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PROPOSAL

BY THE

INTERNATIONAL FREQUENCY REGISTRATION BOARD

(I. F. R. B.)

for suitable methods of bringing the entire
Atlantic City Frequency Allocation Table
into operation

(Administrative Council Resolution No. 199)

INTERNATIONAL TELECOMMUNICATION UNION

GENEVA, 1951



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P R E A M B L E

In Resolution 199, adopted at the Fifth Session (September, 1950), concerning the convening of the Extraordinary Administrative Radio Conference in Geneva, on 16th August, 1951, the Administrative Council requested :

"pending the meeting of the Conference and in order to facilitate and shorten its work :

- a) the active assistance of the I.F.R.B. (in accordance with paragraph c) of the Atlantic City Resolution relating to the participation in the P.F.B. of Members of the I.F.R.B.) and of all Members of the Union in studying and making proposals for suitable methods of bringing the entire Atlantic City Table of Frequency Allocations into operation as soon as possible;
- b) the I.F.R.B. to assemble and collate all comments and proposals and to circulate them to Members of the Union at least two months before the Conference."

Moreover, in Resolution 200, the Administrative Council produced a programme governing the preparations to be made for the Extraordinary Administrative Radio Conference.

This volume contains the analyses, syntheses and proposals which the I.F.R.B. was thus invited to send to Members of the Union by 15th June, 1951.

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INTRODUCTION

PROGRESS MADE BY 15th MAY 1951 WITH PREPARATIONS FOR THE EXTRAORDINARY ADMINISTRATIVE RADIO CONFERENCE

1. Purpose

1.1 This introduction is intended to inform Members of the Union of the progress made, up to 15th May, 1951, with preparations for the Extraordinary Administrative Radio Conference. Most of the information contained in this introduction was submitted in Document 862/CA.6 to the Administrative Council at its Sixth Session (April, 1951) by the I.F.R.B. and it was after taking cognizance of it that the Council decided to confirm the date of 16th August, 1951, for the opening of the Extraordinary Administrative Radio Conference (circular-telegram No. TC 16/18/R of 18th April, 1951).

1.2 In its Third Annual Report (for 1950) circulated to Members of the Union by the Secretary-General on 26th February, 1951 (Circular-letter No. 136), the I.F.R.B. recalled (paragraph 7-B) the studies which the Members of the Union and the I.F.R.B. had been asked to undertake under Administrative Council Resolution 200, and the documentation which had to be prepared and circulated prior to the Extraordinary Administrative Radio Conference, the agenda for which is given in Resolution 199. We shall now succinctly consider, point by point, the progress made up to 15th May, 1951, in the work undertaken in accordance with each part of Resolution 200.

2. Comments by Administrations on the various plans and draft plans of frequency assignment (paragraphs a) and b) of Resolution 200)

2.1 In circular-telegram No. 157/18 (despatched on 18th November, 1950, through the Secretary General), the I.F.R.B. drew the attention of Administrations to the fact that in Resolution 200 they had been asked to submit, before 15th December, 1950, the additional comments on the draft plans prepared by the P.F.B. and on the assignment plans drawn up by the various regional and service conferences. If the comments received in pursuance of Resolution 154 be also counted, sixty Administrations in all have sent comments either on the plans or draft plans in their entirety or on some of them only.

These comments fall into two classes - general comments, on at least one plan or draft plan, considered as a whole; and detailed comments, or, in other words, observations on specific frequency assignments.

2.2 The general comments, as received up to 15th March, 1951, were assembled in a Booklet A, of some 200 pages, and were published in the Union's working languages. The booklet was despatched to Members

of the Union on 26th April, 1951 (Circular-letter D 1127/R). Comments are classified by countries, and an index permits ready reference to any particular plan or draft plan.

2.3 The detailed comments, as received up to 15th March, 1951, some 3,200 in all, have been assembled and are being published (with the use of symbols) in a series of booklets in which they are classified by plan or draft plan, and by numerical order of the frequencies to which they refer. Publication began with those comments relating to parts of the spectrum mentioned in paragraph a) of Resolution 200, namely, those parts for which, according to its agenda (Resolution 199) the Extraordinary Administrative Radio Conference may find it possible to prepare a new International Frequency List. Detailed comments of this kind (some 1,000 in all), are given in the following booklets:

Booklet B: Detailed comments on the draft plan prepared by the P.F.B. for the frequency band 14 to 150 kc/s;

Booklet C: Detailed comments on the Region 1 Table and the African Plan;

Booklet D: Detailed comments on the Region 3 Plan;

Booklet E: Detailed comments on the draft plan prepared by the P.F.B. for the maritime mobile service bands between 4,000 and 23,000 kc/s.

These booklets are being printed and it is expected that Members of the Union will have received them by 15th June, 1951, as scheduled.

The detailed comments, few in number, on the Frequency Allotment Plans prepared by the International Administrative Aeronautical Radio Conference for the bands exclusively allocated to the aeronautical mobile service between 2,850 and 27,500 kc/s are contained in Chapter VI.

2.4 Publication of other detailed comments (some 2,200 of them by 15th March, 1951), may be subject to slight delay, namely those which refer to the draft plans prepared for the bands mentioned in paragraph b) of Resolution 200, i.e. the bands for which, according to its agenda, the Conference will probably be unable to prepare a new frequency list.

2.5 Since 15th March, 1951, some 1,500 new detailed comments have reached the I.F.R.B., which concern, almost exclusively, the Region 3 Plan and the draft plans prepared by the P.F.B. for the bands between 3,900 and 27,500 kc/s. These comments will be published later, in further booklets.

2.6 For the use of the Extraordinary Conference, a card has been prepared for each detailed comment, and these cards have been classed by service and frequency band. In the case of plans or draft plans likely to form the basis of general agreement at the Extraordinary Conference, every objection raised prior to 15th March, 1951, has been considered carefully with the object of facilitating the task of the Conference by suggesting possible adjustments. Objections received since that date will be treated similarly, as far as time permits.

2.7 A detailed analysis of the comments made by Administrations on the various plans and draft plans is given in Chapters IV to IX, and a summary of them is given in paragraph 1 of Chapter I.

3. Proposals relating to methods of bringing into effect the whole of the Atlantic City Frequency Allocation Table, paragraph c) of Resolution 200 and paragraph a) of Resolution 199.

3.1 Ten Administrations have now presented proposals for methods whereby the entire Atlantic City Frequency Allocation Table might be implemented as soon as possible. They are: Belgium, Canada, France, French Overseas Territories, the Netherlands, New Zealand, Portugal, Tunisia, the United Kingdom and the United States of America, and of these, two (Canada and the United States of America) requested that their proposals be published as soon as possible. The seven proposals received up to 1st March, 1951, were assembled in a volume and sent to Members of the Union on 20th March, 1951 (Circular letter D 961/R). The eighth, ninth and tenth proposals - from the Netherlands, Portugal and the United Kingdom - are being printed and will form a second volume which will be despatched shortly to Administrations. Any proposals received later will be published in one or more volumes.

3.2 A brief summary of the proposals received from Members of the Union is given in paragraph 2 of Chapter II.

3.3 The I.F.R.B. submits its own proposals in Chapters II to VIII, each of which deals with a particular radio service or part of the radio spectrum. There is a summary of these proposals in Chapter I (paragraph 2), and in Chapter X the schedule for implementation of the whole Atlantic City Frequency Allocation Table is outlined.

4. Information received regarding the use now being made of frequencies outside the bands provided for the service concerned under the Atlantic City Table of Frequency Allocations, paragraph d) of Resolution 200.

4.1 In paragraph d) of Resolution 200, the Administrative Council asked Administrations to send the I.F.R.B., by 31st January, 1951, information on stations at present using frequencies which are out-of-band according to the Atlantic City Table of Frequency Allocations. In other words, Administrations were asked to supply information on the characteristics of such of their assignments as would have to be shifted to another part of the radio spectrum on implementation of the Atlantic City Table.

4.2 The I.F.R.B. thought it appropriate to send Administrations, through the Secretary General, a circular letter on this matter (No. 134 of 9th January, 1951). In this letter it recalled paragraph d) of Resolution 200, and indicated, among other things, in what form and with what additions, information might usefully be supplied.

4.3 By 15th May, 1951, forty-one Administrations had supplied the information requested in paragraph d) of Resolution 200. These countries are listed in Annex I to this Introduction.

4.4 Altogether, information has been received on some 5,000 frequency assignments which are out-of-band in relation to the Atlantic City Table. With data extracted from the Current Frequency List available (15th Edition, including Supplement 17), completed and amended where possible by the information thus received from Administrations, the I.F.R.B. prepared some 9,000 cards, which should be of assistance to the Extraordinary Administrative Radio Conference. The Board will bring these records up-to-date in accordance with the information in the 16th Edition of the Frequency List when it becomes available, in order that the Conference may have a literature based on the most recent data. The Conference itself will, of course, take the ultimate decision on the basis for its work.

4.5 It will be seen, then, that as things stand, about half the Members of the Union have supplied the information requested by the Administrative Council in connection with stations using frequencies which are out-of-band in relation to the Atlantic City Table. In addition, it should be noted that in many cases (about 50% of the information supplied), the data which has been supplied does not tally with that given in the Current Frequency List which of course reproduces the notifications received by the Secretary General. This subject has been dealt with in detail in Chapter II, part 4, where the I.F.R.B. urges the Administrations to bring to the Conference, in particular, sufficient data for every radio service to establish a Corrected Frequency List between 3,900 and 27,500 kc/s.

5. Information obtained by means of international monitoring, paragraph e) of Resolution 200

5.1 In order to present the Conference with as complete a survey as possible of the use to which frequencies are now being put, and to find any free space in the spectrum to which (paragraph 4.1) stations using out-of-band frequencies might be transferred, the Administrative Council asked Administrations to send the I.F.R.B. monthly summaries of monitoring data.

5.2 In Circular No. 631, of 2nd November, 1950, drafted in accordance with decisions taken by the Administrative Council during its Fifth Session, the I.F.R.B. indicated to Administrations the form which the monthly summaries of information asked for in Resolution 200, paragraph e), should take for the Board to gain a clear idea of how the radio spectrum was being used throughout the world. At present, 12 monitoring sources regularly send information to the I.F.R.B., see Annex 2. It will, however, be seen that of these sources, very few lie outside Western Europe. Hence, the information received, although it may be of considerable assistance to the Extraordinary Conference in providing it with some idea of the use to which frequencies are being put in Europe and its vicinity, will be inadequate to provide a picture of world-wide frequency usage, especially when it is recalled that the data covers only a small portion of the cycle of solar activity.

5.3 The I.F.R.B. accordingly urges those Administrations which have agreed to participate in the international monitoring system, but are not now supplying data to the Board, to send monthly summaries of monitoring information on present frequency usage.

5.4 The task of registering and classifying the data received from monitoring stations was started at the beginning of November, 1950, and will continue until the opening of the Conference. By 15th May, 1951, some 50,000 lines of information, bearing on all services, had been entered on approximately 16,000 cards.

5.5 On 1st April, 1951, when it began to study and prepare the proposals in this volume, the I.F.R.B. was of the opinion that such information as could be deduced from the monitoring data supplied to it was not sufficiently abundant for it to draw firm conclusions which could be embodied in its proposals. Study of this data showed, on the one hand, that a good many notified stations did not appear in the data received, whereas, on the other hand, the data contained certain non-notified stations. Hence the Board's conclusions regarding the inadequacy of the Current Frequency List were confirmed.

ANNEX I TO THE INTRODUCTION

List to 15 May 1951 of Administrations which have provided
information regarding their frequency assignments out of band in
relation to the Atlantic City Frequency Allocation

Table

(Resolution 200, para. d)

Australia
Austria
Belgium
Burma
Canada
Vatican City (State of)
*Colombia
Portuguese Colonies
Colonies, etc., of the United Kingdom
French Overseas Territories
Belgian Congo and Territory of Ruanda Urundi
Costa Rica
Denmark
Egypt
Finland
France
Haïti
India
Indonesia
***Iraq
Ireland
Iceland
Israël
Italy
Japan
Lebanon
Monaco
Norway
New Zealand
Pakistan
Panama
Netherlands
Portugal
French Protectorate of Morocco
Yugoslavia (Federal People's Republic of)
United Kingdom
Thailand
Sweden
Switzerland
**Turkey
Union of South Africa
Venezuela

Country not Member of the Union

Germany (Allied High Commission)

* This country has furnished details of all its frequencies

** This country has furnished details only of broadcasting

*** This country has furnished details of all its frequencies but without
indicating class of service

ANNEX 2 TO THE INTRODUCTION

INTERNATIONAL MONITORING

List of countries and international agencies sending monthly
bulletins in accordance with Administrative Council Resolution 200,
paragraph e).

Situation as of 15th May 1951

Australia
Denmark
France
French Overseas Territories
Italy
Netherlands
Portugal
French Protectorates of Morocco and Tunisia
United Kingdom
Sweden
Monitoring Centre for the mobile services (Brussels) (CCRM)
European Broadcasting Union

C H A P T E R I

SUMMARY OF PROPOSALS BY THE I.F.R.B. FOR METHODS WHEREBY
THE ENTIRE ATLANTIC CITY TABLE OF FREQUENCY ALLOCATIONS
COULD BE IMPLEMENTED AS SOON AS POSSIBLE

CHAPTER ISUMMARY OF PROPOSALS BY THE I.F.R.B. FOR METHODSWHEREBY THE ENTIRE ATLANTIC CITY TABLE OF FREQUENCYALLOCATIONS COULD BE IMPLEMENTED AS SOON AS POSSIBLE1. Synthesis of the comments furnished by Administrations, in accordance with Resolutions 154 and 200 of the Administrative Council.

1.1 The comments furnished by Administrations on the several plans or draft plans drawn up by the Administrative Conferences and by the Provisional Frequency Board for the preparation of a New International Frequency List are analysed in detail in Chapters IV to IX.

1.2 From this detailed analysis it will be seen that, in the view of a suitable majority of those Administrations which commented, a suitable basis for final agreement at the Extraordinary Administrative Radio Conference is provided in the plans or draft plans prepared:

- by the Regional Administrative Conferences for Regions 1 and 3 and by the Committee for the African Region (bands regionally allocated below 3,900 kc/s - see Chapter IV and V).
- by the International Administrative Aeronautical Radio Conference for the aeronautical mobile service "R" and "OR" exclusive bands between 2,850 and 27,500 kc/s (see Chapter VI).
- by the Provisional Frequency Board for the exclusive bands of the maritime mobile service between 4,000 and 23,000 kc/s (see Chapter VII).
- by the Provisional Frequency Board for the bands between 14 and 150 kc/s (see Chapter VIII).

1.3 However, the plans prepared by the P.F.B. for the bands between 3,900 and 27,500 kc/s allocated to the fixed, broadcasting and the land mobile services, would not appear to provide a suitable basis for final agreement since they are not acceptable, even as a basis for discussion, to at least 38 Members of the Union (see Chapter IX).

Further, there exist no finally accepted plans for high-frequency broadcasting.

1.4 It would appear from the general tenor of the comments received that the situation remains substantially what it was at the Fifth Session of the Administrative Council, during which Resolution 199 was adopted, embodying the agenda of the Extraordinary Administrative Radio Conference.

2. Summary of the I.F.R.B. proposals

2.1 On the basis of the conclusions which emerge from the analysis of the comments furnished by Administrations, the Board proposes that the plans or draft plans prepared:

- by the Regional Administrative Conferences for Regions 1 and 3 and by the Committee for the African Region (bands regionally allocated below 3,900 kc/s - see Chapters IV and V)
- by the International Administrative Aeronautical Radio Conference for the aeronautical mobile service "R" and "OR" exclusive bands between 2,850 and 27,500 kc/s (see Chapter VI)
- by the Provisional Frequency Board for the exclusive bands of the maritime mobile service between 4,000 and 23,000 kc/s (see Chapter VII)
- by the Provisional Frequency Board for the bands between 14 and 150 kc/s (see Chapter VIII)

be taken by the Extraordinary Administrative Radio Conference as constituting a basis for discussion likely to afford sufficiently rapid agreement, and that, in accordance with paragraphs 2a and 2b of its agenda, the Conference prepare a New International Frequency List for these parts of the radio spectrum, based on these plans or draft plans conforming to the Atlantic City Radio Regulations.

Chapters IV to VIII contain suggestions which the I.F.R.B. puts forward with the object of facilitating the preparation of final agreements based on these plans or draft plans.

2.2 It should, however, be noted that the plans which have already been adopted by the Administrative Conferences have a higher status than the draft plans prepared by the P.F.B., since the latter were not formally adopted by Administrations, but were merely referred to the Extraordinary Administrative Radio Conference for study. Nevertheless, in the final provisions of the plans for Regions 1 and 3 and the African Region, the signatory Administrations explicitly retained the right to request, if it should be found necessary, certain amendments or additions to these plans; the I.F.R.B. accordingly makes proposals on certain detailed amendments which have been requested (see Chapters IV and V). However, the Final Acts of the International Administrative Aeronautical Radio Conference contain no such provisions, and the I.F.R.B. has therefore, pending the decisions of the Extraordinary Administrative Radio Conference, restricted itself to general suggestions, reserving more concrete proposals for submission in case, for example, the Conference should decide to take account of certain requests for additional assignments in the aeronautical mobile service "OR" bands (see Chapter VI). In any event, on the basis of the analysis of comments by Administrations, the Board does not think that, if the Extraordinary Administrative Radio Conference accepts them as a starting point for discussion, the plans adopted by the Administrative

Conferences will need complete remoulding, but that the decisions to be reached, including all detailed amendments to the plans, might be embodied in the Final Acts of the Conference.

2.3 As a result of the analysis of the comments by Administrations on the draft plans prepared by the P.F.B. for the bands between 3,900 and 27,500 kc/s allocated to the fixed, broadcasting and the land mobile services (see Chapter IX), the I.F.R.B. believes that these plans will not provide a basis of discussion likely to lead to agreement. The Board therefore submits proposals, in Chapter II, for the implementation of the corresponding parts of the Atlantic City Table of Frequency Allocations, in the absence of a New Frequency List.

2.4 Since no plan has been finally accepted for high frequency broadcasting, the I.F.R.B. submits proposals, in Chapter III, for the implementation of the parts of the Atlantic City Table of Frequency Allocations exclusively allocated to broadcasting between 5,950 and 27,500 kc/s.

2.5 With regard to a frequency list for Region 2 in the regionally allocated bands below 4,000 kc/s, the Board considers that the agreements already concluded on the one hand for co-ordination in North America (Canada and the United States) and in South America (Argentina, Bolivia, Brazil, Chile, Paraguay, Peru and Uruguay) and on the other hand the suggestion made by the Administrative Council at its Sixth Session to the countries of Region 2 that they should meet prior to the Extraordinary Administrative Radio Conference (circular telegram D 1352/R of 28th April, 1951), give reason to hope that the Conference will have a draft list at its disposal, which it will be able to take as a basis of agreement for the preparation of a New International Frequency List in that part of the radio spectrum.

2.6 For the order of implementation of the entire Atlantic City Table of Frequency Allocations, the I.F.R.B. proposes the schedule given in Chapter X. In drawing up this schedule, the Board has paid full regard to paragraph 3b of the agenda of the Extraordinary Administrative Radio Conference.

C H A P T E R I I

PROPOSAL OF THE I.F.R.B. FOR A METHOD OF IMPLEMENTATION IN
THE ATLANTIC CITY BANDS ALLOCATED TO THE FIXED, TROPICAL
BROADCASTING AND LAND MOBILE SERVICES BETWEEN 4000 AND 27500
KC/S, AND TO THE BROADCASTING SERVICE BETWEEN 3900 AND 4000
KC/S IN REGIONS 1 AND 3, IN THE ABSENCE OF SPECIFIC
ASSIGNMENT PLANS

CHAPTER II

PROPOSAL OF THE I.F.R.B. FOR A METHOD OF IMPLEMENTATION IN THE
ATLANTIC CITY BANDS ALLOCATED TO THE FIXED, TROPICAL BROADCASTING
AND LAND MOBILE SERVICES BETWEEN 4000 AND 27500 kc/s, AND TO THE
BROADCASTING SERVICE BETWEEN 3900 AND 4000 kc/s IN REGIONS 1 AND
3, IN THE ABSENCE OF SPECIFIC ASSIGNMENT PLANS

1. Introduction

It appears from the comments of Administrations on the draft plans prepared by the P.F.B. for the fixed, broadcasting and land mobile services (3900 - 27500 kc/s) that the first attempt to solve the problem, by completely replanning the assignments in the appropriate bands on an improved technical basis, has not succeeded (see Chapter IX). The modifications to the P.F.B. plans for these services which would be required, even by those countries which are prepared to accept them as a basis for discussion by the Extraordinary Administrative Radio Conference, would involve almost a complete re-casting of most of these plans, and many Administrations are unwilling further to pursue, at least at the present juncture, the technical approach which is laid down in the Atlantic City Resolution pertaining to the Preparation of the New International Frequency List.

2. Proposals of Administrations

2.1 Proposals concerning other methods of implementing the Atlantic City table of frequency allocations have thus far been received from ten Administrations. The principal characteristics of these proposals are summarized as follows:

2.2 New Zealand urges the maximum acceptance of all existing plans, the development of an orderly approach to the problem of the fixed bands, the containing of the high frequency broadcasting service in its appropriate bands, and implementation within a restricted period.

2.3 Portugal considers that the Atlantic City Table for those portions of the radio spectrum 14 - 3950 kc/s and 11975 - 27500 kc/s can be implemented as soon as the Conference has adopted assignment plans based upon the results of the regional conferences, the Aeronautical Conference and the P.F.B.; to accomplish this it would be necessary to meet the objections of Administrations to specific assignments, prepare a "contained" plan for the band 15450 - 16460 kc/s, and insure that the reduced P.F.B. technical standards would give satisfactory results. With regard to the band 3950 - 11975 kc/s, it will be necessary that the Conference determine the most appropriate solution, deciding, if necessary, to defer the implementation of that portion of the Atlantic City Table.

2.4 The United States proposes that the allocation table should be implemented by the unilateral action of each Administration, in the selection of appropriate in-band frequency assignments to replace present out-of-band assignments used for essential services,

which are capable of causing harmful international interference. This is to be done in cooperation with the I.F.R.B., and in accordance with a detailed time schedule starting with the highest frequencies in question.

2.5 The United Kingdom also proposes that implementation should be carried out by each Administration individually, the necessary replacements for out-of-band frequency assignments to be obtained, firstly by exchanges between different radio services in the same Administration, secondly by interchanges of assignments between Administrations, thirdly with the assistance of the I.F.R.B., and lastly by the well-tried method of monitoring. This is to be accomplished prior to an agreed implementation date.

2.6 Tunisia proposes that each Administration should seek and notify its necessary new frequencies in the appropriate Atlantic City bands, the I.F.R.B. to make observations and proposals to any Administrations which might have chosen the same frequencies.

2.7 Belgium suggests, as a first step, that all out-of-band operations should cease. The Administrations would then send to the I.F.R.B. a list of frequency assignments which they require to be exchanged, indicating in each case the frequency desired in exchange, whereupon the I.F.R.B. would determine the extent to which suitable exchanges could be effected.

2.8 France, supported by French Overseas Territories, proposes that each Administration would submit proposals to the I.F.R.B. for the transfer of its out-of-band operations which had been notified to the Union up to 1st March, 1951. The Board would make suggestions to resolve apparent conflicts and would draw up a general plan for the transfer of frequency assignments which would subsequently be submitted to a radio conference.

2.9 The Netherlands proposes, for the fixed service, that the Cairo fixed bands be divided into 5 kc/s channels, each channel then being nominated as an A1 or an A3 channel depending in principle upon which emission now predominates on that channel. The Atlantic City fixed bands would then be channelled on a 2 kc/s basis for A1 and 5 kc/s for A3, the space thereby becoming unoccupied because of the reduced A1 channel separations to absorb the out-of-band listings, with in-band transfers being limited to those cases necessary to avoid harmful interference. The I.F.R.B. would be instructed to redraft the Frequency List accordingly, inserting dates for each listing in accordance with a formula prescribed by the Conference.

2.10 Canada suggests a "controlled approach", based on a contraction of the channel spacing which has been followed in the past, whereby the Atlantic City bands would be rechannelled and the group of notifications on each channel would be assigned a new frequency based upon the reduced channel spacing. Upon the achievement of the new basic arrangement by means of this procedure, a detailed re-arrangement would be undertaken to overcome individual objections.

2.11 The I.F.R.B. recognizes the value of each of these proposals, and has taken them into account in the preparation of its own proposal.

3. Alternative Approaches Available

3.1 Except for the technical approach referred to in paragraph 1 above, there are but few alternative approaches to the problem and these would appear to fall basically into the following three categories:-

- i) The transfer of out-of-band assignments into the appropriate Atlantic City frequency bands by dispersing these assignments among existing in-band assignments.
- ii) The compression of existing in-band assignments by a reduction in channel separations in order to liberate completely a section of each band for the stations which have to be transferred.
- iii) A combination of i) and ii) above, that is, both dispersal and compression.

3.2 The I.F.R.B. has made a study of the three basic alternative methods of approach outlined in para. 3.1 above, and it considers that the method which would commend itself most to the Member-countries of the Union would consist of making as few, and as small, changes as possible of existing in-band assignments while endeavouring to disperse among these assignments those which have to be transferred from bands which, in the Atlantic City Table, are allocated to other services.

3.3 However, from a study of the data at present available to the I.F.R.B., which are mainly those contained in the Frequency List published by the General Secretariat of the Union, the Board considers that the uncoordinated superposition of any large number of out-of-band assignments directly on top of existing in-band assignments (i.e. simple additional frequency sharing) would probably result in intolerable mutual interference between existing and transferred assignments, and would not be likely to provide more than a partial solution of the problem. But in a large number of cases, the spacing between existing assignments is wider than is strictly necessary, with modern techniques, for the operation of the services concerned. This offers the possibility, therefore, of placing out-of-band assignments between existing assignments, a process which would be facilitated if slight movements (say $\frac{1}{2}$ or 2 kc/s) were made in the case of certain assignments in order to widen the spaces between them and so allow groups of displaced assignments to be fitted in. Such an approach falls into category iii) of para. 3.1 above.

4. Point of Departure

4.1 The possibilities of success, however, of any scheme such as that outlined in para. 3.3 above depend on an accurate knowledge both of the services which are actually in operation within the appropriate Atlantic City bands and the services which will have to be transferred to these bands when the Atlantic City Table of

Frequency Allocations is implemented. If harmful interference is to be avoided, a study must be made of the possibilities, in particular, of the adjacent channel interference which may arise from the dispersal of the transferred assignments throughout the new bands, and this study, even if only of a quasi-technical character based on broad engineering knowledge and experience rather than on detailed calculations, can only be realistic if the basic data are factual and comprehensive.

4.2 It might be thought that the requisite information is available from the Current Frequency List published by the General Secretariat of the Union, which, of course, reproduces the data notified by Administrations. However, a detailed examination of the List has revealed that for about 40% of the notifications, either no particulars at all are given, or no indication is given of important information, such as the points or areas of reception. Without such data the possibilities of interference with another service cannot be accurately assessed.

4.3 But there is an even more important consideration than that of insufficient information in respect of the assignments which have been notified to the General Secretariat of the Union and are reproduced in the Current Frequency List. An analysis of the information supplied by Administrations on out-of-band assignments, in response to paragraph (d) of Administrative Council Resolution No. 200, has shown that about 50% of the information which appears in the Current Frequency List no longer corresponds with actual practice, either because

- a) frequencies notified in the List are apparently no longer in use;
- b) frequencies are in fact in use which have never previously been notified;
- c) frequencies which have been notified are used for purposes other than those stated.

While it has long been suspected that the Current Frequency List was not reflecting accurately present usage, it is only recently, from a study of such of the out-of-band data and monitoring data as have now become available, that confirmation has been obtained of this situation, which is illustrated by the table contained in Annex 1.

4.4 There seems little reason to suppose that the information in the Current Frequency List in regard to in-band assignments is any more factual or more accurately represents actual frequency usage than in the case of out-of-band frequencies. Indeed, monitoring data confirm that many assignments which are notified in the Current Frequency List apparently are not now active, while, on the other hand, frequencies are observed to be in use which have never been notified to the Union. Also, cross-checks between data submitted by Administrations to recent Conferences of the Union, and data notified to the General Secretariat for publication in the Frequency List, show serious discrepancies in many cases.

4.5 In view of this situation, the I.F.R.B. urges the Administrations to bring to the Conference sufficient data for every radio service to establish a Corrected Frequency List between 3,900 and 27,500 kc/s, and in addition to furnish such supplementary information for each listing as would be necessary to permit the assessment of adjacent channel and co-channel interference. In this connection, the Board recommends that this data should be furnished in the form prescribed for List I of Appendix 6, Atlantic City Radio Regulations, and by footnote to indicate any wishes which Administrations may have with respect to particular assignments. Such wishes may arise, for instance, from proposed exchanges of assignments between different radio services in the same Administration, or from proposed interchanges of assignments between Administrations.

4.6 It is the view of the I.F.R.B. that, if an accurate knowledge of all existing radio operations were available, it would be possible to apply successfully the basic principles established by the Conference in transferring out-of-band assignments. In presenting the following proposal, therefore, it cannot be stressed too strongly that the measure of success likely to be achieved by such a procedure would depend on the cooperation which Administrations are prepared to extend to the Union in bringing to the Conference full and accurate particulars of existing radio operations.

4.7 A tabulation is given in Annex 2 of the out-of-band fixed, land mobile and broadcasting assignments between 3,900 kc/s and 27,500 kc/s which are contained in the latest Frequency List available to the Board, i.e., the 15th edition of the Frequency List, including Supplement No. 17.

5. PROPOSAL OF THE I.F.R.B.

5.1 The basis of the I.F.R.B. proposal for a method of implementation in the Atlantic City bands for the fixed, tropical broadcasting and land mobile services between 4,000 and 27,500 kc/s, and for the broadcasting service between 3,900 and 4,000 kc/s in Regions 1 and 3, are the five concepts which follow:

A. The elaboration by the Extraordinary Administrative Radio Conference of the basic principles and procedures to be applied in transferring out-of-band assignments into the appropriate Atlantic City bands.

B. The preparation of a Corrected Frequency List, based upon the Current Frequency List and the additional data supplied by the Administrations to the Conference (paragraph 4.5 above), to be put in hand as soon as the Extraordinary Conference assembles; this List to be published, if possible, before the adjournment of the Conference, and the data therein to be used as the point of departure for the subsequent work.

C. The establishment of a Trial Frequency List, either during or after the Conference, on the basic principles and procedures mentioned in A above and the data of the Corrected Frequency List mentioned in B above.

D. The implementation of the Trial List in accordance with a schedule to be established by the Extraordinary Conference.

E. The review of the Trial List, in the light of actual operating experience and monitoring data then available, by the next Ordinary Administrative Radio Conference.

5.2 The I.F.R.B. further proposes that:

a) each entry in the Trial Frequency List should carry with it, for the purpose of information, the dates appearing in columns 3a, 3b and 12 of the present Frequency List irrespective of whether or not the entry represents a change in frequency, in the Trial List, for the assignment concerned.

b) the provisions in the Atlantic City Radio Regulations for the notification and registration of frequencies for the fixed, tropical broadcasting and land mobile services between 4,000 and 27,500 kc/s and for the broadcasting service between 3,900 and 4,000 kc/s in Regions 1 and 3, should continue in suspense until the next Ordinary Administrative Radio Conference.

c) the next Ordinary Administrative Radio Conference should establish the New International Frequency List for the radio services herein dealt with, determine the registration or notification date to be given to each entry, and prescribe the future procedure to be followed in regard to the notification and registration of frequency assignments.

5.3 Within the main concepts outlined above, the I.F.R.B. further recommends:

a) that the fundamental principle which should govern the transfer of out-of-band assignments into the new Atlantic City bands is the creation of minimum disturbance to existing in-band frequency assignments, and existing sharing patterns, to the extent compatible with ensuring reasonable freedom from harmful interference.

b) that the objective should be to transfer groups of assignments, retaining the existing co-channel shares as far as possible, rather than the transfer of individual assignments.

c) that, in principle, the Atlantic City bands for the services concerned should be channelled on an A1 basis as follows:

Frequency range		Channel center frequencies
3,9	- 10 Mc/s	digits ending in 0 - 2.5 - 5.0 - 7.5 - 0
10	- 20 Mc/s	digits ending in 0 - 3.3 - 6.7 - 0
20	- 27.5 Mc/s	digits ending in 0 - 4 - 8 - 12 - 16 - 0

d) that each in-band frequency entry in the Corrected Frequency List falling within \pm or $-$ 1 kc/s of these channel centers should be inserted in the Trial Frequency List without change.

- e) that each in-band frequency entry in the Corrected Frequency List more than 1 kc/s from a channel center should be moved up or down to fit the channelling of the band concerned as would appear appropriate from technical considerations.
- f) that no assignment which is listed in the Corrected Frequency List with a power of 100 watts or less should be given a new frequency assignment in the Trial List unless the retention of such an assignment out-of-band will clearly cause harmful interference to services operating in conformity with the Atlantic City Allocation Table (such cases may arise, in particular, in the case of stations which at present are operating in certain mobile service bands).
- g) that each out-of-band frequency entry in the Corrected Frequency List with a power exceeding 100 watts should be placed on an in-band channel on a quasi-technical basis, i.e. account to be taken of power, emission, areas of reception, and existing sharings, in order to minimise possible adjacent channel interference. In this connection, due consideration must be given to assignments with a bandwidth wider than those referred to in sub-para. c) above. This examination, however, to be based on broad engineering knowledge and experience rather than on theoretical calculations.
- h) that those out-of-band frequency entries in the Corrected Frequency List which are in bands allocated to the service concerned by the Cairo Regulations should have preferred treatment over those which are in derogation of the Cairo Regulations.
- i) that, when the foregoing has been done, the whole of the Trial List should be reviewed with a view to effecting such changes of individual assignments as would appear to be essential if intolerable harmful interference is to be avoided.

5.4 The amount of the foregoing work which might be undertaken by the Extraordinary Administrative Radio Conference itself, and indeed the effectiveness and acceptability to Administrations of the Trial Frequency List, would depend largely on the completeness of the data supplied by Administrations to enable the Corrected Frequency List to be established, and on the time necessary for the preparation of the Trial List. The alternatives, however, are clearly as follows:

- a) Preparation of the Trial List by the Conference itself;
or
- b) Establishment by the Conference of only the basic principles and procedures for the transfer of the out-of-band assignments.

5.5 In the latter case, the Trial Frequency List could be established by two methods:

- i) by the Administrations themselves, in selecting the transfers which they desire for their stations conforming to the principles elaborated by the Conference, or
- ii) by the I.F.R.B. or another body, based on the information given in the Corrected Frequency List and on the basic principles for the transfers which have been elaborated by the Extraordinary Conference.

5.6 In regard to these possible alternatives, the I.F.R.B. is of the opinion that

- a) The relatively short duration of the Extraordinary Administrative Radio Conference as proposed by the Administrative Council, would probably preclude the actual preparation by it of the Trial Frequency List as far as the radio services herein discussed are concerned;
- b) The establishment of the Trial List by the Administrations themselves even in conformity with the basic principles elaborated by the Extraordinary Conference, would be liable to give rise to a number of difficulties. These would appear to include the danger of multiple new, uncoordinated assignments on the same frequency, leading to a further extensive re-arrangement of these assignments at some later stage if excessive harmful interference is to be avoided, and corresponding delay in implementation;
- c) If, therefore, the Conference itself, because of the time factor, is unable to prepare the Trial List, the best procedure would appear to be for the Conference to charge the I.F.R.B., or a special group created by the Conference, to prepare the Trial List in accordance with the basic principles and procedures elaborated by the Conference.

5.7 Should the latter arrangement be followed, it will be for the Conference to decide:

- a) what period should be allowed for the preparation of the Trial Frequency List;
- b) what period should be permitted for Administrations to scrutinize this List and to forward their comments;
- c) what period should be permitted for consideration to be given to these comments and for any amendments which have been requested to be incorporated and promulgated to Administrations;
- d) when the Trial List should actually be implemented, either as a whole or in segments (Chapter X), having regard to the special problems of implementation facing each type of radio service, the need for coordination between one service and another in drawing up an implementation schedule, and the problems which will confront Administrations and operating agencies in making the numerous frequency adjustments which will be necessary.

5.8 The Board has examined portions of the radio spectrum in the vicinity of 4, 6, 9, 13 and 18 Mc/s allocated to the fixed service in the Atlantic City Radio Regulations, taking as a basis the Current Frequency List containing notifications up to 31st October, 1950, in an attempt to determine the feasibility of the above-outlined proposal. The conclusion has been reached that, provided the Corrected Frequency List is not appreciably more congested than the Current List, it should be possible to fit into band all out-of-band assignments for the radio services herein considered which are not in derogation of the Cairo Regulations. It should also be possible to accommodate those assignments for these services in derogation of the Cairo Regulations which would be a potential source of harmful interference to mobile stations.

TABLE COMPARING THE NUMBER OF OUT-OF-BAND NOTIFICATIONS APPEARING IN THE CURRENT FREQUENCY LIST TO THOSE FREQUENCIES DECLARED AS ACTIVE BY ADMINISTRATIONS THAT HAVE ANSWERED UP TO 15th MAY 1951.

COUNTRY	NOTIFICATIONS IN THE LIST (INCLUDING SUP.17,15th EDITION)	FREQUENCIES DECLARED AS IN ACTIVITY (RES.200, A.C.)	DIFF- ERENCE	NOTIFIED, NOT DECLARED AS IN ACTIVITY	FREQUENCIES DECLARED AS IN ACTIVITY, NOT NOTIFIED
AUSTRALIA	506	499	- 7	27	20
AUSTRIA	14	16	+ 2	3	5
BELGIUM	30	20	- 10	10	0
BURMA	39	19	- 20	20	0
CANADA	306	309	+ 3	10	13
VATICAN CITY	7	7	0	0	0
COLOMBIA	22	15	- 7	20	13
PORTUGUESE COLS.	50	9	- 41	44	3
BELGIAN CONGO	163	212	+ 49	23	72
COSTA RICA	38	11	- 27	27	0
DENMARK	45	33	- 12	13	1
EGYPT	77	42	- 35	51	16
FINLAND	34	39	+ 5	8	13
FRANCE (& TERR.)	1047	899	-148	332	184
HAITI	23	7	- 16	20	4
INDIA	510	443	- 67	106	39
INDONESIA	196	138	- 58	63	5
IRELAND	44	12	- 32	32	0
ICELAND	19	22	+ 3	4	7
ISRAEL	29	35	+ 6	2	8
ITALY	201	125	- 76	92	16
JAPAN	170	55	-115	118	3
LEBANON	18	4	- 14	14	0
MONACO	1	1	0	0	0
NORWAY	62	62	0	9	9
NEW ZEALAND	120	139	+ 19	53	72
PAKISTAN	342	314	- 28	47	19
PANAMA (REP.)	10	7	- 3	3	0
NETHERLANDS (& TERR.)	99	106	+ 7	35	42
PORTUGAL	96	122	+ 26	8	34
UNITED KING- DOM (& TERR.)	1129	960	-169	289	120
SWEDEN	52	37	- 15	16	1
SWITZERLAND	27	17	- 10	10	0
THAILAND	60	37	- 23	24	1
UNION OF S. AFRICA	45	18	- 27	33	6
VENEZUELA	38	111	+ 73	4	77
YUGOSLAVIA	47	8	- 39	40	1
GERMANY	109	58	- 51	62	11

TABEAU INDIQUANT LE NOMBRE DES FREQUENCES DIFFERENTES ET ASSIGNATIONS DISTINCTES SITUÉES EN DEHORS DES BANDES APPROPRIÉES ET FIGURANT ENTRE 3900 ET 27500 KC/S DANS LA 15-ME EDITION DE LA LISTE DES FREQUENCES, Y COMPRIS LE SUPPLEMENT 17, POUR LES STATIONS DES SERVICES FIXE, MOBILE TERRESTRE ET DE RADIODIFFUSION.

TABULATION OF THE NUMBER OF DISCRETE FREQUENCIES AND SEPARATE ASSIGNMENTS FOR STATIONS OF THE FIXED, LAND MOBILE AND BROADCASTING SERVICES BETWEEN 3900 AND 27,500 KC/S, WHICH ARE OUT-OF-BAND AND ARE CONTAINED IN THE 15TH EDITION OF THE FREQUENCY LIST INCLUDING SUPPLEMENT 17.

CUADRO INDICATIVO DEL NUMERO DE FRECUENCIAS DIFERENTES Y DE ASIGNACIONES INDIVIDUALES FUERA DE LAS BANDAS CORRESPONDIENTES, QUE FIGURAN ENTRE 3.900 Y 27.500 KC/S EN LA 15ª EDICION DE LA LISTA DE FRECUENCIAS, INCLUIDO EL SUPLEMENTO 17, PARA LAS ESTACIONES DEL SERVICIO FIJO, MOVIL TERRESTRE Y DE RADIODIFUSION.

SIGNIFICATION DES ABBREVIATIONS :

EXPLANATION OF ABBREVIATIONS :

EXPLICACION DE ABBREVIACIONES :

Aero	= { service aéronautique (Le Caire) aeronautical service (Cairo) servicio aeronáutico (El Cairo)	FB	= { service mobile terrestre land mobile service servicio móvil terrestre
Ae M	= { service mobile aéronautique (Atlantic-City) aeronautical mobile service (Atlantic City) servicio móvil aeronáutico (Atlantic City)	FX	= { service fixe fixed service servicio fijo
AM	= { service d'amateur amateur service servicio de aficionados	M	= { service mobile mobile service servicio móvil
BC	= { service de radiodiffusion broadcasting service servicio de radiodifusión	OR	= { service mobile aéronautique OR aeronautical mobile OR service servicio móvil aeronáutico OR
CF	= { stations côtières radiotéléphoniques coastal telephone stations estaciones costeras radio- telefónicas	R	= { service mobile aéronautique R aeronautical mobile R service servicio móvil aeronáutico R
CT	= { stations côtières radiotélégraphiques coastal telegraph stations estaciones costeras radio- telegráficas	SF	= { stations radiotéléphoniques de navire ship telephone stations estaciones radiotelefónicas de barco
FAX	= { service fixe aéronautique aeronautical fixed service servicio fijo aeronáutico	ST	= { stations radiotélégraphiques de navire ship telegraph stations estaciones radiotelegráficas de barco
		SS	= { service des fréquences étalon standard frequency service servicio de frecuencias contras- tadas

SIGNIFICATION DES ABREVIATIONS

EXPLANATION OF ABBREVIATIONS

EXPLICACION DE ABREVIACIONES :

(America - AM)	=	{ service d'amateur sur le continent américain (Le Caire, n° 125) amateur service on the American continent (Cairo, N° 125) servicio de aficionado en el continente ame- ricano (El Cairo, núm 125) }
(America - BC)	=	{ service de radiodiffusion sur le continent américain broadcasting service on the American continent servicio de radiodifusión en el continente americano }
(America - FX - M)	=	{ services fixe et mobile sur le continent américain fixed and mobile services on the American continent servicios fijo y móvil en el continente americano }
(URSS-Aero-....)	=	{ service aéronautique en URSS entre et kc/s (Le Caire, n° 120) aeronautical service in USSR between and kc/s (Cairo, N°120) servicio aeronáutico autorizado en la URSS entre y kc/s (El Cairo, núm. 120) }
(URSS-FX)	=	{ service fixe autorisé en URSS fixed service authorized in the USSR servicio fijo autorizado en la URSS }
(URSS-EX, OR-11400-11450)	=	{ services fixe et mobile aéronautique OR en URSS entre 11.400 et 11.450 kc/s (Atlanti c City, n° 162) fixed and aeronautical mobile OR services allocated in the USSR between 11,400 and 11,450 kc/s (Atlantic City, N° 162) servicios fijo y móvil aeronáutico OR en URSS entre 11.400 y 11.450 kc/s (Atlantic City, núm. 162) }
(-R)	=	{ à l'exception du service mobile aéronautique R except aeronautical mobile R service con la excepción del servicio móvil aeronáutico R }
FX < 0,05 kW	=	{ les stations fixes de puissance n'excédant pas 0,05 kW sont autorisées fixed stations not exceeding 0.05 kW are autho- rized son autorizadas las estaciones fijas que no exceden de 0,05 kW. }

Bande kc/s	Allocation du CAIRE	Largeur en kc/s	Allocation d'ATLANTIC CITY	FX	BC	FB	Service non indiqué
	Europe : Autres : régions		Reg. : Reg. : Reg. 1 : 2 : 3				
Band kc/s	CAIRO Allocation	Band width kc/s	ATLANTIC CITY Allocation	FX	BC	FB	Service not indicated
	Europe : Other : regions		Reg. : Reg. : Reg. 1 : 2 : 3				
Banda kc/s	Distribucion de El CAIRO	Anchura en kc/s	Distribucion de ATLANTIC CITY	FX	BC	FB	Servicio no indicado
	Europe : Otras : regiones		Reg. : Reg. : Reg. 1 : 2 : 3				
1	2	3	4	5	6	7	8

Signification des chiffres des colonnes 5 à 8 :
 Explanation of numbers contained in columns 5 to 8 :
 Significado de los numeros de las columnas 5 a 8 :

Nombre de fréquences différentes hors bande
 Number of out-of-band discrete frequencies
 Numero de frecuencias diferentes fuera de banda

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{ Nombre d'assignments distinctes hors bande.
 Number of separate assignments out-of-band.
 Numero de asignaciones individuales fuera de
 banda.

1	2	3	4	5	6	7	8
3900 - 3950	AM - FX - M	50	OR : AM : AEM : FX : BC : M :	22 / 117	1 / 1	7 / 10	6 / 19
3950 - 4000	AERO : AM-FX-M	50	FX : (-R) : FX BC : : BC			3 / 10	1 / 1
4000 - 4063	FX - M (URSS - AERO 4000-4050)	63	FX		1 / 1	6 / 11	21 / 28
4063 - 4133		70	SF (URSS-FX)	53 / 387	2 / 2	3 / 9	14 / 24
4133 - 4238		105	ST	82 / 619	1 / 1	6 / 8	19 / 47
4268 - 4368		130	CT	77 / 1038	2 / 2	6 / 17	27 / 90
4368 - 4438		70	CF (URSS-FX 4408-4438)	36 / 358		2 / 7	17 / 35
4438 - 4650	(URSS - AERO 4750-4770)	212	FX : FX : FX FX : M : M : (-R) : (-OR)		1 / 1	11 / 16	3 / 3
4650 - 4700		50	R	27 / 87		1 / 5	9 / 16
4700 - 4750		50	OR	27 / 255	1 / 1	1 / 18	10 / 30
4750 - 4770		20	FX - BC FB : OR :			1 / 1	
4770 - 4850		80				3 / 4	1 / 1
4850 - 4965	FX : FX-M-BC M : (URSS-AERO 4770-4820)	115	FX - FB - BC				
4965 - 4995	FX - M	30					
4995 - 5005		10	SS	4 / 102	1 / 1	2 / 8	2 / 7
5005 - 5060		55	FX - BC			7 / 12	2 / 6
5060 - 5250		190	FX		3 / 4	20 / 28	3 / 7
5250 - 5430		180	FX - FB				
5430 - 5450		20	FX - FB OR : : OR				1 / 1

1	2	3	4	5	6	7	8
5450 - 5460	FX - R	50	FX OR FB	9 / 102			9 / 21
5460 - 5500		20	R	11 / 112		1 / 1	4 / 10
5500 - 5640	H	140		49 / 511	1 / 7	10 / 12	29 / 76
5640 - 5660	A E R O	40		21 / 267	2 / 3	2 / 3	4 / 5
5660 - 5700		20	OR	11 / 132			7 / 14
5700 - 5730	FX	30		19 / 302		1 / 1	7 / 24
5730 - 5950		220	FX		13 / 35	13 / 13	
5950 - 6000		50	BC	34 / 322		1 / 1	13 / 33
6000 - 6200	BC	200		47 / 206		6 / 7	14 / 18
6200 - 6357	H	157	ST	48 / 209	16 / 31	12 / 30	23 / 49
6357 - 6500		143	CT	42 / 169	7 / 7	6 / 19	26 / 82
6500 - 6525	A E R O	25		12 / 54		3 / 4	7 / 15
6525 - 6600		75	R	29 / 150	3 / 4	1 / 1	14 / 28
6600 - 6675	H	75		25 / 127	4 / 4	3 / 4	16 / 61
6675 - 6685	FX	10		6 / 80	2 / 2	1 / 1	2 / 7
6685 - 6765		80	OR	60 / 626	3 / 4	1 / 2	18 / 44
6765 - 7000		235	FX		8 / 8	8 / 8	2 / 2
7000 - 7100	AH	100	AH	16 / 108	8 / 8	1 / 1	5 / 11
7100 - 7150		50	AH BC	15 / 66	1 / 1		2 / 5
7150 - 7500	AH - BC (AMERICA - AH)	150	BC	20 / 41	2 / 4		7 / 9
7300 - 8195	FX	895	FX		17 / 21	35 / 35	12 / 12
8195 - 8200		5	ST	3 / 29			1 / 1
8200 - 8215	H	15		4 / 50			2 / 2
8215 - 8235	A E R O	20		10 / 66		1 / 2	2 / 2
8235 - 8265	H	30		9 / 70		1 / 1	3 / 8
8265 - 8476		211	ST	56 / 407	3 / 3	2 / 4	28 / 76

1	2	3	4	5	6	7	8
8476 - 8480	M	4	CT (URSS - FX)	1 / 1			
8480 - 8580	A E R O	100		45 / 321	1 / 3		18 / 45
8580 - 8615	FX - M	35		15 / 189			3 / 18
8615 - 8745		130		61 / 413	3 / 3	3 / 5	20 / 45
8745 - 8815		70		36 / 279			6 / 26
8815 - 8900		85	R	44 / 372	1 / 1	2 / 2	14 / 20
8900 - 8965	FX	65		33 / 246	2 / 2	1 / 1	10 / 21
8965 - 9040		75	OR	35 / 271	4 / 8	1 / 1	9 / 20
9040 - 9500		460	FX		19 / 29	3 / 3	
9500 - 9700	BC	200	BC	26 / 64			4 / 5
9700 - 9770	FX	70		26 / 152			10 / 24
9770 - 9995		225	FX		13 / 27	4 / 7	
9995 - 10005		10	SS	4 / 42	1 / 2		1 / 3
10005 - 10100		95	R	51 / 220	1 / 1		11 / 19
10100 - 11000		900	FX		3 / 6	3 / 3	2 / 2
11000 - 11175		175			6 / 6		
11175 - 11275	M	100	OR	19 / 100			8 / 17
11275 - 11300		25	R	4 / 42			1 / 1
11300 - 11400		100		28 / 115		1 / 1	8 / 11
11400 - 11700	FX	300	FX (URSS-FX, OR-11400-11450)		11 / 16	4 / 4	
11700 - 11900	BC	200	BC	31 / 54			5 / 5
11900 - 11980	FX	80		22 / 197			9 / 12
11980 - 12300		320	FX		20 / 25	4 / 4	1 / 1
12300 - 12330	M	30					
12330 - 12400		70	SF	13 / 61			7 / 7

1	2	3	4	5	6	7	8
12400 - 12714	M	314	ST	56/ 176			24/ 47
12714 - 12770		56	CT	12 / 28	1 / 1		4 / 9
12770 - 12825	A E R O	55		14 / 80			2 / 6
12825 - 12870	A E R O	45		25 / 90	1 / 1		5 / 11
12870 - 12925	FX - M	55		26 / 134			5 / 12
12925 - 13130		205		103 / 343		1 / 1	20 / 41
13130 - 13200		70	CF	32 / 146			1 / 3
13200 - 13260		60	OR	28 / 95		1 / 1	5 / 9
13260 - 13350		90	R	44 / 162			3 / 16
13350 - 13360	FX	10		6 / 37			3 / 10
13360 - 14000		640	FX		3 / 4	1 / 1	
14000 - 14250	AM	250	AM	9 / 12	1 / 1		4 / 5
14250 - 14350		100	AM (URSS - FX)	4 / 5			1 / 1
14350 - 14400		50	FX				
14400 - 14990	FX	590			1 / 4	3 / 3	1 / 1
14990 - 15010		20	SS	10 / 25	1 / 1		2 / 3
15010 - 15100		90	OR	40 / 143	3 / 7		8 / 23
15100 - 15350	BC	250	BC	13 / 21			1 / 1
15350 - 15450	FX	100		33 / 130			5 / 12
15450 - 16400		950	FX		4 / 7	2 / 2	
16400 - 16460	M	60					
16460 - 16530		70	SF	6 / 15			5 / 6
16530 - 16952		422	ST	48 / 109	1 / 1		15 / 26
16952 - 17100		148	CT	21 / 58			7 / 20
17100 - 17160	FX - M	60		32 / 91		1 / 1	5 / 6

1	2	3	4	5	6	7	8
17160 - 17250	FX - M	90	CT	46 / 89		1 / 1	4 / 17
17250 - 17290	A E R O	40	(URSS - FX)	24 / 51			3 / 5
17290 - 17350		60		24 / 84			7 / 11
17350 - 17360	FX - M	10		5 / 13			
17360 - 17700		340	FX			1 / 1	
17700 - 17750		50	BC	9 / 36			2 / 2
17750 - 17850	BC	100		15 / 18			2 / 2
17850 - 17900	FX	50		11 / 33			1 / 2
17900 - 17970		70	R	29 / 81	1 / 1		3 / 9
17970 - 18030		60	OR	20 / 76	1 / 4		
18030 - 19990		1960	FX		2 / 9	1 / 1	
19990 - 20010		20	SS	7 / 14			
20010 - 21000		990	FX				
21000 - 21450		450	AM	138 / 308	1 / 2		4 / 9
21450 - 21750	BC	300	BC				
21750 - 21850	M	100	FX		1 / 4		
21850 - 22000		150	FAX - R	10 / 11			
22000 - 22070		70	SF	2 / 3			2 / 2
22070 - 22300		230	ST	10 / 23			2 / 2
22300 - 22400	FX - M	100		31 / 56			3 / 3
22400 - 22650		250	CT	66 / 106			8 / 6
22650 - 22720		70	CF	18 / 41			1 / 1
22720 - 23200		480	FX				
23200 - 23350		150	FAX - OR	25 / 35			
23350 - 24000		650	FX - FB - ST				
24000 - 24600		600	FX - FB				
24600 - 24990	M	390					
24990 - 25000		10	SS				

1	2	3	4	5	6	7	8
25000 - 25010	M (AMERICA-BC)	10	SS				
25010 - 25600		590	FX - M (EXCEPT AEM)				
25600 - 26100	BC	100	BC	2 / 2		1 / 1	2 / 4
26100 - 26600		500	FX - M (EXCEPT AEM)		12 / 23		
26600 - 27000	FX (AMERICA - BC)	400					
27000 - 27500	FX (AMERICA -FX-M)	500			1 / 1		

CHAPTER III

PROPOSAL OF THE I.F.R.B. FOR A METHOD OF
IMPLEMENTATION IN THE ATLANTIC CITY BANDS
ALLOCATED EXCLUSIVELY TO
THE HIGH FREQUENCY BROADCASTING SERVICE
BETWEEN 5950 AND 27500 kc/s

CHAPTER III

PROPOSAL OF THE I.F.R.B. FOR A METHOD OF
IMPLEMENTATION IN THE ATLANTIC CITY BANDS
ALLOCATED EXCLUSIVELY TO THE HIGH FREQUENCY
BROADCASTING SERVICE BETWEEN 5950 AND 27500 kc/s

1. Introduction

1.1 The International High Frequency Broadcasting Conference, Florence-Rapallo, 1950, decided on 12th August, 1950, to discontinue all work on plan-making. At its close, the Conference made certain general recommendations, addressed to Member-countries of the I.T.U.; these recommendations are reproduced as Annex A of this Chapter.

1.2 No finally agreed plans being available, very few Administrations, in response to Administrative Council Resolution No. 200, expressed their comments on high frequency broadcasting, and then only in general terms. For the same reason, no doubt, in the proposals from Administrations for the implementation of the Atlantic City Table of Frequency Allocations, high frequency broadcasting is not treated in detail but is covered by the methods proposed for the Table as a whole. Thus their proposals for high frequency broadcasting are contained within the summary of proposals given in Chapter II (paragraph 2).

1.3 A heavy responsibility rests upon the high frequency broadcasting service to move into band its out-of-band operations. Failure to do so, in view of the high power and wide bandwidth of broadcast emissions, would not only directly jeopardize the effectiveness of the plans for the mobile services, but even in the case of the fixed service it might well prevent fixed stations from moving out of the mobile bands, with the same unfortunate result. Non-compliance of the high frequency broadcasting service with the Atlantic City Table (under which it was given appreciably more frequency space than that hitherto available for its use) might therefore prejudice the work of the Union in the high-frequency radio spectrum, that has been done at great cost and effort since Atlantic City.

2. Approaches available

2.1 Excluding the technical planning approach visualized at Atlantic City there are given, in paragraph 3 of Chapter II, three categories of basic approach to the problem of transferring out-of-band assignments into the Atlantic City bands; briefly these are:-

- 1) dispersal among in-band assignments;

III/2

- ii) compression of in-band assignments, thereby liberating space to accommodate the out-of-band assignments;
- iii) a combination of i) and ii).

2.2 In considering these approaches from the point of view of the high frequency broadcasting service the I.F.R.B. has noted:

- (a) that the High Frequency Broadcasting Conferences, following the desires of a majority of the delegations there present, adopted and maintained throughout their work, a spacing of 10 kc/s between channel centre-frequencies, beginning and terminating 5 kc/s from each band-edge;
- (b) that at various times during the course of these Conferences a spacing less than 10 kc/s was suggested by some delegations, at least for the more congested bands;
- (c) that in actual fact, notifications appear at intervals of 5 kc/s and even less, and there is clear evidence from monitoring records, that stations are using carrier frequencies separated by 5 kc/s.

Annex B shows the effect of channel spacing on band-loading based upon the notifications in the Current Frequency List.

2.3 The Board also notes that there are notifications on and near the terminal frequencies of each Atlantic City broadcasting band. Such marginal notifications must be moved further into their respective bands. Although their number is not large, they virtually increase the number of out-of-band notifications which must be accommodated in-band.

2.4 Annex C shows the purely statistical aspect of accommodating by approach i) - dispersal - the out-of-band notifications. From this it will be seen (Column 7) that on the average approximately 13% would be added to the existing in-band notifications by the process of dispersal.

2.5 The statistical aspect is of interest - and shows that the problem, in general, is not as difficult numerically as that for the services mentioned in Chapter II. But, in practice, to apply dispersal or a combination of dispersal and compression, requires co-ordinated sharing; and here a serious difficulty arises. Insufficient information is available from the publications of the Union, and from the response of Administrations to Administrative Council Resolution No. 200, to permit formulation of the sharing patterns essential to a coordinated dispersal.

2.6 On the other hand, there is sufficient information from those Administrations which have responded to para. d) of Administrative Council Resolution 200 and from the records of monitoring sources, to show that a substantial portion of the information on high frequency broadcasting which appears in the Current Frequency List no longer corresponds with actual practice, either because:-

- (a) frequencies notified are apparently not in use;
- (b) frequencies are in use which have not been notified;

(c) frequencies notified are used for purposes other than broadcasting;

(d) stations are emitting power differing substantially from the notified power.

Annex D illustrates (a) and (b) above. This Annex is based on the records from monitoring sources, the data from which as yet has a very restricted coverage, for the reasons given in paragraph 5.2 of the INTRODUCTION to this Volume.

2.7 Since all the Atlantic City high frequency broadcasting bands except two have been expanded beyond the limits formerly existing in the Cairo bands it might be thought that this would provide sufficient room for accommodating the out-of-band assignments. But, subsequent to the Atlantic City Conference, notifications, or conversions to broadcasting of former notifications, have been made on an extensive scale in the expanded portions of these bands; and in many instances it is not possible, owing to lack of information, to determine whether these are new services or whether they are "protective" notifications, duplicating out-of-band notifications.

2.8 In general, the situation as to inadequacy and inaccuracy of information, as to present usage is similar to that disclosed and treated in Chapter II, part 4; it is therefore unnecessary to proceed any further in order to justify, in the broadcasting sphere, the need for the Corrected Frequency List.

3. Point of Departure

3.1 Of the sharing methods required, time-sharing is primary. This was adopted as the primary method in the High Frequency Broadcasting Conferences. Simultaneous sharing and other possible forms of sharing were, and no doubt will continue to be, regarded as methods of resort only after the full possibilities of time-sharing have been exhausted.

3.2 Examination of the notifications of the Current Frequency List shows that the time-sharing possibilities for out-of-band dispersal become increasingly difficult to assess in the bands below 15 Mc/s; and that the assessment of such possibilities is limited by the absence, or apparent incorrectness, of information contained in those notifications.

3.3 The I.F.R.B. therefore recommends that the point of departure should be the Corrected Frequency List; and further, that it should contain information on hours of operation and areas of reception for each entry in the broadcasting service, such information being essential to the application of sharing methods.

3.4 In furnishing information for the preparation of the Corrected Frequency List, Administrations should take into account that economy of frequency usage will undoubtedly result from the use by Administrations in a position to do so, of fixed radio-telephone circuits for programme transmission to broadcasting centers, and by the use of transcriptions wherever possible. These methods have already been recommended to all Members of the Union by the International High Frequency Broadcasting Conference Florence-Rapallo 1950, see paragraphs 3 d) and 3 e) of Annex A.

4. PROPOSAL OF THE I.F.R.B.

4.1 The bases of the I.F.R.B. proposal for a method of implementation in the Atlantic City bands for the high frequency broadcasting service, are those given in paragraph 5.1 of Chapter II which are as follows:

A. The elaboration by the Extraordinary Administrative Radio Conference of the basic principles and procedures to be applied in transferring out-of-band assignments into the appropriate Atlantic City bands.

B. The preparation of a Corrected Frequency List, based upon the Current Frequency List and the additional data supplied by the Administrations to the Conference (paragraph 4.5 of Chapter II), to be put in hand as soon as the Extraordinary Conference assembles; this List to be published, if possible, before the adjournment of the Conference, and the data therein to be used as the point of departure for the subsequent work.

C. The establishment of a Trial Frequency List, either during or after the Conference, on the basic principles and procedures mentioned in A above and the data of the Corrected Frequency List mentioned in B above.

D. The implementation of the Trial List in accordance with a schedule to be established by the Extraordinary Conference.

E. The review of the Trial List, in the light of actual operating experience and monitoring data then available, by the next Ordinary Administrative Radio Conference.

4.2 As in paragraph 5.2 of Chapter II, the Board further proposes that:

a) each entry in the Trial Frequency List should carry with it, for the purpose of information, the dates appearing in columns 3a, 3b and 12 of the present Frequency List irrespective of whether or not the entry represents a change in frequency, in the Trial List, for the assignment concerned.

b) the provisions in the Atlantic City Radio Regulations for the notification and registration of frequencies for the high frequency broadcasting service between 5,950 and 27,500 kc/s should continue in suspense until the next Ordinary Administrative Radio Conference.

c) the next Ordinary Administrative Radio Conference should establish the New International Frequency List for the high frequency broadcasting service, determine the registration or notification date to be given to each entry, and prescribe the future procedure to be followed in regard to the notification and registration of frequency assignments.

4.3 The Board further recommends:

(a) that the fundamental principle which should govern the transfer of out-of-band assignments into the new Atlantic City bands, is the creation of minimum disturbance to existing in-band assignments, and existing sharing patterns, to the extent

compatible with ensuring reasonable freedom from harmful international interference;

(b) that the Extraordinary Administrative Radio Conference determine the channel spacing to be adopted, taking into account the information shown in Annex B. Annex E illustrates one way of providing additional channels by using 10 kc/s channel spacing while achieving a large part of the capacity that would result from 5 kc/s spacing. It is to be noted that, in the absence of agreed assignment plans, an increase in the amount of harmful international interference between high frequency broadcast emissions may be unavoidable. To bring the amount of interference within tolerable limits while making provision for the out-of-band assignments it may become essential to face the matter of accepting a channel separation less than 10 kc/s, just as other radio services are likely to have to accept close channel spacing.

(c) that the existing in-band assignments be transferred in accordance with the decision taken in regard to (b), including those on marginal frequencies (see para. 2.3). It is necessary to bear in mind that at present for all bands 56% of notifications are on frequencies ending with digit "0", 30% on digit "5" and about 14% are on other digits;

(d) that each in-band frequency entry in the Corrected Frequency List not conforming to the channel centre frequencies that may be adopted as in (b), should be moved up or down to fit that channelling as would appear appropriate from technical considerations;

(e) that each out-of-band entry in the Corrected Frequency List likely to cause harmful international interference to radio services operating in conformity with the Atlantic City Table should be placed on an in-band channel on a quasi-technical basis, i.e. account to be taken of power, hours of operation, areas of reception and existing sharings in order to minimise possible adjacent channel interference; but on a basis of broad engineering knowledge and experience rather than on theoretical calculations;

(f) that the Conference consider the possibility of adopting the principle of international common channels (as adopted, for example, in European Broadcasting - see Article 1, paragraph 7, of the Preamble to the Copenhagen Plan) in the 6 Mc/s and 7 Mc/s bands for the accommodation of the lower power broadcasting stations, with appropriate limitations of power for night use and for day use, including the possibility of sharing within the W, I and E ionospheric zones;

(g) that the Conference, in making disposition of approximately 30 notifications of Region 2 countries between 6,525 and 8,195 kc/s, takes into account the fact that the band 7,100 - 7,300 kc/s is not available for broadcasting in Region 2 according to the Atlantic City Table.

(h) that when the foregoing has been done, the whole of the Trial Frequency List should be reviewed, with a view to effecting such changes of individual assignments as may appear to be essential if harmful international interference is to be avoided.

4.4 The amount of the foregoing work which might be undertaken by the Conference itself, and indeed the effectiveness and acceptability to Administrations of the Trial Frequency List, would depend largely on the completeness of the data supplied by Administrations to enable the Corrected Frequency List to be established, and on the time necessary for the preparation of the Trial List. The alternatives, however, are clearly as follows:

- a) Preparation of the Trial List by the Conference itself;
or
- b) Establishment by the Conference of only the basic principles and procedures for the transfer of the out-of-band assignments.

4.5 In the latter case, the Trial Frequency List could be established by two methods:

- i) by the Administrations themselves, in selecting the transfers which they desire for their stations, conforming to the principles elaborated by the Conference, or
- ii) by the I.F.R.B. or another body, based on the information given in the Corrected Frequency List and on the basic principles for the transfers which have been elaborated by the Extraordinary Conference.

4.6 In regard to these possible alternatives, the I.F.R.B. is of the opinion that

- a) The relatively short duration of the Extraordinary Administrative Radio Conference as proposed by the Administrative Council, would probably preclude the actual preparation by it of the Trial Frequency List as far as the high frequency broadcasting service is concerned;
- b) The establishment of the Trial List by the Administrations themselves even in conformity with the basic principles elaborated by the Extraordinary Conference, would be liable to give rise to a number of difficulties. These would appear to include the danger of multiple new, uncoordinated assignments on the same frequency, leading to a further extensive re-arrangement of these assignments at some later stage if excessive harmful interference is to be avoided, and corresponding delay in implementation;
- c) If, therefore, the Conference itself, because of the time factor, is unable to prepare the Trial List, the best procedure would appear to be for the Conference to charge the I.F.R.B., or a special group created by the Conference, to prepare the Trial List in accordance with the basic principles and procedures elaborated by the Conference.

4.7 Should the latter arrangement be followed, it will be for the Conference to decide:

- a) what period should be allowed for the preparation of the Trial Frequency List;
- b) what period should be permitted for Administrations to scrutinize this List and to forward their comments;
- c) what period should be permitted for consideration to be given to these comments and for any amendments which have been requested to be incorporated and promulgated to Administrations;
- d) when the Trial List should actually be implemented, either as a whole or in segments (Chapter X), having regard to the special problems of implementation facing each type of radio service, the need for coordination between one service and another in drawing up an implementation schedule, and the problems which will confront Administrations and operating agencies in making the numerous frequency adjustments which will be necessary.

4.8 The Board has examined all the high frequency broadcasting notifications both in and out-of-band, taking as a basis the Current Frequency List containing notifications up to 31st October, 1950, in an attempt to determine the feasibility of the suggestions above outlined. The conclusion has been reached that, subject to the decisions of the Conference on channelling [para. 4.3 (b)], and provided the Corrected Frequency List is not appreciably more congested than the Current Frequency List, it should be possible to accommodate in-band all the out-of-band high frequency broadcasting assignments.

THE SECOND INTERNATIONAL HIGH FREQUENCY BROADCASTING CONFERENCE (FLORENCE/RAPALLO, 1950)

has carefully studied, and attempted to solve, the problem of drawing up six phases of the Mexico City Plan in the light of the comments offered on the work of the Technical Plan Committee (T.P.C.) and the new and modified requirements submitted to the Conference. Considering, however, on the one hand, the difficulties arising from the fact that the requirements exceeded the space available in the various bands assigned to high frequency broadcasting by the International Radio Conference of Atlantic City (1947) and, on the other hand, the development of the international situation during the last weeks of its work, the Conference decided, on 12th August 1950, by 39 votes to 13 with 4 abstentions, to discontinue all work on planmaking.

2. Therefore, while confirming its faith in the principle of establishing world high frequency broadcasting plans by international agreement under the aegis of the International Telecommunication Union (ITU).

THE CONFERENCE RECOMMENDS:

- a) that the conduct of high frequency broadcasting should, in so far as this is possible and contributes to the most effective use of the bands assigned to high frequency broadcasting, conform to the principles and technical standards adopted and the technical data developed at the International Telecommunication Conferences of Atlantic City (1947), and the International High Frequency Broadcasting Conferences of Mexico City (1948-49) and Florence/Rapallo (1950); and, in so far as they are applicable, to the data prepared by the Preparatory Committees of Geneva (1948), and Mexico City (1948), and the Technical Plan Committee sessions of Paris (1949) and Florence (1950);
- b) that countries should take all reasonable steps in the operation of their services to ensure that the possibilities of economy in frequency usage by means of time sharing and simultaneous sharing of the same frequency are fully utilised;
- c) that, within the framework of the Convention and Radio Regulations of Atlantic City (1947), countries should consult amongst themselves, bilaterally and multilaterally, with respect to the scheduling of their respective high frequency broadcasting services, in order to ensure the best use of available frequencies in the high frequency broadcasting bands and with a view to reducing to a minimum interference between stations;
- d) that administrations should cooperate as fully as possible with the International Frequency Registration Board (I.F.R.B.) with a view to reducing to a minimum interference which may arise

between their transmissions, and that they should accord the Board the fullest cooperation and information in the solution of problems of interference and in the utilisation, with the greatest possible facility, of the bands assigned to high frequency broadcasting;

- e) that the Administrative Council of the I.T.U. should take such measures as may be necessary to enable the I.F.R.B. to give, as soon as practicable, and within the framework of the Atlantic City Radio Regulations, all the technical assistance in its power to facilitate the orderly and economic use of frequencies for high frequency broadcasting.

3. FURTHER, with a view to economy in the use of high frequencies, the Conference recommends the employment of the methods indicated in Appendix 1, Section III of the Mexico City Agreement (1949), namely:

- a) Avoid, as far as possible, transmissions during periods when ionospheric conditions are changing very rapidly, if there is no strong reason for continuing the transmissions.
- b) Divide long transmissions into a number of transmissions of shorter duration (but at least equivalent to an hour), for each one of which the use of a single frequency would be acceptable, whenever this procedure would result in avoiding the simultaneous use of frequencies in different bands during certain periods.
- c) Use, wherever technically and economically possible, broadcasting frequencies other than those in the high frequency broadcasting bands (i.e. low, medium, and very high frequencies, and frequencies in the tropical bands).
- d) Take advantage of every practical possibility offered by the utilisation of point-to-point circuits (when such practice is acceptable to the interested services).
- e) Standardise, if possible, transcriptions so that programme exchanges between local or regional stations may lead to a reduction in the use of high frequencies.
- f) Make every effort, in the construction of receivers, to ensure that their characteristics permit the use of all the high frequency and tropical broadcasting bands.

CHAPTER III
Annex B

LOADING PER CHANNEL WHICH WOULD RESULT FROM VARIOUS CHANNEL SPACINGS, BASED ON THE TOTAL
NUMBER OF NOTIFICATIONS, i.e., IN-BAND PLUS OUT-OF-BAND, IN THE CURRENT FREQUENCY LIST (15th EDITION,
INCLUDING SUPPLEMENT 17)

Channel spacing	Atlantic City band kc/s (number of kc/s in band)	5950 - 6200 (250) kc/s	7100 - 7300 (200) kc/s	9500 - 9770 (270) kc/s	11700 - 11980 (280) kc/s	15100 - 15450 (350) kc/s	17700 - 17900 (200) kc/s	21450 - 21750 (300) kc/s	25600 - 26100 (500) kc/s	Totals and averages
10 kc/s	Number of Ch. Surplus kc/s Loading *	25 0 20	20 0 13	27 0 19	28 0 16	35 0 11	20 0 9	30 0 6	50 0 3	total 235 total 0 av. 12
9 kc/s	Number of Ch. Surplus kc/s. Loading *	27 7 19	22 2 12	30 0 17	31 1 14	38 8 10	22 2 8	33 3 5	55 5 3	total 258 total 28 av. 11
8 kc/s	Number of Ch. Surplus kc/s Loading *	31 2 16	25 0 10	33 6 15	35 0 13	43 6 9	25 0 7	37 4 5	62 4 2	total 291 total 22 av. 10
5 kc/s	Number of Ch. Surplus kc/s. Loading *	49 0 10	39 0 7	53 0 10	55 0 8	69 0 5	39 0 5	59 0 3	99 0 1	total 462 total 0 av. 6

* The "loading" is the ratio of the total number of notifications (in-band plus out-of-band) to the number of channels.

◇ "Channel spacing" means the number of kc/s between the centre-frequencies of channels.

CHAPTER III

Annex C

Summary of Notifications and Statistical FactorsBased upon the Current Frequency List (15th Edition, including Supplement 17)

Atlantic City bands kc/s	Number of kc/s in each band	Total number of Notifications (in band plus out-of-band)	Number of Notifications entirely inside each band	Number of notifi- cations in band, but lying on, or 3 kc/s inside each end-frequency	Number of Notifications out-of-band (See Note 3)	Ratio of out-of-band plus marginal notifica- tions (col.5 ÷ col.6) to in-band notifications (Col.4) per cent
Col.1	Col.2	Col.3	Col.4	Col.5	Col.6	Col.7
5950 - 6200	250	511	455	13	43	12.3%
7100 - 7300	200	261	196	10	55(note 2)	17.8%(note 2)
9500 - 9770	270	505	433	13	59	16.6%
11700 - 11980	280	442	391	6	45	13.0%
15100 - 15450	350	376	354	7	15	6.2%
17700 - 17900	200	209	197	3	9	6.1%
21450 - 21750	300	179	171	7	1	4.7%
25600 - 26100	500	147	130	3	14	13.0%
Totals	2350	2630	2327	62	241	$\frac{62 \div 241}{2327} = 13.0\%$

Note 1: This table is based entirely on notifications. In addition, there are 441 assignments (both in and out-of-band) for which there is evidence of activity, as deduced from monitoring records, but which have not been notified to the I.T.U.

Note 2: Of the total of 55 out-of-band notifications, 30 are from countries in Region 2. It is to be observed that the Atlantic City 7100-7300 kc/s band is not available in Region 2 for broadcasting. Subtracting these, the figure in Col.6 becomes 25. The latter figure has been used in calculating Col.7.

Note 3: For the tabulation of the out-of-band notifications, the radio spectrum : 500-27500 kc/s was divided at the following points: 5500, 6525, 8195, 11000, 13360, 16460, 20000, 22300 and 27500 kc/s.

RADIODIFFUSION A HAUTES FREQUENCES

Tableau de comparaison entre le nombre des notifications figurant dans l'actuelle Liste des fréquences (15^e édition, y compris le Supplément 17) et le nombre des assignations figurant dans les résultats du contrôle des émissions.

HIGH FREQUENCY BROADCASTING

Graphic table comparing the number of the notifications appearing in the Current Frequency List (15th edition including Supplement N° 17) and the number of frequency assignments appearing in the records of monitoring sources.

RADIODIFUSION POR ALTAS FRECUENCIAS

Cuadro comparativo del numero de notificaciones que figuran en la actual Lista de frecuencias (15^e edición, incluyendo el Suplemento N° 17) y del número de asignaciones que aparecen en los registros del Control técnico de las emisiones.

Colonne 1	{	Nombre de notifications ne figurant pas dans les résultats du contrôle des émissions.
Column 1		Number of notifications not appearing in the records of monitoring sources.
Columna 1		Total de notificaciones que no figuran en los registros del control técnico de las emisiones.
Colonne 2	{	Nombre de notifications figurant dans les résultats du contrôle des émissions.
Column 2		Number of notifications appearing in the records of monitoring sources.
Columna 2		Total de notificaciones que figuran en los registros del control técnico de las emisiones.
Colonne 3	{	Nombre total de notifications.
Column 3		Total number of notifications.
Columna 3		Número total de notificaciones.
Colonne 4	{	Nombre d'assignations non notifiées, mais figurant dans les résultats du contrôle des émissions.
Column 4		Number of assignments not notified, but appearing in the records of monitoring sources.
Columna 4		Total de asignaciones sin notificar, pero que figuran en los registros del control técnico de las emisiones.

Note. - Ont été considérées comme étant dans les bandes d'Atlantic City les notifications situées aux limites de ces bandes et les assignations figurant dans les résultats du contrôle des émissions et également situées aux limites de ces bandes.

Note. - The notifications, or monitored assignments, on the terminal frequencies of each Atlantic City band have been regarded as being within that band.

Nota. - Las notificaciones situadas en los límites de las bandas de Atlantic City así como las asignaciones que figuran en los registros del control de las emisiones y que se hallan igualmente situadas en los límites de esas bandas han sido consideradas como formando parte de las mismas.

ANNEXE D (Page 3)

ANEXO D (Página 3)

ANNEX D (Page 3)

6 Mc/s band				
Kc/s	1	2	3	4
5300	15	3	18	15
5950	20	13	33	10
6000	318	117	435	31
6200	8	17	25	35
6325				

7 Mc/s band				
	1	2	3	4
6525	23	10	33	32
7100	31	10	41	14
7200	119	46	165	4
7300	15	7	22	41
8195				

9 Mc/s. band				
	1	2	3	4
8195	25	13	38	42
9500	276	110	386	21
9700	41	19	60	9
9770	12	9	21	30
11000				

11 Mc/s band				
	1	2	3	4
11000	13	8	21	12
11700	246	95	341	10
11900	41	15	56	16
11980	21	3	24	27
13360				

15 Mc/s band				
Kc/s	1	2	3	4
13360	7	3	10	15
15100	222	88	310	18
15350	37	14	51	3
15450	3	2	5	6
16460				

17 Mc/s band				
	1	2	3	4
16460	2	1	3	4
17700	22	4	26	5
17750	115	32	147	10
17850	24	3	27	5
17900	6		6	7
20000				

21 Mc/s band				
	1	2	3	4
20000	1		1	5
21450	149	29	178	3
21750				2
22300				

26 Mc/s band				
	1	2	3	4
22300				9
25000	1		1	
25600	131	2	133	
26100	12		12	
27000	1		1	
27500				

Montrant une méthode permettant d'utiliser un espacement de 10 kc/s entre fréquences centrales des voies tout en obtenant une grande partie de la capacité des bandes qui résulterait d'un espacement de 5 kc/s entre fréquences.

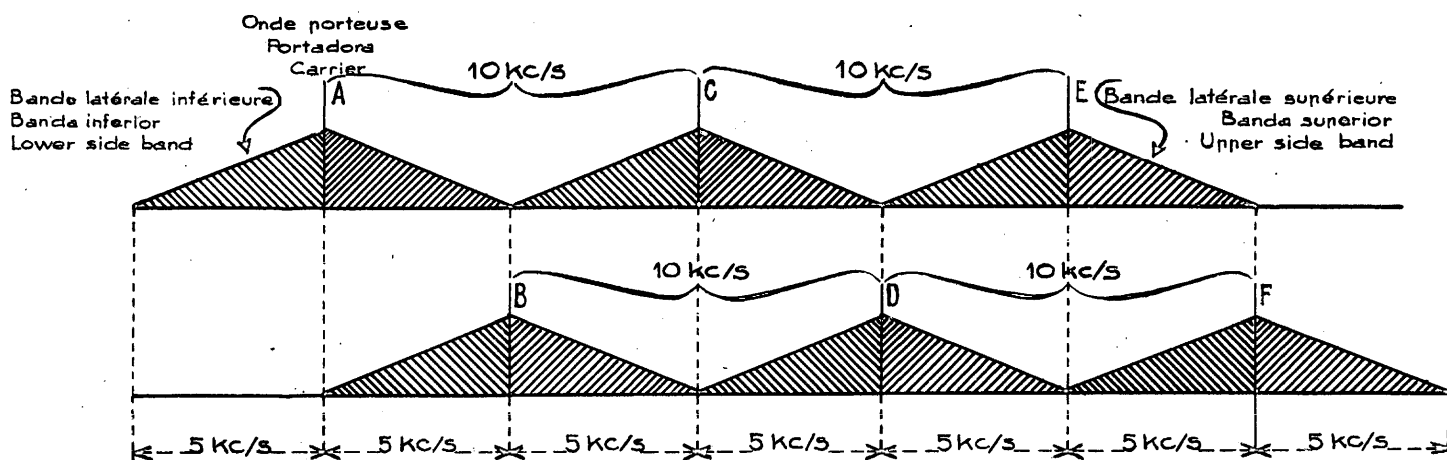
Illustrating a method of using 10 kc/s channel spacing giving a large part of the capacity that would result from 5 kc/s spacing.

Muestra un método que permite utilizar una separación de 10 kc/s. entre las frecuencias centrales de los canales obteniendo una gran parte de la capacidad de banda que resultaría de una separación de 5 kc/s. entre las frecuencias.

CHAPITRE III - ANNEXE E - Page 2.

CHAPTER III - ANNEX E - Page 2.

CAPITULO III - ANEXO E - Página 2.



Les voies "A", "C" etc., sont géographiquement séparées des voies "B", "D", etc., La séparation géographique tiendrait compte de l'emplacement de l'émetteur, de la directivité de l'antenne, de l'emplacement des zones de réception, et des facteurs de propagation appropriés.

Los canales "A" "C", etc. están separados geográficamente de los canales "B" "D" etc. La separación geográfica tiene en cuenta la situación del transmisor, la directividad de la antena, las áreas de recepción y los factores de propagación apropiados.

Channels "A" "C" etc, separated from channels "B" "D" etc. by geographical spacing. The geographical spacing would take into account the location of the transmitter, the antenna directivity, the reception areas and the appropriate propagation factors.

CHAPTER IV

FREQUENCY ASSIGNMENT TABLE FOR REGION 1 AND THE

AFRICAN PLAN

CHAPTER IVFREQUENCY ASSIGNMENT TABLE FOR REGION 1 AND THE AFRICAN PLAN

(See the Final Acts of the Administrative Radio Conference for Region I, Geneva, 1949, and the African Plan)

I

FREQUENCY ASSIGNMENT TABLE FOR REGION 11. Analysis of the Comments submitted by Administrations

1.1 Pursuant to Resolution No. 199 of the Administrative Council, the I.F.R.B. has made a careful analysis of the comments furnished by Administrations on the Frequency Assignment Table which was prepared by the Administrative Radio Conference for Region 1. This analysis has shown that the views of Administrations on the Frequency Assignment Table (Region 1 Plan), as assessed from a study of both their general and detailed comments, can best be classified into 6 broad categories; and the results, which cover all comments received prior to 15th March 1951, are given in the table in Annex 1. This table should be read in conjunction with the Notes which appear on page 2 of Annex 1.

1.2 It is to be noted that it has been rather difficult, in a few cases, to decide in which of the categories the entire comments of a country should be placed. For example, some judgement has had to be used in deciding whether countries should be placed in Category 4 (i.e. countries to which the Region 1 Plan is acceptable without, or with minor, amendment) or in Category 3 (countries to which the Plan is acceptable as a basis for discussion). In such cases, when the amendments desired by a country appear to be such as to require a modification to the Plan which would adversely affect the services of another country, the country desiring the amendment has been placed in Category 3. Some flexibility is, therefore, permissible in interpreting the classifications.

2. Objections raised to Plan

2.1 In the general comments submitted by Administrations, which are being circulated * verbatim to all Administrations as part of the general comments on the ensemble of all P.F.B. and other Assignment Plans, the main objections to the Region 1 Plan fall almost entirely into the following classes :

- a) Objections to excessive co-channel sharing
- b) Objections to an insufficient channel spacing
- c) Objections to interference in the whole area of reception or in a part of it.

2.2 Analysis of the detailed comments furnished by Administrations shows that only 235 assignments, out of a total of about 8800 assignments in the Plan, have been specifically criticized. In nearly every case, the objections to specific assignments are raised on the grounds of probable co-channel or adjacent-channel interference. The detailed comments are being circulated ** in coded form, to all Administrations. Individual cards in respect of each detailed comment, giving full information on the nature of the complaint notified and any suggestions made for its cure, have been prepared for easy reference by the Extraordinary Administrative Radio Conference.

2.3 In agreement with the request of the Administrative Council (Resolution No. 199) for the active assistance of the I.F.R.B. and of all Members of the Union in studying and making proposals for suitable methods of bringing the entire Atlantic City Table of Frequency Allocations into operation as soon as possible, the I.F.R.B. devoted great care to the detailed comments received from the Administrations and tried - with regard to them - to propose changes in the Plan which would make the Plan more acceptable than the existing edition. In their detailed comments certain Administrations also made specific proposals for changes in the Plan. All of the changes proposed by Administrations and by the I.F.R.B. are shown in Annex 2. Of the 235 assignments specifically criticized by Administrations, solutions to 108 cases are suggested.

2.4 It is clear that increased protection can only, in general, be obtained if the number of assignments included in the Plan can be reduced; in fact the range of protected services can, in general, only be increased in the approximate inverse ratio to the reduction in the number of assignments per channel.

* See Booklet A.

** See Booklet C.

II

THE AFRICAN PLAN

The African plan for the distribution of frequencies in the bands 150 - 285 and 415 - 1605 kc/s for the stations of the African Area which was prepared in Geneva 1949 according to a Resolution No. 155 adopted by the Administrative Council at its 4th Session on 19th September, 1949, was signed by 8 countries.

Requests for many changes in the name of stations and in power have been received from Administrations but it seems that these changes would not affect the Plan in its basic form. Only one request asking for a change of frequency was received.

The detailed comments are being circulated * in coded form, to all Administrations. Individual cards in respect of each detailed comment, giving full information on the nature of the change asked for have been prepared for easy reference by the Extraordinary Administrative Radio Conference.

It could be expected that the African Plan would be acceptable to all Administrations involved, in spite of the fact that this has been clearly stated by only one Administration (U.K.).

* See Booklet C.

III

OBSERVATIONS

While, under the Atlantic City Resolution pertaining to the preparation of the New International Frequency List, it is contemplated that assignment plans prepared by Administrative Conferences for regional bands should be studied by the Special (later Extraordinary Administrative) Conference, it should be noted that such plans have a higher status than that of the draft plans prepared by the P.F.B., which were not formally adopted by Administrations and were remitted for consideration by the Extraordinary Administrative Radio Conference. In this connection it is to be recalled that in the Final Acts of the Administrative Radio Conference for Region 1 and in the African Plan the signatory Administrations have retained "the right to submit, if it should be found necessary, certain amended or additional requirements at the time of the Special Administrative Radio Conference".

REGION 1 FREQUENCY ASSIGNMENT TABLE AND THE AFRICAN PLANI. Classification of Comments of Administrations on the Region 1 Plan

CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	CATEGORY 6
PLAN REJECTED ON GENERAL PRINCIPLES BY :	PLAN REJECTED AS NOT MEETING MINI- MUM REQUIREMENTS BY :	PLAN ACCEPTABLE AS BASIS FOR DIS- CUSSION TO :	PLAN ACCEPTABLE WITHOUT, OR WITH ONLY MINOR, AMEND- MENTS TO :	NO COMMENT MADE ON REGION 1 PLAN BUT COMMENTS MADE ON OTHER PLANS BY :	NO COMMENT MADE ON ANY P.F.B. OR OTHER PLANS BY :
ALBANIA BIELORUSSIA BULGARIA CZECHOSLOVAKIA HUNGARY POLAND ROUMANIA UKRAINE U.S.S.R.	ETHIOPIA	FINLAND FRANCE GREECE ICELAND ITALY MOROCCO & TUNISIA NORWAY PORTUGUESE COLONIES U. K. U.K. COLONIES U. S. A. VATICAN CITY	BELGIUM FRENCH OVER- SEA TERRITORIES IRELAND NETHERLANDS PORTUGAL SWEDEN SWITZERLAND UNION OF S. AFRICA YUGOSLAVIA	BELGIAN CONGO DENMARK EGYPT IRAQ LEBANON SAUDI ARABIA S. RHODESIA TURKEY	AUSTRIA ISRAEL LIBERIA LUXEMBOURG MONACO MONGOLIA SYRIA YEMEN

CHAPTER IV

Annex 1/2

- NOTES : A. None of the countries in Category 1 has made any detailed comments on specific assignments in the Region 1 Plan. They have rejected all draft plans prepared by the Regional and Service Conferences and by the P.F.B. on the grounds that the principles and working methods used by them were wrong.
- B. A distinction has been drawn between the countries placed in Category 5 and Category 6, as the absence of comments on the Region 1 Plan from countries which have furnished comments on other plans or draft assignment plans would appear to indicate, at least in many cases, that there is no major objection to the acceptance of the Region 1 Plan.
- C. In the absence of any comments it is not possible to assess the attitude of the countries in Category 6 towards the acceptance of the Region 1 Plan.

II. African Plan.

Many requests for changes in the names of stations etc. in the African Plan but no requests which would affect the basic structure of the Plan, have been received. It could therefore be assumed that the Plan is acceptable without, or with only minor, amendments, to all the countries of the African Area.

FREQUENCY ASSIGNMENT TABLE DRAWN UP BY THE REGION 1 CONFERENCE

The frequency assignment table prepared for Region 1 has given rise to numerous requests for amendment from Administrations, because of risks of interference. The IFRB, while not claiming to have satisfied everybody, has endeavoured to bear these suggestions in mind in the solutions it proposes with a view to making assignments more acceptable.

Region 1 Frequency Assignment Table.First Part

- a) Band 255 - 415 kc/s.
No comments have been received by the IFRB.
- b) Band 285 - 315 kc/s (maritime radiobeacons) :
The United Kingdom has asked for two amendments :
 - 1) Maritime radiobeacon Group 85, Lizard. It is requested that this radiobeacon should use the frequency 298.5 kc/s (frequency E), as 20-mile marker. It would then operate in one of the following groups :
61, 75, 87, etc.
 - 2) Maritime radiobeacon Group 109, Pladda. It is requested that this radiobeacon should use the frequency 307.5 kc/s. (frequency H), as 20-mile marker. It could then operate in one of the following groups :
91, 93, 96, 125, etc.

Second Part

Bands 1605 - 2850 kc/s, 3155 - 3400 kc/s, and 3500 - 3900 kc/s.

The tables attached show the amendments proposed by the IFRB. Mention is made only of those comments in connection with which the IFRB has suggested a possible solution.

The following abbreviations have been adopted :

- | | |
|---------------------------------------|---|
| 1) Ship-shore | Ships (to coast stations); |
| 2) Inter-ship | Between ships; |
| 3) Interference MILANO | Interference feared from MILANO |
| 4) Sharing PARIS | Shared use of frequency is not acceptable; |
| 5) Mediterr. Interference MALTA | In the Mediterranean, there is a risk of interference from MALTA. |

CHAPTER IV
Annex 2/2

REGION 1 - BANDS : 1605 to 2850 kc/s, 3155 to 3400 kc/s and 3500 to 3900 kc/s.

Frequency	Station	Service	Remarks		Possible solutions
			by:	relative to:	
1609	Intership	CP	G	Mediterranean. Interference PADOVA and UDINE	Transfer PADOVA and UDINE to 1612 kc/s.
1623	Ship-shore	CP	G	Mediterranean. Interference MONSANTO - 1621; ROMA - 1623	Transfer MONSANTO and ROMA to 1620 kc/s.
1743	French customs	FX CO	F	Prefers frequency be- tween 3155 and 3400 kc/s.	A "French" frequency might be used for L.M.
1792	Alger	FC CP	F	Sharing with AREZZO difficult.	Transfer ALGER to 1796 kc/s.
1820	Tunis	FC CP	Tuni	Sharing ANCONA. Wants fre- quency between 2500 and 13000 kc/s	Tunis might use 2576 kc/s. It is proposed to transfer KARLSBORG and VARBERG from 2576 to 2580 kc/s.
1946	Strasbourg	FC CP	F	Interference BOLZANO	Place STRASBOURG on 1970 kc/s.
1953	Ship-shore	CP	G	Interference LORAN - 1950.	Transfer Ship-shore to 1978 kc/s.
1960	Ship-shore	CP	F	Interference LORAN - 1950.	Transfer to 1743 kc/s.
1967	Ship-shore	CP	Nor	Interference LORAN - 1950.	Norway would prefer a frequency above 1981 kc/s.
2023	Ship-shore	CP	F	Sharing BRUNICO, MESSINA, S.PIETRO, TRENTO	Transfer BRUNICO, MESSINA, S.PIETRO, TRENTO to 2020 kc/s.

CHAPTER IV
Annex 2/3

Frequency (kc/s)	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
2042	Ship-shore	CP	G	Eastern Mediterranean, sharing RHODOS	Transfer RHODOS to 2033 kc/s.
2045 to 2065		MET	F	No assignment should be made in this band, which should be exclusively re- served for meteorological aids - see pages 4 & 28 RR Atlantic City.	It should be possible to find, within the band 2045-2065 kc/s, the necessary space for the transmitting stations shown in this band in the Region 1 Plan.
2048	United Kingdom	MET	G	Interference LENINGRAD	see 2045 - 2065 kc/s.
2050	Bad Eilsen	MET	D/G	Sharing - LENINGRAD	see 2045 - 2065 kc/s.
2083	Ship-shore	CP	F	Sharing - MESSINA	Transfer MESSINA to 2087 kc/s.
2097	Ship-shore	CP	G	Mediterranean. Interference AOSTA - DIONAZ - FOGGIA - Gr.S. BERNARDO - PUGLIE - TORINO	Transfer AOSTA-DIONAZ-FOGGIA- Gr.S. BERNARDO-PUGLIE-TORINO to 2100 kc/s & transfer Yugoslavia from 2100 to 2079 kc/s.
2104	Ship-shore	CP	G	Mediterranean. Interference VERONA.	Transfer VERONA to 2101 kc/s.
2111	Ship-shore	CP	G	The Channel, Interference FRANCE.	Transfer FRANCE to 2133 kc/s.
2150	Land mobile	IM	G/Maur	Interference SHIPS 2146 kc/s.	Transfer IM Maur to 2153 kc/s.
2261	Intership	CO	F	Interference Atlantic PORT 2264 kc/s.	France proposes transfer "Inter-ship-Port-2264" to 2266 kc/s.

CHAPTER IV
Annex 2/4

Frequency (kc/s)	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
2302	Basse-Bathurst-Georgetown-Kantaur-Mansakinko	FX	G Col	Interference SHIPS - 2296, 2301, 2306.	Transfer Basse-Bathurst-Georgetown-Kantaur-Mansakinko to 2630 kc/s.
2326	Intership	CP	F	North Sea, CHANNEL, sharing D/G	FRANCE proposes that use of this frequency by D be limited to the North Sea.
2361	Intership	CO CP	F	Sharing TIRANE	FRANCE proposes change TIRANE-2361 kc/s with Yugoslavia-2358 kc/s.
2381	Intership	CO	G	Sharing LYON; G. ORIAKHOVITZA, CRISTANO	G. ORIAKHOVITZA, LYON and CRISTANO could be transferred to 2379 kc/s.
2431	Intership	CO	G	Sharing TORINO-TIRANA. Interference A. ABABA-2432.	Transfer TIRANA to 1866 kc/s and TORINO to 2428 kc/s; A. ABABA to 2434 kc/s.
2467	Marrakech	FX	F	Sharing FES, OUJDA	FRANCE proposes transfer MARRAKECH to 2473.
2496	Ship-shore	CP	G	Central Mediterranean. Sharing FIRENZE-CRISTELLO-PISA-ROMA-SIENA-VITERBO	Transfer FIRENZE-CRISTELLO-PISA-ROMA-SIENA-VITERBO to 2510 kc/s and combine with transmitters in Lombardy.
2506	Ship-shore	CP	F Mada	Interference-DIEGO SUAREZ-2507 kc/s.	Transfer DIEGO SUAREZ to 2510 kc/s.
2527	Ship-shore	CP	G	Mediterr. East Red Sea Interference ISMAILIA-2528 kc/s.	Transfer ISMAILIA to 2530 kc/s.

CHAPTER IV
Annex 2/ 5

Frequency	Station	Service	Remarks		Possible solutions
			by:	relative to:	
2541	Ship-shore	-	F	Channel-sharing Ship-shore - D/G.	Ship-shore F might use frequency 2537 kc/s instead of 2541 kc/s.
2555	Ship-shore	GP	G	North Atlantic.Sharing FUNCHAL	FUNCHAL could be transferred to 2551 kc/s.
2574	Metz	FX CO	F	Interference KARLSBORG-VARBERG 2576 kc/s.	France proposes that Metz be transferred to 2572 kc/s.
2576	Ship-shore	GP	F	Sharing KARLSBORG-VARBERG, Interference METZ-2574 kc/s.	Transfer KARLSBORG-VARBERG to 2580 kc/s,METZ to 2572 kc/s.
2614	Arras-Clermont-Ferrand-Laon	FX CO	F	Interference LONDON,ISTRES-2617 kc/s	Transfer ARRAS-CLERMONT FERRAND-LAON to 2610 kc/s
2617 2617 2617	London Gibraltar- Alma-Malta Istres	FX CO FX CO FX CO	G G.Col. F	Sharing AMSTERDAM) Sharing AMSTERDAM) Sharing AMSTERDAM)	Assign 2614 kc/s to AMSTERDAM
2621	Mehdya-Mogador Safi	FC CR	F	Interference GIBRALTAR - 2617 kc/s	Transfer Fr.Mor. to 2628 kc/s, and MARSEILLE to 2633 kc/s.
2628	Marseille	FC CP	F	Interference I - 2624 kc/s	Transfer MARSEILLE to 2633 kc/s
2656	Paris	FX CO	F	Sharing ANCONA	PARIS could be transferred to 2640 kc/s.

CHAPTER ~~IX~~
Annex 2/6

Frequency	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
2663	Casablanca	FC CP	F	Mediterr. Atlant. Sharing SHIP-SHORE	Transfer CASABLANCA to 2652 kc/s
2719	Oran	FC CP	F	Interference ALGER, AJACCIO, SHIP-SHORE, Mediterr. 2726 kc/s.	ORAN might be transferred to 2716 kc/s.
2763	Bordeaux Paris	FX FX CO	F	At Paris interference LAHR- 2764 kc/s.	France proposes that LAHR be transferred to 2765 kc/s
2764	Lahr	FX	F	Interference PARIS- 2763 kc/s.	France proposes that LAHR be transferred to 2765 kc/s.
2768	Chatham- Clyde	FC CO	G	Sharing ATHINAI	Transfer CHATHAM and CLYDE to 2770 kc/s & ATHINAI to 2767 kc/s.
2782	Marrakech Meknes	FX CO	F	Sharing AGADIR, OUJDA	France proposes that frequency 2796 kc/s be assigned to MARRAKECH and MEKNES
2806	KUMASI	FX	G, Col.	Sharing AUGUSTA	Transfer KUMASI to 2803 kc/s.
2840	East England -London	FA CO FAX CO	G	Sharing MOSKVA EAST ENGLAND	Transfer EAST ENGLAND to 2835 kc/s.
3161	St. Helena	FX CP	G, Col.	Interference ABIDJAN 3159 kc/s.	Transfer St. HELENA to 3165 kc/s.

CHAPTER IV
Annex 2/7

Frequency	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
3174	Innsbruck	FX CO	Autr/F	Interference PRAHA - 3173 kc/s	Transfer PRAHA to 3242 kc/s
3189	Lusaka	FX CO	G.Col.	Interference BALOVALE- 3195 kc/s	Transfer BALOVALE to 3200 kc/s
3208	Coimbra	IM	Port		Portugal proposes that COIMBRA be transferred to 3212 kc/s
3216	Apulia-Aveiro- Bom Sucesso- Montijo	FX	Port	Interference PARIS 3220 kc/s	PARIS does not operate on A3, but on A1
3230 3231	London Fayiol	FX CO FX CO	G G-Stat	Sharing TIRANE) Interference TIRANE) 3230 kc/s)	TIRANE might be transferred to 3345 kc/s, since it is proposed that the "INTERSHIP" be transferred from 3345 to 3342 kc/s
3246	Freiburg- Neustadt	FX CO	F	Interference SPLIT- 3245 kc/s: MARSEILLE-BRATISLAVA 3247 kc/s	Transfer FREIBURG and NEUSTADT to 2813 kc/s
3263	Laghouat	FX CO	F	Sharing F (A29)	France proposes that LAGHOUAT be transferred to 3266 kc/s
3273	Dublin	FX CO	Ireland		Assign 3273 kc/s to LONDON, LIVERPOOL, PRESTWICK - (proposal by Ireland)

CHAPTER IV
Annex 2/8

Frequency	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
3284	Lagos	FX	G-Col.	Interference RUGBY- 3285 kc/s	Transfer LAGOS to 3255 kc/s
3288	Perpignan	FX CO	F	Interference I-3286 kc/s I-3289 kc/s	Transfer BREST, PERPIGNAN, RENNES, TOULOUSE, to 3255 kc/s, and NANCY from 3255 kc/s to 3288 kc/s
3298	Quickborn	FX CO	G-Stat	Interference BAGHDAD- 3297 kc/s OXFORD - 3300 kc/s	Transfer BAGHDAD to 3350 kc/s transfer QUICKBORN to 3254 kc/s
3300	Oxford	FX CP	G	Sharing TIRANE, BUDAPEST, ROME, MOSKVA. Interference BAGHDAD - 3297 kc/s	Transfer OXFORD to 3297 kc/s: BATHURST to 3295 kc/s: Land Mobile ACF from 3297 to 3300 kc/s: Tongegourt from 3297 to 3220 kc/s
3302	Oran	FX CO	F	Interference: ROME - 3300kc/s OXFORD: 3300kc/s	OXFORD could be transferred to 3297 kc/s
3306	Enugo	BC	G-Col	Interference A.E.F. 3304kc/s	Transfer A.E.F. to 3301 kc/s
3316 3317	Freetown Ship-shore	BC	G-Col F	Interference SHIPS 3317 kc/s) Interference 3312:3313:3315: 3320: 3322 kc/s. 3317 kc/s unworkable at night)	Transfer Ship-shore F. and POL. to 3371 kc/s Transfer MALTA and MOTALA from 3370 to 3317 kc/s

CHAPTER IV
Annex 2/9

Frequency	Station	Service	Remarks		Possible solutions
			by:	relative to:	
3334	Paris, Baden, Sarrebruck	FX CO	F	Sharing Nor. 3334 kc/s	Nor. might be transferred to 3340 kc/s and BRUXELLES and F from 3340 to 3346 kc/s.
3341	Innsbruck, Baden	FX CO	F	Interference MILAN-S.NICOLA DI TREMITI-VASTO: ALDERSHOT 3343 kc/s	ALDERSHOT might be transferred to 3344 kc/s
3346	Tamale	BC	G-Col	Interference SHIPS 3345 kc/s	Transfer the "INTERSHIP" from 3345 to 3342 kc/s
3354	Shannon	FX CO	Ireland	Sharing HOLL	Transfer either AMSTERDAM or SHANNON to 3350 kc/s
3382 3384 3387 3396	Ismailia Alger, Oran, Sétif. Intership Accra	FX CO FX CO BC	G-Stat. F G G-Col.	Interference WIEN - 3384 kc/s Interference I.3383: Sharing WIEN Sharing NICE Interference SHIPS 3394 kc/s	Transfer ISMAILIA to 3384 kc/s, WIEN to 3394 kc/s, INTERSHIP from 3394 to 3381 kc/s Transfer F(Alg) to 3395 kc/s Transfer INNSBRUCK from 3394 to 3384 kc/s Transfer CAPE TOWN and D.MARCOS from 3386 to 3387, and NICE from 3387 to 3386 kc/s
3522	Djibouti	FX CP	Som. F	Sharing ADEN	Transfer ADEN or DJIBOUTI to 3524 kc/s
3530	Lyon, Metz, Rennes	FX CO	F	Interference RUGBY- 3528kc/s Sharing I-Nord	LYON, METZ, RENNES might be transferred to 3531 kc/s
3532	Bathurst	FX	G.Col.	Too close to 3502 kc/s	BATHURST might be transferred to 3605 kc/s

CHAPTER IV
Annex 2/10

Frequency	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
3555	Marseille Tunis	FX CO	F	Sharing ALMAZA, M.MATROUTH	ALMAZA and MERSAH MATROUTH might be transferred to 3657 kc/s
3557	Berlin	FX CO	G-Stat	Interference ANKARA- 3558	Transfer ANKARA to 3577 kc/s
3559	Accra	MET	G.Col.	Interference ANKARA 3558 kc/s	See 3557 kc/s
3562	Bad Eilsen	FAX CO	D/G	Sharing WIEN	Transfer WIEN to 3547 kc/s : LONDON to 3559 kc/s
3569	Freetown	FX	G-Col	Sharing ROMA	Transfer FREETOWN to 3579 kc/s
3574	Djibouti	FX CP	F	Interference ASMARA 3569 kc/s	Transfer DJIBOUTI to 3590 kc/s
3593	Police	FX CO	F	Interference PARIS 3590 kc/s	France proposes that the interfering station : PARIS on 3590 kc/s be transferred to another frequency
3620	Mascara	FX CO	F	Sharing PARIS	Transfer MASCARA to 3622 kc/s
3624	Alger, Taza, Bizerte	FX CO	F	Sharing ROME, MADDALENA	Transfer ALGER, TAZA, BIZERTE to 3625 kc/s
3628	Paris, Rabat, Alger, Tunis	FX CO	F	Interference ROMA 3627 kc/s	PARIS-ALGER-RABAT-TUNIS might be transferred to 3630 kc/s

CHAPTER IV
Annex 2/11

Frequency	Station	Service	Re m a r k s		Possible solutions
			by:	relative to:	
3635	Hamburg	FX Met.	G/D	Sharing VAASA	Transfer VAASA to 3633 kc/s
3650 3652	Tunisie Aldershot	FX CO FX CO	F G	Interference AUGUSTA- 3652 kc/s) Sharing AUGUSTA))))	The 3645 kc/s bloc might be transferred to 3652 kc/s, and the 3652 kc/s bloc, with the exception of ALDERSHOT, to 3645 kc/s. ALDERSHOT to remain on 3652 kc/s. The French stations would have to be re-arranged.
3665	Innsbruck Berlin Paris	FX CO	F	Sharing PRESTWICK	PRESTWICK might be transferred to 3666 kc/s
3677	Aalesund	FX FA	Nor		Norway would prefer, either for AALESUND, or for BERGEN (3690 kc/s), a frequency in the 3155-3200 kc/s band
3680	Innsbruck	FX CO	F	Sharing MOSKVA	Transfer MOSKVA - 3680 to 3704 kc/s
3680	Liby/g	FX FA	G.Stat.	Sharing MOSKVA	Transfer MOSKVA to 3704 kc/s and BAKOU from 3705 to 3707 kc/s
3682	Baden-Marseille	FX CO	F	Interference MOSKVA	See 3680 kc/s
3687	Banya	FX CO	G.-Col	Interference ADEN, ASMARA-3690 kc/s	Transfer BANYA to 3680 kc/s
3690	Bergen	FX FA	Nor.		See 3677 kc/s

CHAPTER IV
Annex 2/12

Frequency	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
3696	Zanzibar	FX CP	G-Col.	Interference LOURENCO MARQUES 3697 kc/s	Transfer L.MARQUES to 3710 kc/s
3715	Freiburg	FX CO	F	Interference STASBOURG- DIJON - 3714 kc/s	Transfer FREIBURG to 3716 kc/s
3732	Bordeaux- Alger-Rabat- Tunis	FX CO	F	Sharing BUDAPEST, PRAHA	Transfer PRAHA to 3731 kc/s, BOLOGNA to 3730 kc/s and BUDAPEST to 3734 kc/s
3735	Kuwait	FX CP	G-COL	Acceptable if BAHREIN - 3756 kc/s is transferred	Transfer BAHREIN to 3782 kc/s
3740	Philippeville	FX CO	F	Sharing Fr. Mor., Tuni	PHILIPPEVILLE could be transferred to 3796 kc/s
3752	Lilongwe	FX CO	G Col	Interference VILALUSO - 3749 kc/s and MZIMBA - 3745 kc/s	LILONGWE might be transferred to 3786 kc/s
3756	Bahrein	FX CP	G Col	See KUWAIT - 3735 kc/s	Transfer BAHREIN to 3782 kc/s
3778	Marseille	FX	F	Interference BARI-FIRENZE- ALEXANDRIA SHIPS - Mediterranean	MARSEILLE might be transferred to 3772 kc/s
3780	Bad Eilsen	FX CO	G	Sharing TIRANE	BAD EILSEN might be transferred to 3794 kc/s

CHAPTER IV
Annex 2/13

Frequency	Station	Service	R e m a r k s		Possible solutions
			by:	relative to:	
3790	Dijon, Lyon, Marseille, Paris	FX CV	F	Sharing I.	DIJON, LYON, MARSEILLE, PARIS might be transferred to 3770 kc/s
3807	Saint Denis (Reunion)	FX CP	F	Interference LUSAKA, BULAWAYO, SALISBURY - 3810 kc/s	Transfer LUSAKA, BULAWAYO, SALISBURY to 3815 kc/s
3810	Lusaka	FX	G Col	Sharing L.MARQUES	Transfer LUSAKA, BULAWAYO, SALISBURY to 3815 kc/s
3867	Malta	FX	G Col	Sharing EL HAGG	Transfer EL HAGG to 3866 kc/s and MALTA to 3869 kc/s
3892	Mostaganem	FX CO	F	Sharing MADRID	Transfer MADRID to 3881 kc/s

CHAPTER V

FREQUENCY ASSIGNMENT LIST FOR REGION 3

CHAPTER V

FREQUENCY ASSIGNMENT LIST

FOR

REGION 3

(See the Final Acts of the Region 3 Administrative Radio
Conference, Geneva 1949)

1. Analysis of the Comments submitted by Administrations.

1.1 Pursuant to Resolution No. 199 of the Administrative Council, the comments of Administrations on the Region 3 plan have been analysed by the I.F.R.B. and the results are tabulated in Annex I. It is evident from this table that the Region 3 plan is supported by a substantial majority of the countries of this region. In fact, the only country which has clearly indicated its objection to the acceptance of this plan is Portuguese Colonies, which has submitted a comparatively small number of requirements. All the general comments submitted by Administrations prior to 15th March 1951 have been circulated verbatim to all Members of the Union. *

1.2 The detailed comments, which have been published in a separate booklet ** and which are mostly concerned with objections, or proposed alterations, to certain specific frequency assignments, have been closely examined. Because of the large area of Region 3 and the propagation characteristics of the frequencies concerned, the majority of alterations desired by the various countries are not considered likely to affect the assignments to other countries. The observations of the I.F.R.B. on the detailed comments made by Administrations, and, where possible, suggestions whereby dissatisfaction with assignments in the present plan might be overcome, are given in Annex II.

2. Objections raised to the Plan and Observations.

2.1 The Portuguese Colonies have made no detailed objections to specific assignments and it is therefore impossible, at present, to estimate exactly what is involved in overcoming their dissatisfaction with the plan. Having regard to the comparatively small requirements of that country, however, and to the relatively slight difficulty which is foreseen in meeting objections raised by other countries, there seems no reason why, by some further refinement of the plan and by a little give and take between the various countries, a plan

* See Booklet A

** See Booklet D.

succeptable to all the countries in Region 3 should not be finalised by the Extraordinary Administrative Conference.

2.2 While, under the Atlantic City Resolution pertaining to the preparation of the New International Frequency List, it is contemplated that assignment plans prepared by Administrative Conferences for regional bands should be studied by the Special (later the Extraordinary Administrative) Conference, it should be noted that such plans have a higher status than that of the draft plans prepared by the P.F.B., which were not formally adopted by Administrations and were remitted for consideration by the Extraordinary Administrative Radio Conference. In this connection it is to be recalled that in the Final Acts of the Administrative Radio Conference for Region 3 the signatory Administrations have retained "the right to submit, if it should be found necessary, amendments and additional requirements for the Special Administrative Radio Conference".

AFTER - NOTE

The I.F.R.B. has just received (23 April 1951) from India detailed comments on over 800 frequency assignments above 1605 kc/s, the majority of which are considered as "unworkable for India". Since these comments have been submitted much later than the date specified in Resolution No. 200 and since time does not permit the Board to examine them prior to the latest date by which the material specified in this same Resolution must be published in order to be despatched in due time, the I.F.R.B. cannot modify the preceding report, nor can it include the detailed comments just received in Booklet D. Appropriate supplements will therefore be published later.

Annex 1

Classification of Comments of Administrations

Plan acceptable							Unacceptable	No answer	No definite indication
apparently without amendment to	with reservation to submit additional requirements to	with minor amendments to	with alterations not likely to affect the general plan to	to, but expression of some dissatisfaction by	with alterations which will affect the Plan in certain bands to	but generally not satisfactory for the assignments above 1605 kc/s to	to	by	by
Burma Indonesia Netherlands (New Guinea)	Ceylon	French Overseas U.K. Colonies U.S. Territories	Australia New Zealand	Pakistan	Japan	India	Portuguese Colonies	Afghanistan Korea Iran Nepal Siam	China Philippines
3	1	3	2	1	1	1	1	5	2

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Annex 2

Observations on Administrations' detailed comments for Region 3 Plan - Geneva, 1949.

Country	Freq.	Circuit No.	Administration's comments	Observations by I.F.R.B.
Australia			A considerable number of changes of specific assignments and some additional assignments, are proposed.	All detailed comments from Australia received by I.F.R.B. up to 15th March 1951 have been examined. It is believed that alterations to assignments in the Plan, proposed in these comments, as well as new additions, will not introduce serious interference to the operations of other countries. Any such alterations which might affect New Zealand are assumed to have been agreed upon by the latter in the mutual negotiations which are mentioned in both Administrations' general comments.
French Overseas	2310	C-EZ 56	Inadequate protection from R-BX 854 on 2310 kc/s and proposal to transfer C-EZ 56 to 2316 kc/s.	The proposed transfer will cause no serious interference to other countries
India			Several changes of specific assignments and some additional assignments are proposed	All detailed comments received by the I.F.R.B. up to the 15th March 1951 have been examined. It is believed that alterations to assignments in the Plan suggested by the Indian Administration will not introduce any serious interference to the operations of other countries in Region 3.
Japan*	2315	F-FN 57	Sharing with F-FN 50 unacceptable. Several changes of specific assignments and some additional assignments are proposed.	Suggests to transfer F-FN 57 to 2340 kc/s. *Other comments for alterations from the Japanese Administration received by I.F.R.B. up to 15th March 1951 have also been examined, and it is believed that they will not introduce any serious interference to the operations of other countries in Region 3.

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Annex 2/2

Country	Freq.	Circuit No.	Administration's comments	Observations by I.F.R.B
Pakistan	3395	R-LD 1	Amend the following columns : (4b) to read West Pakistan, Afghanistan & Iran (4c) to read 2000 (8) " " 10 - 50 (10) " " 0100-0430 1200-1900	No serious change in the original sharing situation
U.K. Territories	223	A-GN 5	Unacceptable owing to possible inter- ference from A-GN6 at 217 kc/s and from D-GN 23 at 228 kc/s.	Suggests to transfer A-GN 5 to 255 kc/s
"	422.5	C-LU Z30	Unacceptable owing to possible inter- ference from C-HP 2 at 422.5 kc/s	Suggests to transfer C LU Z30 to 435 kc/s
"	2560	F-BL 190	Unacceptable owing to possible inter- ference from F-HY 99N at 2555 kc/s and from F-HY Z17 at 2560 kc/s.	Suggests to transfer F-BL 190 to 2420 or 2130 kc/s.
"	2595	F-DG Z04	Unacceptable owing to possible inter- ference from C-HY 41 at 2595 kc/s.	Suggests to transfer F-DG Z04 to 2523 kc/s, A-DG 60 from 2525 to 2595 kc/s, and L-HM Z30 from 2524 to 2597 kc/s.
"	2665	F-BL 845	Unacceptable owing to possible inter- ference from F-HY 65, 181 at 2662.5 kc/s, from F-BW 766-767 at 2667.5 kc/s and from F-KT Z02 at 2670 kc/s.	Suggests to transfer F-BL 845 to 2460 or 2234 kc/s.
"	2707.5	F-FZ 614	Unacceptable owing to possible inter- ference to reception at Bangkok by F-EU 65IN at 2707.5 kc/s.	" " " F-FZ 614 to 2675 kc/s, and F-BW 326 from 2675 to 2707.5 kc/s

CHAPTER V

Annex 2/3

Country	Freq.	Circuit No.	Administration's comments	Observations by I.F.R.B.
U.K. Territories	2730	F-FZ 47N	Unacceptable owing to possible interference from F-EZ 160Z at 2731.25 kc/s.	Suggests to transfer F-FZ 47N to 2728 kc/s, or 2145 kc/s.
"	2785	F-BL 158	Unacceptable owing to possible interference from F-HY 4 at 2781.25 from F-EZ 166Z at 2782.5 kc/s and from F-EZ 164Z, 172Z at 2787.5 kc/s.	" " " F-BL 158 to 2282 kc/s.
"	3167.5	F-FZ 941	Unacceptable owing to possible interference from F-FN 32N at 3167.5 kc/s.	" " " F-FN 32N to 3166.25 kc/s
"	3180	F-BL 198	Unacceptable owing to possible interference from A-HY 17-19 at 3175 kc/s, from F-GN 589 at 3177.5 kc/s, from F-EZ 157Z at 3182.5 kc/s, etc.	" " " F-BL 198 to 2292 kc/s.
"	3185	F-IS 316Z	Unacceptable owing to possible interference from C-EX 127 at 3180 kc/s, from F-BL 198 at 3180 kc/s, from F-EZ 157Z at 3182.5 kc/s, from F-EZ 267-268, 271, 345 at 3185 kc/s, etc.	" " " F-IS 316Z to 3516, or 2254 kc/s
"	3268	R-BL 1	Unacceptable owing to possible interference from C-EZ 62, C-HA 62 and C-HN 62 at 3261.5 kc/s, from F-KT19N at 3265 kc/s, from F-KT X19 at 3271 kc/s, etc.	" " " R-BL 1 to 2470 kc/s
"	3272.5	F-GN 127	Unacceptable owing to possible interference from R-EX 2C at 3277 kc/s	" " " F-GN 127 to 3521 kc/s.
"	3286	R-BL Z10 R-BL Z11 R-BL Z13	Unacceptable owing to possible interference from F-HY 2 at 3280 kc/s, from R-BJ 3, R-EX 34, R-HY 6 at 3286 kc/s and from F-HY 150 at 3290 kc/s.	Concessions by neighbouring countries are necessary.

CHAPTER V

Annex 2/4

Country	Freq.	Circuit No.	Administration's comments	Observations by I.F.R.B
U.K. Territories	3330	F-IS 256N	Unacceptable owing to possible interference from F-EZ 193, 196-197, 323-325, 344 at 3330 kc/s.	Suggests to transfer F-IS 256N to 3507.5, or 2169 kc/s.
"	3360	F-BL 196	Unacceptable owing to possible interference from R-EX 3 at 3355, from F-EZ 123Z at 3360, etc.	" " " F-BL 196 to 2479, or 2210 kc/s.
"	3380	F-GN 773	Unacceptable owing to possible interference from L-EZ 40Z, 43Z and F-IS 247Z at 3380 kc/s.	" " " F-GN 773 to 2405, or 2287 kc/s.
"	3385	R-BL Z12	Unacceptable owing to possible interference from L-EZ 40Z, 43Z at 3380, F-KT 22 at 3382.5, R-BY Z08, R-EX30, R-HT 1, F-HY 336 at 3385 and L-EZ 24Z, 27Z at 3390 kc/s.	Concessions by neighbouring countries are necessary.
"	3530	F-GN 664	Unacceptable owing to possible interference from F-FE 15 and F-EZ 206-208, 334 at 3530 kc/s	Interference seems to be tolerable
"	3540	F-FZ 615	Unacceptable owing to possible interference from F-BY 741 at 3540 kc/s	Suggests to transfer F-FZ 615 to 2491 kc/s.
"	3562.5	F-GN Z16	Unacceptable owing to possible interference from F-EX 145, 146, 148, 150 at 3562.5, A-BW 161, 158 A, E, F, and A-BY 158 B, C, D, at 3565 kc/s	" " " F-GN Z16 to 3805 or 2108.5 kc/s
"	3602.5	F-GN 574	Unacceptable owing to possible interference from F-EZ 186Z at 3602.5 kc/s	" " " F-GN 574 to 3675 kc/s
"	3662.5	F-BL 195	Unacceptable owing to possible interference from F-EX 91-103 at 3660, F-EX 172-184 at 3665, F-HY 60N at 3662.5, F-HY Z03 at 3657.5 and F-BL 555 at 3667.5 kc/s	" " " F-BL 195 to 3540, or 2225 kc/s

CHAPTER V

Annex 2/5

Country	Freq.	Circuit No	Administration's comments	Observations by I.F.R.B.
U.K. Territories	3667.5	F-BL 555	Unacceptable owing to possible interference from F-EZ 337 at 3667.5 kc/s	Suggests to transfer F-BL 555 to 3501.5, or 2145 kc/s

CHAPTER VI

FREQUENCY ALLOTMENT PLANS FOR THE AERONAUTICAL MOBILE SERVICE

EXCLUSIVE BANDS BETWEEN 2850 AND 27500 kc/s

CHAPTER VIFREQUENCY ALLOTMENT PLANS FOR THE AERONAUTICAL MOBILE SERVICEEXCLUSIVE BANDS BETWEEN 2850 AND 27500 kc/s

(See the Frequency Allotment Plan for the Aeronautical Mobile Service and Final Agreement of the International Administrative Aeronautical Radio Conference, Geneva 1948-1949, and the document annexed to Circular Letter No. 20/20 dated 10 February 1950).

SECTION AFREQUENCY ALLOTMENT PLAN FOR THE AERONAUTICAL MOBILE "R" SERVICE1. Analysis of the comments submitted by Administrations

Pursuant to Resolution No. 199 of the Administrative Council the I.F.R.B. has made an analysis of the comments furnished by Administrations on the Frequency Allotment Plan for the Aeronautical Mobile "R" Service which was prepared by the International Administrative Aeronautical Radio Conference (I.A.A.R.C.) (Geneva 1948-49). This analysis has shown that the views of Administrations on the Plan can best be classified into five broad categories and the results, which cover all comments received prior to 15th March 1951, are given in the Table in Annex 1.

The 9 countries in Category 1 have all rejected the Plan on the ground that it does not take equitable account of the interests of I.T.U. Member States and 5 of the countries have stated that this results from the allotment to Major World Air Routes ⁽¹⁾ of one-half of the frequencies available to the Aeronautical Mobile "R" Service.

The two countries ⁽²⁾ in Category 2 have rejected the Plan because it does not provide for the frequencies which are being used by these countries for Aeronautical Mobile communications.

The 22 countries in Category 3 have indicated their acceptance of the Frequency Allotment Plan as a basis for the final frequency assignments to be made, by each country, to its stations operating in the Aeronautical Mobile "R" Service. Several of the countries in this Category have made

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- (1) The IAARC allots 12 frequencies exclusively to Major World Air Route Areas, 84 frequencies exclusively to the Regional and Domestic Air Route Areas, and 55 frequencies shared between Major World and Regional and Domestic Air Route Areas.
 - (2) A frequency assignment Plan, prepared at the Europe-Middle East Regional meeting in Paris, 1950, which provides for specific assignments to the stations of the countries in this Region within the framework of the IAARC Allotment Plan, was however apparently acceptable to the Greek representative.

the reservation that the final specific frequency assignments to stations should take account of the discussions and agreements at Regional meetings held under the aegis of I.C.A.O. Yugoslavia has requested two additional frequencies for use in the "R" service while Portugal accepts the basic Allotment Plan provided that the A3 channels are not sub-divided into A1 channels for telegraphic operations.

The absence of comments on the Allotment Plan from the 23 countries in Category 4, which have all furnished comments on some or all of the other plans prepared by the P.F.B., Regional or Service Conferences, would appear to indicate, at least in many cases, that there is no major objection to the acceptance of the I.A.A.R.C. Plan. This is borne out by the fact that 14 of the countries listed in this Category were signatories to the Frequency Allotment Plan for the Aeronautical Mobile Service and the Final Agreement of the Aeronautical Administrative Conference. Moreover, many of these countries have participated in subsequent Regional meetings at which agreements were reached on the specific assignments to these countries within the framework of the I.A.A.R.C. Allotment Plan.

In the absence of any comments, it is not possible exactly to assess the attitude of the 25 countries in Category 5 towards the acceptance of the Allotment Plan. However, 10 of the countries in this Category also signed the Final Acts of the Aeronautical Administrative Conference.

The comments of Administrations on the Allotment Plan for the Aeronautical Mobile "R" Service are being circulated verbatim to all Member-countries of the Union as part of the ensemble of the comments on all Plans covered by Administrative Council Resolution No. 200.*

2. Observations

(1) While, under the Atlantic City Resolution pertaining to the preparation of the New International Frequency List, it is contemplated that Assignment Plans prepared for exclusive Service bands should be studied by the Special (later the Extraordinary Administrative) Conference, it has to be remembered that the Frequency Allotment Plan for the Aeronautical Mobile "R" Service has already been adopted by an Administrative Conference. It has therefore a higher status than that of the draft Plans prepared by the P.F.B. which were not formally adopted by Administrations and were remitted for consideration by the Extraordinary Administrative Conference.

(2) A substantial majority of the Member-countries of the Union would still appear to be in favour of maintaining the I.A.A.R.C. Frequency Allotment Plan for the Aeronautical Mobile service as the basis for the registration of specific frequency assignments, for this service, by individual countries,

(3) The Allotment Plan, and specific frequency assignment Plans elaborated at subsequent Regional meetings, provide for a considerable number of frequencies to Greece and to Guatemala for Aeronautical Mobile "R" Services. No great difficulty is foreseen therefore, in reconciling the objections raised by these countries to the Allotment Plan, provided that they are prepared to move the frequencies already in use in their countries to conform with the channel frequencies adopted in the Allotment Plan.

* See Booklet A

(4) A major issue is involved, however, in reconciling the objections of the U.S.S.R. and other States in Eastern Europe since these objections to the Plan rest fundamentally on the amount of spectrum space which is allotted respectively to Major World Air Routes and to Regional and Domestic Air Routes. It will be for the Extraordinary Administrative Conference to consider how this difficulty can best be overcome. However, it would appear to be possible, technically, for a number of Major World Air Route frequencies, in particular in the lower bands, to be used in many areas of the U.S.S.R. and in certain other parts of Eastern Europe for Regional and Domestic aeronautical services, without interfering, particularly by day, with the Major World Air Route services of other countries. Hence, a solution may be possible by the conclusion of mutual agreements among the interested States on additional frequency sharing, or possibly on small changes of Area boundaries, without any major revision of the general structure of the Allotment Plan.

(5) Several countries have proposed that, in accordance with Recommendation No. 4 of the I.A.A.R.C., assignments made by individual countries to individual stations, within the framework of the Allotment Plan for the Aeronautical Mobile "R" Service, should be based on the discussions and agreements reached at Regional meetings. A series of such Regional meetings has been held, mainly under the aegis of ICAO, since the publication of the Allotment Plan and in all known cases have resulted in the elaboration of specific frequency assignment plans which have been accepted by the representatives of the participating countries. Copies of these plans will be made available to the Extraordinary Administrative Conference ; but it is assumed that in accordance with Recommendation No. 6 of the I.A.A.R.C. , these plans and agreements will not be formally adopted but will simply be used by the Administrations which are parties to these agreements as the basis on which they will notify individual assignments which are in conformity with the I.A.A.R.C. Allotment Plan.

(6) In view of the very exhaustive studies and discussions of the problem of Aeronautical Mobile "R" communications by the International Administrative Aeronautical Conference, the considerable amount of agreement which was reached by that Conference in regard to the final conclusions, the comparatively small number of objections which have been lodged against the Frequency Allotment Plan, and the large amount of effort which has been expended since the Plan was published in planning and co-ordinating the assignments of individual countries, it is to be hoped that the Extraordinary Conference will not find it necessary drastically to modify the basic framework of the Allotment Plan. It would appear to be possible to localize the areas in which the Plan does not, in its present form, provide frequencies which are considered adequate by a country or countries in these areas ; and the Conference may wish to consider whether it would not be profitable for the difficulties to be examined, at least in the first instance, by all the countries in these areas whose assignments for the Aeronautical Mobile "R" Service might be affected by any changes which would make the plan more acceptable to the dissatisfied countries. Any solutions either as regards additional frequency sharing or as regards small changes in Area boundaries might then be embodied in a draft Supplementary Agreement to the I.A.A.R.C. Final Agreement and submitted to the full Conference for consideration.

SECTION BALLOTMENT PLAN AND FREQUENCY ASSIGNMENT LIST FOR STATIONS OF
THE AERONAUTICAL MOBILE "CR" SERVICE1. Analysis of the comments submitted by Administrations

Comments of Administrations on the Plans for the Aeronautical Mobile "CR" Service have been classified into five broad categories and the results, which cover all comments received prior to 15 March 1951, are given in the Table in Annex 2. It will be remembered that following the adoption of the Allotment Plan for the Aeronautical Mobile "CR" Service by the International Administrative Aeronautical Radio Conference, (Geneva, 1948-49), a specific Frequency Assignment List for individual stations in the "CR" service, within the framework of the Allotment Plan and based on requirements for this service which had been submitted to the Conference, was prepared by a Working Group of that Conference, and was circulated to Administrations by the Secretary General on 10th February 1950 (Circular letter No. 20/20). The comments which have been furnished by Administrations therefore relate, in some cases, not only to the basic Allotment Plan drawn up by the Aeronautical Conference, but also to the later specific Frequency Assignment List.

None of the 9 countries in Category 1 has made any detailed comments either on the "CR" Allotment Plan or on the Frequency Assignment List. They have rejected the Plans prepared by the International Administrative Aeronautical Conference on the main ground that the sub-division of the spectrum space available to the "R" service does not take equitable account of the interests of the I.T.U. Member States. No specific objections have been lodged against the "CR" Allotment Plan as such, and, in fact, the adoption of this Plan was supported by the countries in question at the first session of the International Administrative Aeronautical Conference.

Of the three countries in Category 2, Guatemala and Uruguay* are unable to accept the Plan, and associated Frequency Assignment List, because they do not include sufficient assignments to their countries. The comment received from Greece indicates a rejection of all Aeronautical Mobile Plans; but since that country made no requirements for "CR" communications to the I.A.A.R.C., it would seem that its objections are not directed against the "CR" Plan.

The 30 countries in Category 3 have accepted the "CR" Frequency Allotment Plan in principle. However, China, Switzerland and Yugoslavia have requested that additional "CR" frequencies should be assigned for their use, while the United States accept the Plan subject to the addi-

* A reservation against this Plan was made, by Uruguay, at the International Administrative Radio Conference.

tion of some areas (which are not estimated to give rise to interference to other assignments) to certain frequencies mentioned in the Plan.

An important reservation has been made by Portugal, which, while accepting the Plan as far as Portuguese frequency assignments are concerned, points out that the Plan does not provide for the requirements of Spain and that the operation of Spanish stations may negative the practical value of the Plan especially, as far as the Portuguese Administration is concerned, on the lower frequencies. The Portuguese Administration considers it indispensable that an arrangement should be made with Spain concerning the frequencies to be used by Spanish stations and that those frequencies should be incorporated in the Plan.

The absence of comments on the Plan from the 17 countries in Category 4, which have all furnished comments on some or all of the other plans prepared by the P.F.B., Regional or Service Conferences, would appear to indicate, at least in many cases, that there is no major objection to the acceptance of the Allotment Plan and draft Frequency Assignment List. This is borne out by the fact that 6 of the countries listed in this Category were signatories to the Final Acts of the Aeronautical Administrative Conference.

In the absence of any comments, it is not possible exactly to assess the attitude of the countries in Category 5 towards the acceptance of the allotment of the Frequency Assignment Plan. However, 10 of the countries in this Category also signed the Final Acts of the Aeronautical Administrative Conference.

The general comments of Administrations on the Allotment Plan for the Aeronautical Mobile "QR" Service, and the associated Frequency Assignment List, are being circulated verbatim to all Member-countries of the Union as part of the ensemble of the comments on all Plans covered by Administrative Council Resolution No. 200. *

The detailed comments on specific allotments or assignments are given in Annex 3.

2. Observations

(i) Like the Frequency Allotment Plan for the "R" Service, the basic Frequency Allotment Plan for the "QR" Service has already been adopted by an Administrative Conference. The associated Frequency Assignment List has not yet been approved by an Administrative Conference but is framed on the basic Allotment Plan and the requirements for this type of service submitted to the I.A.A.R.C.

(ii) A substantial majority of the Member-countries of the Union would appear to be in favour of maintaining the I.A.A.R.C. Allotment Plan for the Aeronautical Mobile "QR" Service and adopting the corresponding Frequency Assignment List without, or with only comparatively minor, modifications.

(iii) Should the Extraordinary Administrative Conference decide to admit

* See Booklet A

the requests of China, Guatemala, Switzerland, Uruguay and Yugoslavia for additional frequencies it would seem that a solution to the difficulties of these countries might be found through discussions between the countries in the areas concerned which might lead to agreements in regard to the additional shared use of some frequencies.

(iv) It is not clear, from the comments which have been furnished, how serious are the objections of the countries in Category I of Annex 2 to the adoption of the "QR", as distinct from the "R" Plan ; but it would seem that the objections to the "QR" Plan are perhaps not very deeply rooted. If this is so, it should not be difficult for the Extraordinary Conference to reach complete agreement on a final Frequency Assignment Plan to Aeronautical Mobile "QR" stations, based on the draft List circulated to Administrations, for inclusion in the new International Frequency List.

AFTER - NOTE

The I.F.R.B. received (9th May 1951) a telegram from the United Kingdom and the U.K. Colonies stating that the Frequency Allotment Plan for the Aeronautical Mobile "R" Service is "acceptable with minor amendments to the Administrations of the United Kingdom and the U.K. Colonies".

In Annex 1 to this Chapter, therefore, the United Kingdom and the U.K. Colonies should be transferred from Category 4 to Category 3.

FREQUENCY ALLOTMENT PLAN FOR AERONAUTICAL MOBILE "R" SERVICE

CLASSIFICATION OF COMMENTS OF ADMINISTRATIONS

CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5
PLAN REJECTED ON GENERAL PRINCIPLES BY :	PLAN REJECTED AS NOT MEETING MINIMUM REQUIREMENTS BY :	PLAN ACCEPTABLE WITHOUT, OR WITH MINOR, AMENDMENTS TO :	NO COMMENT MADE ON AERONAUTICAL MOBILE R PLAN, BUT COMMENTS MADE ON OTHER PLANS BY :	NO COMMENT MADE ON ANY PLANS BY :
ALBANIA BELORUSSIA BULGARIA CZECHOSLOVAKIA HUNGARY POLAND ROMANIA U.S.S.R. UKRAINIAN S.S.R.	+ GREECE + GUATEMALA	• ARGENTINE • AUSTRALIA • BELGIUM • CANADA • CUBA • FRANCE • FRENCH OVERSEAS TERRITORIES • INDIA • INDONESIA • IRELAND • MOROCCO & TUNISIA • NEW ZEALAND • NORWAY • PORTUGAL • PORTUGUESE COLONIES + SAUDI ARABIA • SOUTH AFRICA • SWEDEN • SWITZERLAND • U. S. A. • U.S. TERRITORIES + YUGOSLAVIA	• BELGIAN CONGO BURMA CEYLON • DENMARK • EGYPT • ETHIOPIA FINLAND GERMANY (BRITISH) HAITI • ICELAND IRAK • ITALY • JAPAN LEBANON • NETHERLANDS • PAKISTAN • PARAGUAY SOUTHERN RHODESIA TURKEY • UNITED KINGDOM • U.K. COLONIES • URUGUAY VATICAN CITY • VENEZUELA	AFGHANISTAN • AUSTRIA BOLIVIA • BRAZIL • CHILE CHINA • COLOMBIA COSTA RICA • DOMINICAN REPUBLIC ECUADOR EL SALVADOR • HONDURAS IRAN ISRAEL LIBERIA • LUXEMBOURG • MEXICO MONACO • NICARAGUA PANAMA PERU • PHILIPPINES SYRIA THAILAND YEMEN

• COUNTRY SIGNED FREQUENCY ALLOTMENT PLAN FOR THE AERONAUTICAL MOBILE SERVICE AND FINAL AGREEMENT OF THE INTERNATIONAL ADMINISTRATIVE AERONAUTICAL RADIO CONFERENCE.

+ FURTHER INFORMATION HAS BEEN SOUGHT FROM THESE COUNTRIES.

FREQUENCY ALLOTMENT PLAN & FREQUENCY ASSIGNMENT LIST FOR THE AERONAUTICAL MOBILE "OR" SERVICE

CLASSIFICATION OF COMMENTS OF ADMINISTRATIONS

CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5
PLAN REJECTED ON GENERAL PRINCIPLES BY :	PLAN REJECTED AS NOT MEETING MINI- MUM REQUIREMENTS BY :	PLAN ACCEPTABLE WITHOUT, OR WITH MINOR AMENDMENTS, TO :	NO COMMENT MADE ON AERO- NAUTICAL MOBILE OR PLAN BUT COMMENTS MADE ON OTHER PLANS BY :	NO COMMENT MADE ON ANY PLANS BY :
ALBANIA BYELORUSSIA BULGARIA CZECHOSLOVAKIA HUNGARY POLAND ROMANIA U.S.S.R. UKRAINIAN S.S.R.	+ GREEK + GUATEMALA • URUGUAY	• ARGENTINE • AUSTRALIA • BELGIUM • CANADA CHINA • CUBA • DENMARK • EGYPT • FINLAND • FRANCE • FRENCH OVERSEAS TERRITORIES • INDIA • INDONESIA • IRELAND • MOROCCO & TUNISIA • NEW ZEALAND • NORWAY • PAKISTAN • PORTUGAL • PORTUGUESE COLONIES + SAUDI ARABIA • SOUTH AFRICA • SWEDEN	• SWITZERLAND • UNITED KINGDOM • U.K. COLONIES • U. S. A. • U.S. TERRITORIES + YUGOSLAVIA • BELGIAN CONGO BURMA CEYLON ETHIOPIA GERMANY (BRITISH) HAITI • ICELAND IRAK • ITALY JAPAN LEBANON • NETHERLANDS • PARAGUAY SOUTHERN RHODESIA TURKEY VATICAN CITY • VENEZUELA	AFGHANISTAN • AUSTRIA BOLIVIA • BRAZIL • CHILE • COLOMBIA COSTA RICA • DOMINICAN REPUBLIC EL SALVADOR ECUADOR • HONDURAS IRAN ISRAEL LIBERIA • LUXEMBOURG • MEXICO • NICARAGUA PANAMA PERU • PHILIPPINES SYRIA THAILAND YEMEN

• COUNTRY SIGNED FREQUENCY ALLOTMENT PLAN FOR THE AERONAUTICAL MOBILE SERVICE AND FINAL AGREEMENT OF THE INTERNATIONAL ADMINISTRATIVE AERONAUTICAL RADIO CONFERENCE.

+ FURTHER INFORMATION HAS BEEN SOUGHT FROM THESE COUNTRIES.

COMMENTAIRES DÉTAILLÉS SUR LE PLAN D'ATTRIBUTION ET LA LISTE D'ASSIGNATION
DES FREQUENCES DU SERVICE MOBILE AERONAUTIQUE
"OR"

DETAILED COMMENTS ON THE FREQUENCY ALLOTMENT PLAN AND ASSIGNMENT LIST FOR
THE AERONAUTICAL MOBILE "OR" SERVICE

COMENTARIOS DETALLADOS ACERCA DEL PLAN DE DISTRIBUCION Y DE LA LISTA DE
ASIGNACION DE FRECUENCIAS DEL SERVICIO MOVIL
AERONAUTICO "OR"

Fréquence Frequency Frecuencia kc/s 1	Administration présentant le commentaire Administration commenting Administración que envía el comentario 2	Commentaire Comment Comentario 3
3032	NOUVELLE ZELANDE NEW ZEALAND NUEVA ZELANDIA	<p>Supprimer Delete Suprimir</p> <p>A HM 102, 103, 106, 101, 105, 104</p> <p>Toutes les stations aéronautiques All aeronautical stations Todas las estaciones aeronáuticas</p> <p>A HM 107 x</p> <p>et ajouter and insert y agregar</p> <p>NZel 100km 6A3 1,0kW-I</p> <p>A HM 107 x</p> <p>Stations d'aéronefs Aircraft stations Estaciones de aeronave</p> <p>NZel 100km 6A3 - I</p>
3039	PAYS-BAS NETHERLANDS PAISES BAJOS	<p>Au lieu de Instead of En lugar de</p> <p>EX 85 WUNDI, New Guinea IndN</p> <p>lire read léase</p> <p>MB 85 BIAK, New Guinea, NGuiH</p>

1	2	3
3095	SUISSE SWITZERLAND SUIZA	Remplacer l'assignation de 3095 kc/s à A JD 6 par 3088 kc/s ou 3102 kc/s. Replace the assignment of 3095 kc/s for A JD 6 by 3088 kc/s or 3102 kc/s. Sustitución de la asignación de 3095 kc/s para A JD 6 por 3088 kc/s o 3102 kc/s.
3151	PAYS-BAS NETHERLANDS PAISES BAJOS	<div> <div> Au lieu de Instead of En lugar de </div> <div> EX 86 WUNDI, New Guinea IndN </div> </div> <div> <div> lire read léase </div> <div> MB 86 BIAK, New Guinea NGuiH </div> </div>
4738.5	SUISSE SWITZERLAND SUIZA	<p>Pour remplacer la fréquence 5720 kc/s demandée par la Suisse et qui n'a pas été prise en considération, ajouter aux assignations:</p> <p>To replace frequency 5720 kc/s requested by Switzerland and which was not taken into consideration, add to assignments:</p> <p>En sustitución de la frecuencia 5720 kc/s, solicitada por Suiza y que no ha sido tomada en consideración, agregar a las asignaciones:</p> <p>A JD 6 05° 30'E 47° N Suis 200km 6A3 1,5kW C</p>

1	2	3
5703	NOUVELLE ZELANDE NEW ZEALAND NUEVA ZELANDIA	<p>Supprimer Delete Suprimir</p> <p>A HM 102, 103, 106, 101, 105, 104</p> <p>et ajouter and insert y agregar</p> <p>A HM 108 x Toutes les stations aéronautiques All aeronautical stations Todas las estaciones aeronáuticas</p> <p>NZel 300 km 6A3 1,0kW I</p> <p>A HM 108 x Stations d'aéronefs Aircraft stations Estaciones de aeronave</p> <p>NZel 300km 6A3 - I</p>
6745.5	NOUVELLE ZELANDE NEW ZEALAND NUEVA ZELANDIA	<p>Supprimer Delete Suprimir</p> <p>A HM 102, 103, 106, 101, 105, 104</p> <p>et ajouter and insert y agregar</p> <p>A HM 108 x Toutes les stations aéronautiques All aeronautical stations Todas las estaciones aeronáuticas</p> <p>NZel 500km 6A3 1,0kW I</p> <p>A HM 108 x Stations d'aéronefs Aircraft stations Estaciones de aeronave</p> <p>NZel 500km 6A3 - I</p>

1	2	3
9009.5	PAYS-BAS NETHERLANDS PAISES BAJOS	<p>Au lieu de Instead of En lugar de</p> <p>EX 87 WUNDI, New Guinea IndN</p> <p>lire read léase</p> <p>MB 87 BIAK, New Guinea NGuiH</p>
11247	YUGOSLAVIE YUGOSLAVIA YUGOESLAVIA	<p>Cette fréquence supplémentaire est nécessaire pour la radiotélégraphie dans le service R (OR?)</p> <p>This extra frequency requested for radiotelegraphy in R (OR?) service</p> <p>Solicitamos esta frecuencia suplementaria para la radiotelegrafía en el servicio R (OR?)</p>
11265	YUGOSLAVIE YUGOSLAVIA YUGOESLAVIA	<p>Cette fréquence supplémentaire est nécessaire pour la radiotélégraphie dans le service OR.</p> <p>This extra frequency requested for radiotelegraphy in OR service</p> <p>Solicitamos esta frecuencia suplementaria para la radiotelegrafía en el servicio OR.</p>

Bande Band Banda kc/s 1	Administration présentant le commentaire Administration commenting Administración que envía el comentario 2	Commentaire Comment Comentario 3
3025 - 3155	URUGUAY	1 voie supplémentaire est demandée 1 additional channel requested 1 canal suplementario solicitado
4700 - 4750	-do-	1 -do-
5680 - 5730	-do-	2 voies supplémentaires sont demandées 2 additional channels requested 2 canales suplementarios solicitados
6685 - 6765	-do-	1 voie supplémentaire est demandée 1 additional channel requested 1 canal suplementario solicitado
11175 - 11275	-do-	1 -do-
11175 - 11275	CHINE CHINA CHINA	1 fréquence est demandée pour les liaisons à grande distance 1 frequency requested for long distance circuits 1 frecuencia solicitada para los circuitos de largas distancias.
13200 - 13260	-do-	1 -do-
13200 - 13260	URUGUAY	1 voie supplémentaire est demandée 1 additional channel requested 1 canal suplementario solicitado

Bande Band Banda kc/s	Administration présentant le commentaire Administration commenting Administración que envía el comentario	Commentaire Comment Comentario
1	2	3
15010 - 15100	URUGUAY	1 voie supplémentaire est demandée 1 additional channel requested 1 canal suplementario solicitado
15010 - 15100	CHINE CHINA CHINA	1 fréquence est demandée pour les liaisons à grande distance 1 frequency requested for long distance circuits 1 frecuencia solicitada para los circuitos de largas distancias.
17970 - 18030	URUGUAY	1 voie supplémentaire est demandée 1 additional channel requested 1 canal suplementario solicitado

CHAPTER VII

DRAFT FREQUENCY ASSIGNMENT PLANS FOR THE MARITIME MOBILE SERVICE

EXCLUSIVE BANDS BETWEEN 4000 AND 23000 kc/s.

CHAPTER VIIDRAFT FREQUENCY ASSIGNMENT PLANS FOR THE MARITIME MOBILE SERVICEEXCLUSIVE BANDS BETWEEN 4000 AND 23000 kc/s

(See documents annexed to Circular Letter No. 20/50 dated 2 March 1950).

SECTION ADRAFT FREQUENCY ASSIGNMENT PLAN FOR COAST TELEGRAPH STATIONS1. Analysis of the Comments submitted by Administrations

Pursuant to Resolution No. 199 of the Administrative Council the I.F.R.B. has made an analysis of the comments furnished by Administrations on the draft Frequency Assignment Plan for Coast Telegraph Stations which was prepared by the P.F.B. and circulated to Administrations by the Secretary-General on 2nd March 1950 (Circular letter No. 20/30). This analysis has shown that the views of Administrations on the draft Plan, assessed from a study of both their general and detailed comments, can best be classified into 6 broad categories; and the results, which cover all comments received prior to 15th March 1951, are given in the table in Annex 1. This table should be read in conjunction with the Notes which appear on page 2 of Annex 1.

It is to be noted that it has been rather difficult, in a few cases, to decide in which of the categories the overall comments of a country should be placed. For example, although a country may, in its general comments, have rejected the draft Plan as not meeting its minimum requirements and has therefore been placed in Category 2, the percentage of the assignments made to it which it has criticized is less, in some cases, than the corresponding percentage of assignments criticized by countries which have nevertheless indicated that the draft Plan is acceptable as a basis for discussion. Similarly, some judgement has had to be used in deciding whether countries should be placed in Category 4 (i.e. countries to which the draft Plan is acceptable without, or with minor, amendment) or in Category 3 (countries to which the draft Plan is acceptable as a basis for discussion). In such cases, when the amendments desired by a country appear to be such as to require a modification to the draft Plan which would adversely affect the services of another country, the country desiring the amendment has been placed in Category 3. A slight amount of flexibility, is, therefore permissible in interpreting the classifications.

It will be observed that many countries, particularly in Categories 1, 5 and 6, have no requirements for high-frequency Coast Telegraph station services. It would appear that, if the Atlantic City Table of Frequency Allocations is to be implemented, the interests of these countries would not be affected to any major degree irrespective of whether the draft Plan is accepted, rejected or modified, unlike countries whose Maritime services would be directly affected by the adoption of the Plan.

2. Objections raised to draft Plan

In the general comments submitted by Administrations, which are being circulated verbatim to all Administrations as part of the general comments on the ensemble of all P.F.B. and other draft Assignment Plans², the main objections to the draft Coast Telegraph Station Plan fall almost entirely into the following classes :

- a) Objections on general principles
- b) Objections to the restricted protected range of communications on 4, 6 and 8 Mc/s
- c) Objections to excessive co-channel sharing
- d) Objections to an insufficient number of assignments

Objections in Class a) have been expressed by the 9 countries listed in Category I in Annex I. They have rejected all draft Plans prepared by the P.F.B. on the grounds that the principles and working methods used by the P.F.B. were wrong, and, in not using the 1939 Berne List as a basis, were not conducive to the preparation of plans which would meet the requirements of all countries.

Objections in Class b) are voiced in particular by the United States, Cuba, Norway and Sweden. It is not entirely clear from the comments, in all cases, whether it is fully understood that the draft Plan does not prohibit countries from endeavouring to operate services at greater ranges than the protected distances : and the possibility of doing so depends, of course, on propagation conditions and on the traffic loading of the stations concerned. It is clear that increased protection ranges can only, in general, be obtained if the number of assignments included in the Plan can be reduced; in fact, the range of protected services can in general only be increased in the approximate inverse ratio to the reduction in the number of assignments per channel.

Objections in Class c), which comprise by far the largest number of criticisms, are made by Belgium, France, French Overseas Territories, Indonesia, Italy, Norway, Netherlands, Sweden, United Kingdom and U.K. Colonies; Canada and Portugal have expressed doubts in regard to the feasibility of certain co-channel shares; and the United States have intimated that certain co-channel adjustments are required. Of these, the gravest objections seem to be in respect of certain assignments in the 8 Mc/s and 12 Mc/s bands. While proposals may be made, and in some cases, have been made, for reducing the amount of probable co-channel interference to a particular service by an interchange of stations sharing the frequency, it is clear that, with the present number of assignments in the draft Plan, any improvement in the operating conditions on one frequency can only be achieved, in general, by degrading the operating conditions on another frequency and usually adversely affecting the plan for some other country. Thus, while an attempt could certainly be made further to reduce the possibility of co-channel interference to "first category" assignments* this could only be done, with the present total number of assignments in the draft Plan by correspondingly further degrading "second category" assignments which, themselves, have already been criticized by some countries as unacceptable. Here again a substantial improvement in the technical quality of the draft Plan could only be achieved through a considerable reduction in the total number of assignments which have to be included in the Plan.

* See P.F.B. Document No. 591 - Report of Maritime Group.

² See Booklet A

As regards objections in Class d), Indonesia, Pakistan, Portuguese Colonies and Yugoslavia, from among the countries which have furnished comments on the actual draft Maritime Plans as distinct from general comments on the ensemble of all Plans prepared by the P.F.B., have stated that the total number of assignments made to them in the draft Coast Station Telegraph Plan is insufficient; Argentine, Cuba and Norway have each requested the use of one, and Finland two, additional frequencies and Burma and Uruguay have also intimated that additional frequencies are required for their Coast Station services, but it would appear that full account may not have been taken by these countries of the assignments also made to the same circuits in the draft Coast Station Telephone plan. In connection with the foregoing comments, it has to be noted that the P.F.B. endeavoured to include, in the draft Plans assignments in respect of all Coast Telegraph services which, within the time limits set for the receipt of requirements and in the light of the information available to the Board, qualified for high frequency assignments. Hence the question of the inclusion of additional assignments in the draft Plan is bound up, to a large degree, with the treatment which the Extraordinary Administrative Conference may decide to accord to "Section 16" requirements (see para. 3 below). It is clear, however, that the inclusion in the Plan of additional assignments to any country can only result in further degradation of the technical characteristics of the Plan unless other countries, usually in the same Area, are prepared to surrender a corresponding number of assignments.

Analysis of the detailed comments furnished by Administrations shows that only 91 assignments, out of a total of 3325 assignments in the draft Plan, have been specifically criticised. In nearly every case, the objections to specific assignments are raised on the grounds of probable co-channel interference. Indeed, in only three cases are objections raised to probable adjacent-channel interference and, even these complaints relate only to restricted areas of reception. (In addition, however, the United States consider that some (unspecified) adjacent-channel adjustments are necessary). The detailed comments are being circulated* in coded form, to all Administrations and individual cards in respect of each detailed comment, giving full information on the nature of the complaint notified and any suggestions made for its cure, have been prepared for easy reference by the Extraordinary Administrative Radio Conference.

No objections have been raised by any Administration to the recommendation made by the P.F.B. that A2 emissions should not be permitted in the Coast Station Telegraph service.

Only Norway has stated that it may be unable to accept the further recommendation that power limitations should be applied to all Coast station transmitters; and even in the case of Norway, the comment relates only to a maximum limit of 5 kW in the lower frequency bands where the range of communication in Norwegian waters is restricted by auroral absorption. Argentine, however, has requested that the power of its main Coast Telegraph station, in all bands, should be listed as 15 kW.

As against the objections detailed above, it will be observed, from a study of Annex I, that a number of countries have indicated that the draft Plan is acceptable to them without, or with only very minor, amendments; and that the absence of any adverse comments from many other countries, including some whose representatives supported the Plan in the P.F.B., indicates that the Plan in its present form is not regarded as unsatisfactory.

* * See Booklet E.

3. "Section 16" Notifications

The Coast Telegraph Station Plan was based on requirements for high-frequency Maritime Telegraph services, involving stations to be established before September 1st 1949, which were submitted to the P.F.B. by the various countries of the Union prior to 10th April 1948. In accordance with Section 16 of the Atlantic City Resolution pertaining to the preparation of the new International Frequency List, assignments which have been notified to the Union as having been activated subsequent to the latter date have been listed and it will be for the Extraordinary Conference to decide what action is to be taken in regard to such assignments in formulating the Frequency List for high-frequency Coast Telegraph Stations. Up to 31st August 1950, approximately 400 such assignments had been notified by 32 countries ; and the list, together with further assignments subsequently notified (which are continuing to be extracted from the I.T.U. records) will be made available to the Extraordinary Administrative Conference. It would appear, from the comments submitted by Administrations, that a considerable number of these assignments will automatically be cancelled if a Plan, on the lines of that prepared by the P.F.B., is finally adopted and implemented ; but some countries hold the view that account must be taken of these later notifications if the final Plan is to be satisfactory to them.

4. Comparison of assignments in draft Plan with those notified in existing List of Coast Stations.

It is interesting to compare the number of assignments made in the draft P.F.B. Frequency Assignment Plans for Coast Stations with the number of assignments which are recorded as being in use with "List of Coast Stations" (March 1950 Edition) published by the General Secretariat of the Union. Annex 2 gives the figures for the entire world, while Annexes 3, 4 and 5 give the corresponding statistics for each I.T.U. Region. Individual statistics in respect of each country have been prepared for reference by the Extraordinary Conference.

It will be seen that, in all cases, the assignments have been subdivided by classes of emission ; and that figures are given both for the total number of specific assignments to individual stations and for the total number of separate frequencies (some of which may be shared by two or more stations of the same country) assigned to, or notified by, the various countries.

It has to be remembered that the List of Coast Stations does not contain, in the case of some countries, particulars of the frequencies used for Naval, as distinct from commercial, purposes. Also certain newly established States such as Pakistan and Israel did not have the opportunity, prior to the publication of the March 1950 edition of this List, of developing their high-frequency Maritime Services. On the other hand, such monitoring data as is available tends to indicate that there is an appreciable number of inactive assignments even among those appearing in the List of Coast Stations.

It will be seen from Annex 2 that the total of A1 and A1 A3 assignments to individual Coast stations throughout the world, as notified in the latest List of Coast Stations, is 2078, as against 3325 A1 assignments to

individual Coast stations in the draft P.F.B. Plan for Coast Telegraph Stations, i.e. less than 63 % of the latter total. The comparison is even more striking if one takes the total number of separate frequencies notified by each country for A1 and A1 A3 Coast station operations in the List of Coast Stations, and the total number of separate frequencies assigned to each country for A1 operations in the draft P.F.B. Coast Telegraph Station Plan. The respective numbers in this case are 1169 and 2261, indicating that, on the average, each country would be entitled to use, if the draft P.F.B. Plan were implemented, almost twice as many distinct frequencies as they have notified as being in use in the latest List of Coast Stations.

In the light of these figures, it is hardly to be wondered at that concern has been expressed by many countries at the possibilities of co-channel interference with a number of the assignments in the draft P.F.B. Plan, since the huge number of specific assignments could only be contained within the available bands by extensive co-channel sharing. Moreover, it would seem that the representatives of many countries, when the P.F.B. Plan was being evolved, were not prepared to accept an amount of co-channel sharing between the stations of their own country comparable to that which exists at present. A substantial reduction both in the average number of specific assignments per country and in the average number of separate frequencies assigned to each country (coupled, when possible, with the use of these frequencies for a greater number of stations in the same country) would therefore appear to be feasible without imposing hardship on the majority of countries which operate high-frequency Coast Telegraph services, and would result in a very considerable improvement in the technical characteristics of the draft P.F.B. Plan. In this connection, Italy has suggested that countries which have stations which might act as relays, scattered throughout the world, should realise the need to reduce their assignments, particularly on the 12 Mc/s and 16 Mc/s bands. The Netherlands too, have drawn attention to the fact that the number of assignments to various countries in the draft Plan bears little relation to the volume of Coast Telegraph traffic handled by these countries ; and such traffic statistics as are notified to and published by the Secretary General, will be available for reference by the Extraordinary Administrative Conference.

The further analysis given in Annex 6 shows the numbers of existing assignments (as notified in the List of Coast Stations) which at present are respectively within, and outside, the frequency bands allocated to the Maritime Mobile Service under the Atlantic City Radio Regulations. It can be seen that the percentage of existing A1 and A1 A3 assignments which are within the new Atlantic City Maritime Mobile bands is about 70 % of the total and that, while the percentage is higher in respect of assignments between 7500-10,000 kc/s, it is considerably lower (actually about 50 %) in the case of assignments between 5000-7500 kc/s. This is a natural result from the availability to the Maritime Mobile Service, under the Cairo Regulations, of wider frequency bands which were shared with other Mobile Services, and, in some cases, with the Fixed Service. It has to be remembered, too, that at Atlantic City, the narrower (but exclusive) bands allocated to the Maritime Mobile Service have been, in turn, each divided into sections for Coast Telegraph, Coast Telephone, Ship Telegraph and Ship Telephone services respectively. Hence it is only to be expected

that the number of Coast Telegraph stations whose present working frequencies fall within the sub-bands allocated at Atlantic City, to this type of station, is only a small proportion of the total number and this is confirmed by analysis of monitoring data supplied by the C.C.R.M. It follows, too, from the restriction of the frequency bands, that even if the total number of assignments to Coast Telegraph Stations were to remain unchanged, the number of such assignments per channel must be increased when the Atlantic City Table of Frequency Allocations is implemented. This does not mean, however, that operating conditions must necessarily deteriorate ; on the contrary, a scrutiny of the present List of Frequencies (Berne List) shows that it is difficult to imagine how many Coast Stations can satisfactorily maintain a service at present when account is taken of the numerous Fixed, Aeronautical and other stations which are shown as sharing the same frequency.

5. Observations

(1) From the analysis of the comments submitted by Administrations, it would appear that the draft Frequency Assignment Plan for Coast Telegraph Stations while not generally acceptable in its present form, is considered by a majority of the Member-countries of the Union which operate high-frequency Coast Telegraph services and which have submitted comments on the Plan, to provide at least a useful basis for discussion by the forthcoming Extraordinary Administrative Conference.

(2) The fact that so few fears have been raised in regard to anticipated adjacent-channel interference suggests that the channel separations contained in the draft P.F.B. Plan are sufficiently wide. In fact, it seems probable that, without necessarily altering the present nominal channel spacings, the plan could be improved in practical operation, and a number of the present objections to it might be removed by permitting some of the Coast stations, which share a channel exclusively for manually operated services, to off-set their frequencies slightly (say ± 1 kc/s) from the nominal channel frequencies. This would enable an additional amount of aural discrimination to be obtained by the receiving operator in addition to the discrimination which he may be able to secure from the design of his receiver, and would tend to reduce co-channel interference. Such an arrangement, however, would have to be used with great discretion when automatic working (e.g. teletype) is carried out on the adjacent channels, otherwise the stations using off-set frequencies may tend to drift into the band used for automatic operations.

(3) While some minor improvements in channel sharings can, no doubt, be made, it is clear that, if the total number of assignments in the draft plan is to be retained, or has even to be increased, any substantial improvement to one of the services which at present is assigned to a particular channel can only, in general, be achieved by degrading the service assigned to another channel ; also, in general, the assignments to any one country can only be improved by degrading the quality of the assignments to another country. It is not, therefore, considered profitable to suggest any changes of specific assignments at the present stage. It would appear to be better to defer consideration of such changes until the Extraordinary Administrative Conference has decided whether to use the present plan, in its present basic form, as the foundation for its work and, if so, suggestions for changes of specific assignments can be considered jointly by all the countries which would be affected by these changes.

(4) There is no doubt that the draft plan for Coast Telegraph Stations could be tremendously improved, technically, if the number of assignments made in the Plan were reduced to a figure corresponding to that of the total assignments at present recorded as being in use in the List of Coast Stations. It is therefore of paramount importance that all countries which operate high-frequency Coast Telegraph services should consider whether they could not agree to reduce the frequency requirements for such services, which they submitted to the P.F.B., to a figure more nearly approaching that of the assignments at present in use and to accept a greater amount of co-channel sharing among the stations of their own country. Failing the wholehearted co-operation of Administrations in this matter, the Extraordinary Conference may wish to consider whether a special Panel should not be set up with the task of examining the justification for the greatly increased number of assignments desired by various countries. In this connection, it must be pointed out that, in a number of cases where a country has objected even to a considerable number of specific assignments in the draft P.F.B. Plan, the total number of assignments to which it has raised no objections is still greater than the number of assignments which appear, from the List of Coast Stations, to be at present in use. In many cases, too, the objections are raised to "second category" assignments to which, in the draft plan prepared by the P.F.B., a smaller degree of protection was given than that given to "first category" assignments.

(5) Consideration has been given to the question of whether a more acceptable plan could not be framed on the basis of leaving existing in-band assignments, including existing co-channel shares, on their present frequencies, and transferring assignments which are out-of-band into the correct Atlantic City bands. But if the whole of the Atlantic City Radio Regulations are to be implemented, including the sub-allocations of the Maritime Mobile frequency bands to Coast Telegraph, Coast Telephone, Ship Telegraph etc. services, this would mean that a large majority of existing assignments to Coast Telegraph stations would have to be moved; and it would seem in these circumstances to be simpler and to lead to a better technical plan if all assignments to Coast Telegraph stations were recast, using revised channel separations, as was attempted by the P.F.B.

(6) If, however, a new plan were to be based on existing in-band assignments and the object were to move the minimum number of existing assignments, in accordance with Section 12 (b) 3 of the Atlantic City Resolution pertaining to the Preparation of the New International Frequency List, it would seem that the plan could best be built up on channels spaced, basically, at 5 kc/s intervals, with a sharp distinction between manually-operated services and automatically-operated services, so that the former might also be allocated intermediate channels at 2.5 kc/s intervals. Such an arrangement, while it would appear to be feasible in the lower frequency bands, would not be satisfactory in the higher frequency bands with the average equipment at present fitted on ships; and the assignment to the same groups of stations of any considerable number of harmonically-related channels, which is both a feature and a limitation of the draft P.F.B. Plan, and which is held to be of great importance by some Administrations, would be rendered extremely difficult, if not impossible.

(7) In view of the very large number of assignments in the draft P.F.B. Plan, as compared with the number of assignments in the present List of Coast Stations, and having regard to the relatively small total number of

assignments against which specific objections have been raised, it is considered that the difficulties of evolving a frequency assignment plan for Coast Telegraph Stations which would meet the requirements for high - frequency Maritime services of a very large majority of the Member-countries of the Union, are not unsurmountable. Even, too, if such a plan should appear on inspection to have shortcomings there is good reason to believe that the results in practice would, in many cases, be much better than might be feared, due to the fact that many stations have only intermittent operations. Also, the traditional cooperation between operators in the Maritime Service enables them to work through difficulties which are much less acute when a frequency is shared by stations of the same service, which are interested in each others activities, than when the frequencies are shared between different stations which have no common interest.

SECTION BDRAFT FREQUENCY ASSIGNMENT PLAN FOR COAST TELEPHONE STATIONS1. Analysis of Comments submitted by Administrations

As in the case of the comments furnished on the draft Coast Telegraph Station Plan, the comments of Administrations on the Draft Frequency Assignment Plan for Coast Telephone Stations prepared by the P.F.B. have been classified into six broad categories. The results, which cover all comments received prior to 15th March 1951, are given in the table in Annex 7. This table should be read in conjunction with the notes which appear on page 2 of Annex 7.

For reasons similar to those explained in the memorandum on the draft Coast Station Telegraph Plan, a certain amount of flexibility is permissible in interpreting these classifications.

It will again be observed that many countries, particularly in Categories 1, 5 and 6, have no requirements for high-frequency Coast telephone services.

2. Objections raised to Draft Plan

In the general comments submitted by Administrations, which are being circulated verbatim to all the Administrations in respect of the ensemble of all P.F.B. and other draft assignment plans, the main objections to the Draft Coast Station Telephone Plan fall almost entirely into the following three classes :

- (a) Objections on general principles
- (b) Objections to excessive co-channel sharing
- (c) Objections to an insufficient number of assignments

Objections in class (a) have been expressed, as in the case of the draft Coast Telegraph Station Plan and for the same reasons, by the 9 countries listed in Category 1 in Annex 7.

Objections in class (b) have been expressed, in particular, by Belgium, Egypt, France, Indonesia, Norway, Sweden, United Kingdom and the U.K. Colonies, while Canada and New Zealand have expressed fears that one of the assignments made to each of their countries may be subject to co-channel interference.

As regards objections in class (c), Argentina, Belgium, Finland, India, United States and Yugoslavia, from among the countries which have furnished comments on the actual Maritime plans as distinct from general comments on the ensemble of all plans prepared by the P.F.B., desire the total number of assignments made to them in the draft Coast Telephone Station Plan to be increased. Pakistan and Denmark, which have no assignments made to them in the draft Coast Telephone Station Plan, have reserved the right to ask for these should they decide to inaugurate Coast Telephone services (Denmark, in such a case, would propose to share the assignments made to Norway and Sweden, by agreement with these countries).

Only 25 detailed criticisms of specific assignments have been made by Administrations. The criticisms nearly all relate to co-channel shares but, in 2 cases, fears are expressed of possible adjacent channel interference in certain areas. These criticisms are being circulated,* in coded form, to all Administrations and individual cards in respect of each detailed comment, giving full information of the nature of the complaint and any suggestions for its cure, have been prepared for easy reference by the Extraordinary Administrative Conference.

In considering the foregoing objections, it has to be remembered that there is only room for 9, or at the most 10, channels of adequate width in each of the frequency bands available to Coast Telephone stations under the Atlantic City Radio Regulations; and that almost 40 countries desire to operate Coast Telephone services sometimes, in the case of the larger countries or in the case of groups of Colonial territories, from several stations which are geographically widely dispersed. It follows therefore that only a limited number of assignments can be made to each country and that, even with a restricted number of assignments per country, a very considerable amount of co-channel sharing is still inevitable. Moreover, even if maximum advantage is taken of propagation phenomena to reduce interference, by the co-channel sharing of assignments which are afforded a degree of mutual protection by the propagational characteristics of the frequency concerned, the possibility of co-channel interference cannot be entirely eliminated in this manner, with the present scale of requirements, particularly in areas of heavy shipping density such as the Atlantic Ocean. The addition of further assignments, therefore, to any country except, possibly, in the 22 Mc/s band, can only result in a further increase in the danger of co-channel interference, unless other countries, in the same Area, are prepared to surrender some of the assignments already made to them in the draft Plan.

The impracticability of obtaining assignments which would at all times be free from the possibility of co-channel interference is already recognized by some countries, such as Canada and Belgium, which have stated that they are prepared to accept even the assignments which they have criticized (on the grounds of possible co-channel interference) provided that arrangements can be worked out for equitable time-sharing of the frequencies among the interested countries.

* See Booklet E.

No Administration has objected to the recommendation of the P.F.B. that the power of Coast Station Telephone transmitters should be limited to a maximum of 20 kW (unmodulated carrier).

As against the objections detailed above, it will be observed from a study of Annex 7 that many countries have either signified that they are prepared to accept the draft Plan without, or with only minor, amendments or have at least made no adverse comments on the Plan.

3. "Section 16" Notifications

A list of assignments to Coast Telephone stations which have been notified to the Union as having been activated since 10th April 1948 (the closing date for the receipt of requirements considered by the P.F.B.) will be made available to the Extraordinary Conference for consideration by that Conference in formulating the Frequency List for high-frequency Coast Telephone Stations.

4. Comparison of Assignments in Draft Coast Station Telephone Plan with those notified in the existing list of Coast Stations

A comparison of the number of assignments in the Draft Coast Telephone Station Plan, as compared with those notified as being in use in the "List of Coast Stations" (March 1950 Edition), published by the General Secretariat of the Union is given, for the whole world, and for each I.T.U. Region, in Annexes 2, 3, 4 and 5. Individual statistics in respect of each country have been prepared for reference by the Extraordinary Conference.

It has to be remembered that the List of Coast Stations does not contain, in the case of some countries, particulars of the frequencies used for Naval, as distinct from commercial, purposes, but it is exceptional for telephony to be used for Naval communications. The frequencies used by a few countries for commercial radio-telephone services to ships, which utilize telephone transmitters employed mainly in the Fixed service, have also not been notified in the List of Coast Stations; and certain newly established States did not have the opportunity, prior to the publication of the 1950 Edition of this List, of developing their high-frequency Maritime services.

The analysis of the assignments in the List of Coast Stations shows that there are comparatively few purely A3 assignments and that the majority of countries utilize, at present, the same frequencies for Coast Telegraph and Coast Telephone services, as they are entitled to do under the Cairo Radio Regulations. Under the Atlantic City Regulations, it is necessary to allocate separate frequencies to such countries for the two types of transmissions, but it should be possible for the countries then to accept an increased amount of co-channel sharing on each frequency due to the smaller amount of usage of each of the two frequencies arising from the separation of the telephone and telegraph traffic.

The further analysis given in Annex 6 shows the numbers of existing assignments (as notified in the List of Coast Stations) which at present are within the frequency bands available to the Maritime Mobile Service under the Atlantic City Radio Regulations. It will be seen that the number of existing A3 assignments which are within the latter bands

is very small but that the position in regard to actual telephone operations is masked by the large number of A1 A3 assignments, many of which are believed to be rarely, if ever, used for telephony transmission. There is no doubt, however, that since, under the Atlantic City Regulations, the frequency bands available to Coast Telephone Stations (which comprise only sections of the bands allocated to the Maritime Mobile Service) have been very considerably restricted in width as compared with the bands available to such stations under the Cairo Regulations, a large majority of the existing Coast Telephone station assignments will have to be moved when the Atlantic City Table of Frequency Allocations, and associated Regulations, are brought into force.

(5) Observations

1. From the analysis of the comments by Administrations, it would seem that the draft Frequency Assignment Plan for Coast Telephone Stations, while not wholly acceptable in its present form, is considered by a majority of the Member countries of the Union which operate high-frequency Coast Telephone services and which have submitted comments on the Plan, to provide a useful basis for discussion by the forthcoming Extraordinary Administrative Conference.

2. The fact that so few fears have been expressed in regard to anticipated adjacent channel interference suggests that the channel separations proposed in the P.F.B. Plan are sufficiently wide. However, it is not considered that any reduction in the width of these channels is feasible since, in view of the small number of channels which can be fitted into the available bands, even the provision of one additional channel per band would involve a substantial reduction (approximately 10%) in the channel separations adopted by the P.F.B. and would be liable to give rise to excessive adjacent channel interference with the majority of equipment at present in use for Coast Telephone station services.

3. While some adjustments in channel sharings could be made, it is clear that if the total number of assignments in the draft Plan is to be retained, or has even to be increased, any substantial improvement to one of the services which at present is assigned to a particular channel can only, in general, be achieved by degrading the services assigned to another channel; also, in general, the assignments to any one country can only be improved by degrading the quality of the assignments to another country. It is not, therefore, considered profitable to suggest any changes of specific assignments at the present stage. It would appear to be much better to defer consideration of such changes until the Extraordinary Conference has decided whether to use the present Plan, in its present basic form, as the foundations for its work and, if so, suggestions for specific changes can be considered jointly by all the countries which would be affected by these changes.

4. The only way in which the Plan can be substantially improved, technically, is by a reduction in the number of assignments made in the Plan and it is for the various countries which operate high-frequency Coast Telephone services to consider whether they could not agree to reduce their requirements for such services.

5. Consideration has been given to the question of whether a more acceptable plan could not be framed on the basis of leaving existing in-band assignments, including existing co-channel shares, on their present frequencies and transferring assignments which are out-of-band into the correct Atlantic City bands. The large proportion of out-of-band assignments which would apparently have to be transferred, in relation to those at present in-band, does not, however, lend itself to this approach of the problem of evolving a satisfactory plan. Moreover, the frequencies of existing in-band assignments do not, in general, provide channel separations which are technically sound for telephone transmissions.

6. Unless Administrations can agree to reduce their requirements, the problem of fitting all assignments into the restricted bands available, while preserving reasonable technical standards, is exceedingly difficult and possibilities of co-channel interference are almost inevitable. The most promising solution would appear to lie in the working out of mutual agreements, between Administrations, on the time sharing of certain channels, after the most acceptable combinations of co-channel sharings have been determined by the Extraordinary Administrative Conference. Having regard to the fact that it is in the interest of all countries which operate high-frequency Coast Telephone services to ensure that their services should not experience harmful interference, and having regard to the traditional cooperation which exists among the brotherhood of Maritime service operators, it is believed that such time-sharing arrangements could be evolved and could lead to the most acceptable and orderly arrangement of Coast Telephone services which is permitted by the amount of spectrum available to such services under the Atlantic City Radio Regulations.

SECTION CFREQUENCY BANDS RESERVED FOR SHIP STATIONS

Chapter III, Article 9, Section IV of the Atlantic City Radio Regulations specifies the frequency bands which, in addition to those allocated to Coast Telegraph and Coast Telephone stations, are to be used respectively for Ship Telegraph and by Ship Telephone stations. Chapter XIII, Article 33, Section V of the Regulations also lays down the principles which are to be followed by Administrations in assigning and using the frequencies in the two latter bands. Appendix 10 to the Regulations lists the specific frequencies assignable to Ship Telegraph stations in the Maritime Mobile bands between 4000 - 23,000 kc/s, subdivided into sections containing working frequencies for passenger ships, working frequencies for cargo ships and calling frequencies respectively. Appendix 12 contains a table of frequencies recommended for use by Coast and Ship stations in the sub-bands allocated to Maritime radio-telephone services between 4000 and 23,000 kc/s, to be used by Administrations as a guide in choice of frequencies for their stations.

No comments have been received from Administrations concerning the specific services of individual countries which have to be fitted into the bands for Ship Telegraph and Ship Telephone stations, nor did the Atlantic City Regulations visualize that any attempt would be made to evolve specific frequency assignment plans for these bands for consideration by the Special (later the Extraordinary) Administrative Conference.

The bands in question are at present largely occupied by other types of mobile services (including Coast Telegraph and Coast Telephone services) and by Fixed Service stations, and can only be fully made available for the purpose visualized at Atlantic City by the implementation of the entire Atlantic City Table of Frequency Allocations and the associated Regulations.

No action was taken by the P.F.B. which conflicted, in any way, with the provisions of Article 33, and Appendix 10 of the Radio Regulations in respect of frequencies assignable for Ship Telegraph stations. In evolving the draft plans for Coast Telephone stations, however, the P.F.B. departed from the channels recommended in Appendix 11 in order to provide, in the appropriate sections of 4 Mc/s and 8 Mc/s Maritime Mobile bands, 10 telephone channels instead of the 9 specified in this Appendix. Should the Extraordinary Administrative Conference decide to accept, as a basis for the final frequency assignment plan for Coast Telephone stations, the channels which are incorporated in the draft P.F.B. plan, it would appear to be desirable that the channel frequencies quoted in Appendix 11 should be amended accordingly, even although Appendix 11 contains only a recommendation to Administrations.

Apart from this, it would appear that no action is required by the Extraordinary Conference in regard to the frequency bands allocated for Ship Telegraph and Ship Telephone services ; but it has to be remembered that even if the Atlantic City Table of Frequency Allocations, by main

types of Service, were implemented, failure to reach agreement on the marshalling of Coast Telegraph and Coast Telephone stations into the new sub-bands allocated at Atlantic City to this type of station, would have serious repercussions on the new Radio Regulations governing ships' services and would thus considerably affect the efficiency of the whole of the Maritime Mobile service.

AFTER - NOTE

The I.F.R.B. received (9th May 1951) a telegram from the United Kingdom and the U.K. Colonies, stating that the P.F.B. draft Frequency Assignment Plan for the Coast Telegraph Stations should be considered as being "acceptable as a basis for discussion" to the Administrations of the United Kingdom and the U.K. Colonies.

In Annex 1 to this Chapter, therefore, the United Kingdom and the U.K. Colonies should be transferred from Category 2 to Category 3.

P.F.B. DRAFT FREQUENCY ASSIGNMENT PLAN FOR COAST TELEGRAPH STATIONS

CLASSIFICATION OF COMMENTS OF ADMINISTRATIONS

CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	CATEGORY 6
PLAN REJECTED ON GENERAL PRINCIPLES BY :	PLAN REJECTED AS NOT MEETING MINIMUM REQUIREMENTS BY :	PLAN ACCEPTABLE AS BASIS FOR DISCUSSION BY :	PLAN ACCEPTABLE WITH-OUT, OR WITH ONLY MINOR, AMENDMENTS TO :	NO COMMENT MADE ON COAST TELEGRAPH STATION PLAN BUT COMMENTS MADE ON OTHER PLANS BY :	NO COMMENT MADE ON ANY P.F.B. PLAN BY :
<ul style="list-style-type: none"> • ♦ ALBANIA • ♦ BELORUSSIA BULGARIA CZECHOSLOVAKIA • ♦ HUNGARY POLAND • ROMANIA UKRAINE U.S.S.R. 	<ul style="list-style-type: none"> • ETHIOPIA INDONESIA NETHERLANDS PAKISTAN PORTUGUESE COLONIES U. K. U. K. COLONIES YUGOSLAVIA 	<ul style="list-style-type: none"> BELGIUM BURMA DENMARK FINLAND FRANCE INDIA ITALY NORWAY PORTUGAL SWEDEN UNITED STATES U.S. TERRITORIES URUGUAY • ♦ VATICAN CITY • VENEZUELA 	<ul style="list-style-type: none"> ARGENTINE AUSTRALIA BELGIAN CONGO CANADA CUBA EGYPT FRENCH OVERSEAS TERRITORIES • IRAQ IRELAND JAPAN MOROCCO & TUNISIA NEW ZEALAND S. AFRICA 	<ul style="list-style-type: none"> CYPRUS CHINA GERMANY (WESTERN) GREECE GUATEMALA HAITI ICELAND LEBANON ♦ PARAGUAY ♦ SAUDI ARABIA ♦ S. RHODOSIA ♦ SWITZERLAND ♦ TURKEY 	<ul style="list-style-type: none"> • ARMENISTAN • ♦ AUSTRIA • ♦ BOLIVIA BRAZIL CHILE COLOMBIA COSTA RICA DOMINICAN REPUBLIC • EL SALVADOR ECUADOR HONDURAS IRAN • IUGOSLAVIA • LIBERIA • ♦ LUXEMBOURG MEXICO • ♦ MONACO NICARAGUA PANAMA PERU PHILIPPINES • ♦ SYRIA THAILAND YEMEN
<ul style="list-style-type: none"> • COUNTRY HAD NO REQUIREMENT FOR HIGH FREQUENCY ASSIGNMENTS TO COAST TELEGRAPH STATIONS IN DRAFT P.F.B. PLAN. ♦ COUNTRY HAD NO ASSIGNMENT TO COAST TELEGRAPH STATIONS IN LATEST I.T.U. "LIST OF COAST STATIONS (MARCH 1950 EDITION)". 					

- NOTES :
1. NONE OF THE COUNTRIES IN CATEGORY 1 HAS MADE ANY DETAILED COMMENTS ON SPECIFIC ASSIGNMENTS IN THE COAST TELEGRAPH STATION PLAN.
 2. SOME COUNTRIES IN CATEGORY 2 (ETHIOPIA, INDONESIA AND PAKISTAN) HAVE NOT NOTIFIED ANY OBJECTIONS TO SPECIFIC ASSIGNMENTS. INDIA, INDONESIA, PAKISTAN, PORTUGUESE COLONIES AND YUGOSLAVIA REQUIRE ADDITIONAL ASSIGNMENTS. THE REMAINING COUNTRIES HAVE REJECTED A NUMBER OF SPECIFIC ASSIGNMENTS BUT, WITH THE EXCEPTION OF THE NETHERLANDS, THOSE REJECTED AMOUNT TO LESS THAN 25% OF THE ASSIGNMENTS MADE TO THE COUNTRY CONCERNED. THE U.K. AND U.K. COLONIES HAVE INTIMATED THAT THE FIRST DRAFT PLAN PREPARED BY THE P.F.B. WAS FAR MORE ACCEPTABLE AND "WOULD PROBABLY HAVE GIVEN GENERAL SATISFACTION UNDER NORMAL OPERATING CONDITIONS."
 3. THE COMMENTS MADE BY THE COUNTRIES PLACED IN CATEGORY 3 RANGE FROM THOSE (SUCH AS FROM FRANCE AND ITALY) WHICH INCLUDE OBJECTIONS MADE TO SPECIFIC ASSIGNMENTS, TO THOSE (SUCH AS FROM DENMARK) WHICH CONTAIN NO OBJECTIONS TO SPECIFIC ASSIGNMENTS BUT "ACCEPT THE PLAN IN PRINCIPLE". IT MAY BE ASSUMED THAT, IN GENERAL, SOME MODIFICATIONS WILL BE NECESSARY TO THE SPECIFIC ASSIGNMENTS MADE TO COUNTRIES IN THIS CATEGORY BEFORE THE PLAN IS ACCEPTABLE TO THESE COUNTRIES.
 4. SOME ADMINISTRATIONS IN CATEGORY 4 HAVE INTIMATED THAT THEIR ACCEPTANCE OF THE PLAN IS CONTINGENT ON NO MAJOR MODIFICATIONS BEING MADE WHICH WILL ADVERSELY AFFECT THE SERVICES OF THEIR COUNTRY.
 5. A DISTINCTION HAS BEEN DRAWN BETWEEN THE COUNTRIES PLACED IN CATEGORY 5 AND CATEGORY 6, AS THE ABSENCE OF COMMENTS ON THE COAST TELEGRAPH STATION PLAN FROM COUNTRIES WHICH HAVE FURNISHED COMMENTS ON OTHER DRAFT ASSIGNMENT PLANS WOULD APPEAR TO INDICATE, AT LEAST IN MANY CASES, THAT THERE IS NO MAJOR OBJECTION TO THE ACCEPTANCE OF THE COAST TELEGRAPH STATION PLAN.
 6. IN THE ABSENCE OF ANY COMMENTS IT IS NOT POSSIBLE TO ASSESS THE ATTITUDE OF THE COUNTRIES IN CATEGORY 6 TOWARDS THE ACCEPTANCE OF THE DRAFT PLAN. HOWEVER, THE LIST IN CATEGORY 6 INCLUDES A NUMBER OF COUNTRIES WHOSE REPRESENTATIVE ON THE P.F.B. CONSIDERED THE DRAFT COAST TELEGRAPH STATION PLAN TO BE SUFFICIENTLY PROMISING TO BE REMITTED FOR STUDY BY ADMINISTRATIONS AND BY THE EXTRAORDINARY ADMINISTRATIVE CONFERENCE.

COMPARISON BETWEEN NUMBER OF ASSIGNMENTS IN DRAFT P.F.B. COAST STATION PLANS AND NUMBER OF EXISTING ASSIGNMENTS
NOTIFIED IN LIST OF COAST STATIONS (MARCH 1950 EDITION)

WORLD

NOTE - (1) - THE MAIN FIGURES, IN EACH COLUMN, GIVE THE GROSS TOTAL NUMBER OF SPECIFIC ASSIGNMENTS (I.E. TO INDIVIDUAL STATIONS) TO EACH COUNTRY.
(2) - THE FIGURES IN BRACKETS GIVE THE GROSS TOTAL NUMBER OF SEPARATE FREQUENCIES ASSIGNED TO, OR NOTIFIED BY EACH COUNTRY.

DRAFT P.F.B. PLANS	CLASS OF EMISSION	4063 kc/s TO 4438 kc/s	6200 kc/s TO 6525 kc/s	8195 kc/s TO 8815 kc/s	12330 kc/s TO 13200 kc/s	16460 kc/s TO 17360 kc/s	22000 kc/s TO 22720 kc/s	TOTAL
	A1	629 (402)	653 (393)	704 (486)	593 (433)	454 (331)	292 (216)	3325 (2261)
	A3	173 (69)	-	200 (70)	108 (47)	59 (36)	44 (24)	584 (246)
	TOTAL	802 (471)	653 (393)	904 (556)	701 (480)	513 (367)	336 (240)	3909 (2507)
LIST OF COAST STATIONS		3900 kc/s TO 5000 kc/s	5001 kc/s TO 7500 kc/s	7501 kc/s TO 11000 kc/s	1101 kc/s TO 14000 kc/s	14001 kc/s TO 18500 kc/s	18501 kc/s TO 22800 kc/s	
	A1	126 (79)	203 (134)	306 (213)	224 (155)	142 (101)	66 (37)	1067 (719)
	A3	26 (10)	63 (22)	26 (19)	11 (10)	14 (13)	14 (14)	154 (88)
	A1 A3	278 (71)	358 (136)	177 (103)	120 (78)	62 (48)	16 (14)	1011 (450)
	TOTAL	430 (160)	624 (292)	509 (335)	355 (243)	218 (162)	96 (65)	2232 (1257)
DIFFERENCE		372 (311)	29 (101)	395 (221)	346 (237)	295 (205)	240 (175)	1677 (1250)

COMPARISON BETWEEN NUMBER OF ASSIGNMENTS IN DRAFT P.F.B. COAST STATION PLANS AND NUMBER OF EXISTING ASSIGNMENTS
NOTIFIED IN LIST OF COAST STATIONS (MARCH 1950 Edition)

REGION I

NOTE - (1) THE MAIN FIGURES, IN EACH COLUMN, GIVE THE GROSS TOTAL NUMBER OF SPECIFIC ASSIGNMENTS (I.E. TO INDIVIDUAL STATIONS) TO EACH COUNTRY

(2) THE FIGURES IN BRACKETS GIVE THE GROSS TOTAL NUMBER OF SEPARATE FREQUENCIES ASSIGNED TO, OR NOTIFIED BY, EACH COUNTRY.

DRAFT P. F. B. PLANS	CLASS OF EMISSION	4063 kc/s to 4438 kc/s	6200 kc/s to 6525 kc/s	8195 kc/s to 8815 kc/s	12330 kc/s to 13200 kc/s	16460 kc/s to 17360 kc/s	22000 kc/s to 22720 kc/s	TOTAL
	A1	274 (177)	265 (180)	207 (168)	194 (154)	153 (115)	78 (67)	1171 (861)
	A3	64 (29)	"	64 (33)	42 (24)	31 (20)	20 (15)	221 (121)
	TOTAL	338 (206)	265 (180)	271 (201)	236 (178)	184 (135)	98 (82)	1392 (982)
LIST OF COAST STATIONS		3900 kc/s to 5000 kc/s	5001 kc/s to 7500 kc/s	7501 kc/s to 11000 kc/s	11001 kc/s to 14000 kc/s	14001 kc/s to 18500 kc/s	18501 kc/s to 22800 kc/s	
	A1	38 (31)	69 (59)	106 (85)	53 (54)	22 (23)	8 (7)	296 (259)
	A3	4 (4)	10 (10)	10 (10)	3 (3)	9 (9)	13 (13)	49 (49)
	A1 A3	200 (52)	213 (88)	95 (74)	72 (60)	41 (37)	14 (12)	635 (323)
	TOTAL	242 (87)	292 (157)	211 (169)	128 (117)	72 (69)	35 (32)	980 (631)
DIFFERENCE		96 (119)	-27 (23)	60 (32)	108 (61)	112 (66)	63 (50)	412 (351)

COMPARISON BETWEEN NUMBER OF ASSIGNMENTS IN DRAFT P_oF_oB_o COAST STATION PLANS AND NUMBER OF EXISTING ASSIGNMENTS
NOTIFIED IN LIST OF COAST STATIONS (MARCH 1950 EDITION)

REGION 2

NOTE - (1) THE MAIN FIGURES, IN EACH COLUMN, GIVE THE GROSS TOTAL NUMBER OF SPECIFIC ASSIGNMENTS (i.e. TO INDIVIDUAL STATIONS) TO EACH COUNTRY.

(2) THE FIGURES IN BRACKETS GIVE THE GROSS TOTAL NUMBER OF SEPARATE FREQUENCIES ASSIGNED TO, OR NOTIFIED BY, EACH COUNTRY.

DRAFT P _o F _o B _o PLANS	CLASS OF EMISSION	4063 kc/s to 4438 kc/s	6200 kc/s to 6525 kc/s	8195 kc/s to 8815 kc/s	12330 kc/s to 13200 kc/s	16460 kc/s to 17360 kc/s	22000 kc/s to 22720 kc/s	TOTAL
	A1 A3 TOTAL	194 (113) 34 (21) 228 (134)	164 (98) " 164 (98)	267 (154) 37 (17) 304 (171)	228 (137) 21 (10) 249 (147)	178 (106) 5 (5) 183 (111)	133 (80) 3 (3) 136 (83)	1164 (688) 100 (56) 1264 (744)
LIST OF COAST STATIONS		3900 kc/s to 5000 kc/s	5001 kc/s to 7500 kc/s	7501 kc/s to 11000 kc/s	11001 kc/s to 14000 kc/s	14001 kc/s to 18500 kc/s	18501 kc/s to 22800 kc/s	
	A1	61 (27)	100 (43)	121 (67)	124 (60)	78 (39)	49 (22)	533 (258)
	A3	9 (3)	48 (7)	13 (6)	6 (5)	4 (3)	"	80 (24)
	A1 A3	70 (13)	109 (26)	62 (20)	41 (12)	15 (5)	2 (2)	299 (78)
	TOTAL	140 (43)	257 (76)	196 (93)	171 (77)	97 (47)	51 (24)	912 (360)
DIFFERENCE		88 (91)	93 (22)	108 (78)	78 (70)	86 (64)	85 (59)	352 (384)

COMPARISON BETWEEN NUMBER OF ASSIGNMENTS IN DRAFT P.F.B. COAST STATION PLANS AND NUMBER OF EXISTING ASSIGNMENTS
NOTIFIED IN LIST OF COAST STATIONS (MARCH 1950 EDITION)

REGION 3

NOTE = (1) THE MAIN FIGURES, IN EACH COLUMN, GIVE THE GROSS TOTAL NUMBER OF SPECIFIC ASSIGNMENTS (I.E. TO INDIVIDUAL STATIONS) TO EACH COUNTRY.

(2) THE FIGURES IN BRACKETS GIVE THE GROSS TOTAL NUMBER OF SEPARATE FREQUENCIES ASSIGNED TO, OR NOTIFIED BY, EACH COUNTRY.

DRAFT P.F.B. PLANS	CLASS OF EMISSION	4063 kc/s to 4438 kc/s	6200 kc/s to 6525 kc/s	8195 kc/s to 8815 kc/s	12330 kc/s to 1300 kc/s	16460 kc/s to 17360 kc/s	22000 kc/s to 22720 kc/s	TOTAL
	A1	161 (112)	224 (115)	230 (164)	171 (142)	123 (110)	81 (69)	990 (712)
	A3	75 (19)	"	99 (20)	45 (13)	23 (11)	21 (6)	263 (69)
	TOTAL	236 (131)	224 (115)	329 (184)	216 (155)	146 (121)	102 (75)	1253 (781)
LIST OF COAST STATIONS		3900 kc/s to 5000 kc/s	5001 kc/s to 7500 kc/s	7501 kc/s to 11000 kc/s	11001 kc/s to 14000 kc/s	14001 kc/s to 18500 kc/s	18501 kc/s to 22800 kc/s	
	A1	27 (21)	34 (32)	79 (61)	47 (41)	42 (39)	9 (8)	238 (202)
	A3	13 (3)	5 (5)	3 (3)	2 (2)	1 (1)	1 (1)	25 (15)
	A1 A3	8 (6)	36 (22)	20 (9)	7 (6)	6 (6)	"	77 (49)
TOTAL		48 (30)	75 (59)	102 (73)	56 (49)	49 (46)	10 (9)	340 (266)
DIFFERENCE		188 (101)	149 (56)	227 (111)	160 (106)	97 (75)	92 (66)	913 (515)

CLASSIFICATION OF ASSIGNMENTS IN LIST OF COAST STATIONS (MARCH 1950)

WORLD

NOTE - (1) THE MAIN FIGURES, IN EACH COLUMN, GIVE THE GROSS TOTAL NUMBER OF SPECIFIC ASSIGNMENTS (I.E. TO INDIVIDUAL STATIONS) TO EACH COUNTRY.

(2) THE FIGURES IN BRACKETS GIVE THE GROSS TOTAL NUMBER OF SEPARATE FREQUENCIES ASSIGNED TO, OR NOTIFIED BY, EACH COUNTRY.

WITHIN THE BANDS ALLOCATED AT ATLANTIC CITY TO THE MARITIME MOBILE SERVICE.	CLASS OF EMISSION	4063 kc/s to 4438 kc/s	6200 kc/s to 6525 kc/s	8195 kc/s to 8815 kc/s	12330 kc/s to 13200 kc/s	16460 kc/s to 17360 kc/s	22000 kc/s to 22720 kc/s	TOTAL
	A1	76 (48)	116 (71)	285 (190)	139 (102)	122 (81)	41 (21)	779 (513)
	A3	20 (5)	9 (9)	18 (12)	8 (7)	8 (7)	2 (2)	65 (42)
	A1 A3	203 (48)	187 (64)	156 (85)	75 (39)	45 (31)	7 (5)	673 (272)
	TOTAL	299 (101)	312 (144)	459 (287)	222 (148)	175 (119)	50 (28)	1517 (827)
OUTSIDE THE BANDS ALLOCATED AT ATLANTIC CITY TO THE MARITIME MOBILE SERVICE.		3900 kc/s to 5000 kc/s	5001 kc/s to 7500 kc/s	7501 kc/s to 11000 kc/s	11001 kc/s to 14000 kc/s	14001 kc/s to 18500 kc/s	18501 kc/s to 22800 kc/s	
	A1	50 (31)	37 (63)	21 (23)	95 (53)	20 (20)	25 (16)	288 (206)
	A3	6 (5)	54 (13)	8 (7)	3 (3)	6 (6)	12 (12)	89 (46)
	A1 A3	75 (23)	171 (72)	21 (18)	45 (39)	17 (17)	9 (9)	338 (178)
	TOTAL	131 (59)	312 (148)	50 (48)	133 (95)	43 (43)	46 (37)	715 (430)
GENERAL TOTAL		430 (160)	624 (292)	509 (335)	355 (243)	218 (162)	96 (65)	2232 (1257)

* U.S.A. - PLUS 1 FREQUENCY (1) OF 24930 kc/s

CUBA - PLUS 1 (1) FREQUENCY OF 4 Mc/s, 6 (6) FREQUENCIES OF 6 Mc/s, 3 (3) FREQUENCIES OF 8 Mc/s AND 7 (7) FREQUENCIES OF 12 Mc/s WITHOUT INDICATION OF CLASS OF EMISSION.

P.F.B. DRAFT FREQUENCY ASSIGNMENT PLAN
FOR COAST TELEPHONE STATIONS

CLASSIFICATION OF COMMENTS OF ADMINISTRATIONS

CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	CATEGORY 6
PLAN REJECTED ON GENERAL PRINCIPLES BY :	PLAN REJECTED AS NOT MEETING MINIMUM REQUIREMENTS BY :	PLAN ACCEPTABLE AS BASIS FOR DISCUSSION TO :	PLAN ACCEPTABLE WITHOUT, OR WITH ONLY MINOR, AMEND- MENTS, TO :	NO COMMENTS MADE ON COAST TELEPHONE STATION PLAN BUT COMMENTS MADE ON OTHER PLANS, BY :	NO COMMENTS MADE ON ANY P.F.B. PLANS BY :
<ul style="list-style-type: none"> • + ALBANIA • + BYELORUSSIA BULGARIA • + CZECHOSLOVAKIA • + HUNGARY POLAND • + ROUMANIA UKRAINE U.S.S.R. 	<ul style="list-style-type: none"> • + ETHIOPIA + INDIA INDONESIA PORTUGUESE COLONIES YUGOSLAVIA 	<ul style="list-style-type: none"> BELGIUM + BURMA • DENMARK + EGYPT FINLAND FRANCE ITALY NORWAY • + PAKISTAN SWEDEN U. K. U.K. COLONIES UNITED STATES U.S. TERRITORIES • + VATICAN CITY • + VENEZUELA 	<ul style="list-style-type: none"> ARGENTINE AUSTRALIA • + BELGIAN CONGO CANADA CUBA FRENCH OVERSEAS TERRITORIES • IRAQ • IRELAND JAPAN NEW ZEALAND PORTUGAL SOUTH AFRICA URUGUAY 	<ul style="list-style-type: none"> CEYLON + CHINA GERMANY (BRITISH) • + GREECE • + GUATEMALA • + HAITI • ICELAND • + LEBANON MOROCCO AND TUNISIA NETHERLANDS • + PARAGUAY • + SAUDI ARABIA • + S. RHODESIA • + SWITZERLAND 	<ul style="list-style-type: none"> • + AFGHANISTAN • + AUSTRIA • + BOLIVIA • + BRAZIL + CHILE • + COLOMBIA • + COSTA RICA DOMINICAN REPUBLIC • EL SALVADOR + ECUADOR • HONDURAS IRAN • + ISRAEL • + LIBERIA • + LUXEMBOURG MEXICO • + MONACO + NICARAGUA PANAMA • + PERU PHILIPPINES • + SYRIA • THAILAND • + YEMEN
<ul style="list-style-type: none"> • COUNTRY HAS NO REQUIREMENT FOR HIGH FREQUENCY ASSIGNMENTS TO COAST TELEPHONE STATIONS IN DRAFT P.F.B. PLAN. + COUNTRY HAS NO ASSIGNMENT TO COAST TELEPHONE STATIONS IN LATEST I.T.U. LIST OF COAST STATIONS (MARCH 1950 EDITION). 					

- NOTE. - 1. NONE OF THE COUNTRIES IN CATEGORY 1 HAS MADE ANY DETAILED COMMENTS ON SPECIFIC ASSIGNMENTS IN THE COAST TELEPHONE STATION PLAN. THEY HAVE REJECTED ALL DRAFT PLANS PREPARED BY THE P.F.B. ON THE GROUNDS THAT THE PRINCIPLES AND WORKING METHODS USED BY THE P.F.B. WERE WRONG, AND, IN NOT USING THE 1939 BERNE LIST AS A BASIS, WERE NOT CONDUCTIVE TO THE PREPARATION OF PLANS WHICH WOULD MEET THE REQUIREMENTS OF ALL COUNTRIES.
2. THE COUNTRIES IN CATEGORY 2 HAVE REJECTED THE PLAN EITHER BECAUSE IT DOES NOT CONTAIN AN ADEQUATE NUMBER OF ASSIGNMENTS TO THEIR COUNTRY (INDIA AND YUGOSLAVIA) OR BECAUSE OF EXCESSIVE CO-CHANNEL SHARING (INDONESIA) OR BECAUSE THE P.F.B. PLANS IN GENERAL DO NOT SUFFICIENTLY REFLECT EXISTING FREQUENCY USAGE (ETHIOPIA AND PORTUGUESE COLONIES).
3. SOME OF THE COUNTRIES IN CATEGORY 3 (BELGIUM, FINLAND AND UNITED STATES) DESIRE ADDITIONAL ASSIGNMENTS. NEARLY ALL THE REMAINING COUNTRIES HAVE OBJECTED TO SPECIFIC ASSIGNMENTS ON THE GROUNDS OF INTERFERENCE DUE TO CO-CHANNEL SHARING.
4. IT MAY BE ASSUMED THAT ACCEPTANCE OF THE DRAFT PLAN BY THE ADMINISTRATIONS IN CATEGORY 4 IS CONTINGENT ON NO MAJOR MODIFICATIONS BEING MADE TO THE PLAN WHICH WILL ADVERSELY AFFECT THE SERVICES OF THEIR COUNTRY.
5. THE ABSENCE OF COMMENTS ON THE COAST TELEPHONE STATION PLAN FROM COUNTRIES IN CATEGORY 5 WHICH HAVE FURNISHED COMMENTS ON OTHER DRAFT ASSIGNMENT PLANS WOULD APPEAR TO INDICATE, AT LEAST IN SOME CASES, THAT THERE IS NO MAJOR OBJECTION TO THE ACCEPTANCE OF THE COAST TELEPHONE STATION PLAN.
6. IN THE ABSENCE OF ANY COMMENTS IT IS NOT POSSIBLE TO ASSESS THE ATTITUDE OF THE COUNTRIES IN CATEGORY 6 TOWARDS THE ACCEPTANCE OF THE DRAFT PLAN. HOWEVER, THE LIST IN CATEGORY 6 INCLUDES A NUMBER OF COUNTRIES WHOSE REPRESENTATIVE ON THE P.F.B. CONSIDERED THE DRAFT COAST TELEPHONE STATION PLAN TO BE SUFFICIENTLY PROMISING TO BE REMITTED FOR STUDY BY ADMINISTRATIONS AND BY THE EXTRAORDINARY ADMINISTRATIVE CONFERENCE.

CHAPTER VIII

DRAFT FREQUENCY ASSIGNMENT PLAN

FOR THE BANDS BETWEEN 14 AND 150 kc/s

VIII/1
CHAPTER VIII

DRAFT FREQUENCY ASSIGNMENT

PLAN FOR THE BANDS BETWEEN 14 AND 150 kc/s

(See document annexed to Circular Letter No. 20/45 dated 16th March 1950)

1. Analysis of the Comments submitted by Administrations

1.1 Pursuant to Resolution No. 199 of the Administrative Council, the I.F.R.B. has made a careful analysis of the comments furnished by Administrations on the draft frequency assignment plan for the band 14 - 150 kc/s which was prepared by the P.F.B. and circulated to Administrations by the Secretary General on 16th March 1950 (Circular-letter No. 20/45). This analysis has shown that the views of Administrations on the draft plan, assessed from a study of both their general and detailed comments, can best be classified into six broad categories; and the results, which cover all comments received prior to 15th March 1951, are given in the table in Annex 1. This table should be read in conjunction with the Notes which appear on page 2 of Annex 1.

1.2 It is to be noted that it has been rather difficult, in a few cases, to decide in which of the categories the overall comments of a country should be placed, and some judgment has had to be used in deciding whether countries should be placed, for example, in Category 4 (i.e. countries to which the draft plan is acceptable without, or with minor, amendment) or in Category 3 (countries to which the draft plan is acceptable as a basis for discussion). In such cases, when the amendments desired by a country appear to be such as to require a modification to the draft plan which would adversely affect the services of another country, the country desiring the amendment has been placed in Category 3. A slight amount of flexibility is, therefore, permissible in interpreting the classifications.

2. Objections raised to draft plan

2.1 In the general comments submitted by Administrations, which are being circulated verbatim to all Administrations as part of the general comments on the ensemble of all P.F.B. and other draft assignment plans*, the main objection to the draft low frequency plan relates almost entirely to the narrow channel spacing used in the plan and, in connection with this, the adjacent channel problems which result, especially in the European Area. There is only one possible way out of this difficulty, in view of the fact that this band (14 - 150 kc/s) is relatively very narrow and that high powers are used by many countries: that is, by a reduction in the number of assignments included in the plan. In fact, the protection of services can in general only be increased in the approximate inverse ratio to the reduction in the number of assignments. At the same time, only the power actually necessary for each individual case should be used.

* See Booklet A

2.2 Analysis of the detailed comments furnished by Administrations shows that only 48 assignments, out of a total of 682 assignments in the draft plan, have been specifically criticised unfavourably, and 20 favourably. In nearly every case, the objections to specific assignments are raised on the grounds of probable co-channel or adjacent-channel interference. The detailed comments are being circulated, in coded form, to all Administrations.** Individual cards in respect of each detailed comment, giving full information on the nature of the complaint notified and any suggestions made for its cure, have been prepared for easy reference by the Extraordinary Administrative Radio Conference.

3. Tentative solutions suggested

3.1 In agreement with the request of the Administrative Council (Resolution No. 199) for the active assistance of the I.F.R.B. and of all Members of the Union in studying and making proposals for suitable methods of bringing the entire Atlantic City Table of Frequency Allocations into operation as soon as possible, the I.F.R.B. devoted great care to the detailed comments received from the Administrations and tried - with regard to them - to propose changes in the draft plan which would make it more acceptable than the existing edition. Also a few Administrations made specific proposals in their detailed comments for changes and amendments to the draft plan.

A. 14 to 30 kc/s band

3.2 In the lowest section of the plan (14 to 30 kc/s), the frequencies actually requested by the Administrations concerned were retained by the P.F.B. This was done primarily on account of the high frequency alternators still working in this band. But because of complaints of insufficient frequency separation expressed in some comments, it would be possible to propose several solutions, one of which is given in Annex 2.

3.3 To avoid the necessity of a large displacement, the band 14 to 30 kc/s was divided into two sub-bands. For the lower portion, (14 to 20 kc/s) a frequency separation of 240 c/s has been employed, and for the higher portion, (20 to 30 kc/s) a separation of 850 c/s has been proposed.

The resulting frequency changes appear in Col.4. As it is to be seen, this solution combines the advantage of uniform frequency separation; with the necessity of very slight frequency changes; in the lower portion of the band the maximum displacement is + 200 c/s, while in the higher portion the most important change is + 950 c/s, which is considered acceptable for a frequency of the order of 25 kc/s.

B. The band 30 to 150 kc/s

3.4 The changes in the band 30 to 150 kc/s proposed by some Administrations, together with the recommendations of the I.F.R.B., appear in Annex 3. Only those comments of Administrations for which a tentative amendment is proposed are mentioned.

** See Booklet B

CHAPTER VIII
Annex 1

P.F.B. DRAFT FREQUENCY ASSIGNMENT PLAN FOR THE BAND 14-150 kc/s

Classification of comments of Administrations

CATEGORY 1	CATEGORY 2	CATEGORY 3	CATEGORY 4	CATEGORY 5	CATEGORY 6
Plan rejected on general principles by:	Plan rejected as not meeting minimum requirements by:	Plan acceptable as basis for discussion to:	Plan acceptable without, or with only minor, amendments to:	No comment made on Low Frequency Plan but comments made on other plans by:	No comment made on any P.F.B. plans by:
ALBANIA BIELORUSSIA BULGARIA HUNGARY POLAND UKRAINE ROUMANIA CZECHOSLOVAKIA U.R.S.S.	U.S.A. & Territories GREECE	CANADA VATICAN CITY PORTUGUESE COLS. U.K. COLS. DENMARK FRANCE IRELAND ITALY NORWAY MOROCCO & TUNISIA U.K. SWEDEN	ARGENTINA BELGIUM CUBA IRAQ ICELAND JAPAN NETHERLANDS YUGOSLAVIA UNION OF S.AFRICA	SAUDI ARABIA AUSTRALIA PORTUGAL BURMA S.RHODESIA CEYLON SWITZERLAND CHINA TURKEY BELGIAN CONGO EGYPT URUGUAY ETHIOPIA VENEZUELA FINLAND FRENCH OVER-SEAS TERR. GUATEMALA HAITI INDIA INDONESIA LEBANON NICARAGUA NEW ZEALAND PAKISTAN PARAGUAY	AFGANISTAN AUSTRIA PHILIPPINES BOLIVIA SYRIA BRAZIL THAILAND CHILE YEMEN COLOMBIA COSTA RICA DOMINICAN REPUBLIC EL SALVADOR ECUADOR HONDURAS IRAN ISRAEL TRANSJORDAN LIBERIA LUXEMBOURG MEXICO MONACO PANAMA PERU

N.B. The above lists of countries are given in French alphabetical order

CHAPTER VIII

Annex 1/2

- NOTES
1. None of the countries in Category 1 has made any detailed comments on specific assignments in the L.F. plan. They have rejected all draft plans prepared by the P.F.B. on the grounds that the principles and working methods used by the P.F.B. were wrong.
 2. U.S. states that certain essential U.S. requirements were omitted from the L.F. plan, and that the list presents serious adjacent channel problems. The list requires revision or other acceptable method will have to be devised to achieve the implementation of this band. Greece has not notified any objections to specific assignments.
 3. The comments made by the countries placed in Category 3 range from those (such as from Canada, France, Italy, U.K. etc.) which include objections made to specific assignments, to those which contain no objections to specific assignments but "accept the plan in principle". It may be assumed that, in general, some modifications will be necessary to the specific assignments made to countries in this Category before the plan is acceptable to these countries.
 4. Some Administrations in Category 4 have stated that the plan may be adopted as it stands, others have intimated that their acceptance of the plan is contingent on no major modifications being made which will adversely affect the services of their country.
 5. A distinction has been drawn between the countries placed in Category 5 and Category 6, as the absence of comments on the L. F. plan from countries which have furnished comments on other draft assignment plans would appear to indicate, at least in many cases, that there is no major objection to the acceptance of the L.F. plan.
 6. In the absence of any comments it is not possible to assess the attitude of the countries in Category 6 towards the acceptance of the draft plan. However, the list in Category 6 includes a number of countries whose representative on the P.F.B. considered the draft L.F. plan to be sufficiently promising to be remitted for study by Administrations and by the Extraordinary Administrative Conference.

CHAPTER VIII

a) FREQUENCIES BETWEEN 14 and 20 kc/s

Annex 2

Name of the station	Frequencies in the PFB draft plan kc/s	Proposed frequency with separation 240 c/s kc/s	Frequency change ◇ - c/s
1	2	3	4
Warszawa	14.29	14.32	◇ 30
Casablanca	14.63	14.56	- 70
Kodiak, Guam,			
Puget Sound	14.90	14.80	- 100
Croix d'Hins	15.22	15.04	- 180
Kodiak, Guam,			
Puget Sound	15.44	15.28	- 160
Annapolis	15.60	15.52	- 80
Mare Island	(15.80	15.76	- 40)
Chollas Heights	()
Rugby	16.00	16.00	0
Paris	16.20	16.24	◇ 40
Warszawa	16.42	16.48	◇ 60
Lualualei	16.68	16.72	◇ 40
Amsterdam	16.80	16.96	◇ 160
Varberg	17.20	17.20	0
Warszawa	17.60	17.44	- 160
Annapolis	17.80	17.68	- 120
Mare Island,			
Chollas Heights	18.00	17.92	- 80
New York	18.20	18.16	- 40
New York	18.40	18.40	0
Kodiak, Guam,			
Puget Sound	18.60	18.64	◇ 40

CHAPTER VIII

Annex 2/2

1	2	3	4
New York	18.80	18.88	+ 80
Annapolis	19.00	19.12	+ 120
Warszawa	19.20	19.36	+ 160
Kodiak, Guam, Puget Sound			
Criggion	19.40	19.60	+ 200
Mare Island, Chollas Heights	19.80	19.84	+ 40

b) FREQUENCIES BETWEEN 20 and 30 kc/s

Name of the station	Frequencies in the PFB draft plan kc/s	Proposed frequencies with separation 850 c/s kc/s	Frequency change \pm c/s
1	2	3	4
Roma	20.15	20.15	0
Roma	20.76	21.00	+240
New York	21.80	21.85	+ 50
New York	22.10	22.70	+600
New York	22.60	23.55	+950
Summit	24.00	24.40	+ 400
New York	25.82	25.25	- 570
Lualualei	26.10	26.10	0
Paris	27.00	26.95	- 50
Chollas Heights	28.50	27.80	- 700
Moskva	28.64	28.65	+ 10
Ongar/Dorchester	29.50	29.50	0

FREQUENCIES BETWEEN 30 and 150 kc/s

For the sake of simplicity, the following abbreviations have been adopted:

1. Interf. PARIS... = risk of interference caused by PARIS.
2. Sharing PARIS... = sharing the frequency with PARIS cannot be accepted.

Frequency (kc/s)	Name of Station	Comment		Possible solution
		by:	relating to:	
36.55	Jeløy	Nor	Interf. BROADCASTING Would prefer a frequency outside 34.5-43 kc/s band) If Norway and Sweden agree) frequency 33.75 kc/s could) be assigned to Jeløy and) 44.25 kc/s to Varberg/Karlsborg.)))))))
40.40.	Varberg/Karlsborg	Nor	Norway fears interference from Varberg/Karlsborg to her broadcasting service operating in the 34.5-43 kc/s band.	
88.516	DECCA system of Sweden	S	Interf. KAUNAS 89.05	Sweden proposes that KAUNAS be transferred to 93.95 kc/s and ROMA from 93.95 to 89.05 kc/s.
96.05	Halifax	Can	Interf. LORAN. Would prefer a frequency between 55 and 85 kc/s.	Transfer HALIFAX to 57.20 kc/s.

CHAPTER VIII
Annex 3/2

Frequency (kc/s)	Name of Station	Comment		Possible solution
		by:	relating to:	
97.10	Gibraltar	G/Col	Interf. LYON 97.45 kc/s	GIBRALTAR could be transferred to 117.75 kc/s
98.50	Tryvasshøgda	Nor	Interf. PODEBRADY 98.85 kc/s	} PODEBRADY 13 JJ could be inter- } changed with PODEBRADY 4JJ } (PODEBRADY 13JJ could be placed } on 100.60 kc/s and PODEBRADY } 4JJ on 98.85 kc/s).
99.20	St. Nazaire	F	Interf. PODEBRADY 98.85 kc/s	
103.05	Portishead	G	Interf. PARETS-BAD VILBEL 103.40 kc/s. Sharing EGYPT	} Portishead could be interchanged } with Longyearbyen: (PORTISHEAD } to be placed on 104.80 and } LONGYEARBYEN on 103.05 kc/s).
104.80	Longyearbyen	Nor	Sharing NARSARSSUAK, SOFIA Interf. SVERDLOVSK 104.45 kc/s	
106.20	Halifax	Cana	See 96.05 kc/s	Transfer HALIFAX to 79.25 kc/s

CHAPTER VIII
Annex 3/3

Frequency (kc/s)	Name of Station	Comment		Possible solution
		by:	relating to:	
107.60	Odense	Dnk		See Recommendation No. 4 of the Region 1 Conference
110.05	Takoradi	G/Col	Sharing: CABINDA, LOBITO	Transfer TAKORADI to 111.10 kc/s
110.75	Prince Rupert	Cana	See 96.05 kc/s	Transfer PRINCE RUPERT to 78.55 kc/s
125.10	Takoradi	G/Col	Sharing: MINDELO, PRAIA, BISSAU, BOLAMA	Transfer TAKORADI to 124.05 kc/s
125.45	Prestwick	G	Interf. RADIONAVIG. of U.K. 126.9675 kc/s	Transfer PRESTWICK to 119.50 kc/s
129.65	Portishead	G	Sharing: KEFLAVIK. Interf. PORTO (129.30 kc/s)	Transfer PORTISHEAD to 137.70 kc/s
132.774	DECCA system of Sweden	S	Interf. KAMSKOE OUSTIE, 133.15 kc/s	Sweden proposes transferring KAMSKOE OUSTIE from 133.15 to 130.70 kc/s
149.60	Trondheim	Nor	Interf. TROMSØ 155 kc/s (Broadcasting)	Norway proposes the transfer of Trondheim to 128.95 kc/s. In view of No.133 of the Atlantic City Radio Regula- tions the I.F.R.B. proposes that TRONDHEIM be transferred to 131.40 kc/s.

CHAPTER IX

ANALYSIS OF THE COMMENTS SUBMITTED BY ADMINISTRATIONS ON THE

DRAFT PLANS PREPARED BY THE P.F.B. FOR THE BANDS ALLOCATED

TO THE FIXED, BROADCASTING AND LAND MOBILE SERVICES BETWEEN

3 900 AND 27 500 kc/s

CHAPTER IX / 1

ANALYSIS OF THE COMMENTS SUBMITTED BY ADMINISTRATIONS ON THE DRAFT PLANS PREPARED BY THE P.F.B. FOR THE BANDS ALLOCATED TO THE FIXED, BROADCASTING AND LAND MOBILE SERVICES BETWEEN 3 900 AND 27 500 kc/s

(See documents annexed to Circular Letter No. 20/59 dated 6th April 1950)

Consequent upon Administrative Council Resolutions No. 154 & 200, the I.F.R.B. received general and detailed comments relating to the P.F.B. fixed, broadcasting and land mobile service draft plans from 42 countries.

The analysis of the comments has shown that the views of Administrations on the draft plans can best be classified into 5 broad categories and the results, which cover all comments received prior to 15th March, 1951, are given in Annex 1.

All the general comments submitted by Administrations prior to 15th March, 1951, have been circulated verbatim to all Members of the Union *. The detailed comments submitted up to the same date will also be circulated, but in coded form. In respect of each detailed comment, however, individual cards giving full information on the nature of the complaint notified have been prepared for easy reference by the Extraordinary Administrative Radio Conference.

It appears from Annex 1 that :

- a) The 9 countries in Column 1 have all rejected the draft Plans on the ground that the general principles used by the P.F.B. in elaborating these draft Plans were wrong.
- b) The countries in Column 2 are those which are not in a position to accept the draft plans because they do not provide for a sufficient number of frequencies for their communications.
- c) The countries mentioned in Column 3 accept the draft plans as a basis for discussion, but some of them indicate that considerable recasting would be necessary.
- d) Six of the countries in Column 4 sent no comments on the P.F.B. draft plans for the services herein discussed, but sent comments on other plans. Argentina abstained from formulating comments "for the time being".
- e) In the absence of any comments, it is not possible exactly to assess the attitude of the countries in Column 5 towards the acceptance of the draft plans.

* See Booklet A

In order that each Administration may have some idea of the scope of the detailed comments submitted by the Administrations on the P.F.B.'s draft plans for the fixed, broadcasting and land mobile service bands between 3 900 and 27 500 kc/s, the I.F.R.B. has prepared a numerical analysis of the detailed comments received up to 15th March, 1951 (Annex 2).

As a considerable number of the Members of the I.T.U. have sent no detailed comments, this analysis must be considered incomplete, and since some of the comments received are worded in an extremely guarded manner, its accuracy leaves some room for improvement.

In an effort to throw the problem into even sharper relief, the I.F.R.B. has provided, in Annex 2, a numerical assessment of additional frequencies resulting from the application of the technical rules of the P.F.B., which would have to be assigned in the draft plans to meet the requirements submitted up to 1st September 1950 under paragraph 16 of the Atlantic City Resolution.

Conclusions

From the 42 countries which sent comments, no country accepts the draft plans as they stand or with minor modifications, 13 propose to accept them as a basis for discussion, and 29 reject them as not meeting minimum requirements.

Since 21 countries submitting requirements sent no comments at all (Col. 5), and 7 countries did not send comments on the P.F.B. draft plans for the fixed, broadcasting and land mobile services (Col. 4), the number of 38 countries (29 countries in Col. 2 and 9 in Col. 1) rejecting the draft plans represents an important majority of the Members of the Union which have expressed opinions on the P.F.B. draft plans (38 countries out of 51 countries).

This rejection of the draft Plans prepared by the F.P.B. for the services herein discussed by such a substantial number of the Members of the Union confirms the advance information given by the I.F.R.B. to the Administrative Council which, during its Fifth Session, drew up Resolution 199.

CHAPTER IX

Annex 1

P.F.B. FIXED, BROADCASTING & LAND MOBILE SERVICE DRAFT PLANS (3 900 - 27 500 kc/s)Classification of Comments of Administrations received to 15th March, 1951

Column 1	Column 2	Column 3	Column 4	Column 5		
Plans rejected on general principles by :	Plans unacceptable as not meeting minimum requirements to :	Plans acceptable as basis for discussion to :	No comment made on these draft plans but comments made on other plans by:	No comment made on any P.F.B. plans by :		
Albania Bielorussia Bulgaria Czechoslovakia Hungary Poland Roumania Ukraine U.S.S.R.	Belgium China Cuba Egypt El Salvador Ethiopia France French Overseas Terr. Greece Guatemala Haiti India Iraq Ireland Italy Morocco & Tunisia Netherlands	Pakistan Paraguay Portuguese Colonies Sweden Switzerland S. Africa U.K U.K.Colonies U.S.A. U.S.A. Territories Venezuela Yugoslavia	Australia Canada Belgian Congo Denmark Finland Indonesia Iceland Lebanon Norway N. Zealand Portugal S. Rhodesia Vatican City (State of)	Argentina Burma Ceylon Nicaragua Saudi Arabia Turkey Uruguay	Afghanistan Austria Bolivia Brazil Chile Colombia Costa Rica Dominican Republic Ecuador Honduras Iran Israel Jordan Liberia * Luxembourg Mexico	* Monaco Panama Peru Philippines Syria Thailand Yemen

* No requirements were submitted to the P.F.B. by these Administrations

ANALYSE NUMERIQUE, PAR BANDES DE FREQUENCES, DES COMMENTAIRES DETAILLES
REÇUS JUSQU'AU 15 MARS 1951 ET RELATIFS AUX PROJETS DE PLANS ETABLIS PAR
LE C.P.F. POUR LES BANDES DES SERVICES FIXE, DE RADIODIFFUSION ET MOBILE
TERRESTRE.

ANALYSIS, BY BANDS, OF THE DETAILED COMMENTS RECEIVED UP TO 15 MARCH 1951,
IN CONNECTION WITH THE P.F.B.'S DRAFT PLANS FOR THE FIXED, BROADCASTING
AND LAND MOBILE SERVICE BANDS.

ANALISIS NUMERICO, POR BANDAS DE FRECUENCIAS, DE LOS COMENTARIOS DETALLADOS
RECIBIDOS HASTA EL 15 DE MARZO DE 1951 Y QUE SE REFIEREN A LOS PROYECTOS DE
PLANES ESTABLECIDOS POR LA J.P.F. PARA LAS BANDAS DE SERVICIO FIJO,
RADIODIFUSION Y MOVIL TERRESTRE.

Bande Band Banda	Nombre de fréquences assignées dans la bande Number of frequencies assigned in the band Número de frecuencias asignadas en la banda	Nombre de fréquences inscrites dans la co- lonne "Notifications" Number of frequencies entered in Notifica- tion column. Número de frecuen- cias inscrites en la columna "Noti- ficaciones".	Nombre de commentaires détaillés selon les- quels la fréquence assignée est : Number of detailed comments declaring the frequency assigned : Número de comentarios detallados segun los cuales la frecuencia asignada es :		Nombre d'assignations de fréquences nécessaires pour satisfaire selon les règles du C.P.F. les demandes additionnelles présentées jusqu'au 1 septembre 1950, conformément au paragraphe 16. Number of assignments needed to meet the additional requirements submitted up to 1 September 1950, under section 16, according to P.F.B. rules. Número de asignaciones de frecuencias necesarias para satisfacer, de acuerdo con las reglas de la J.P.F., las demandas adicionales presentadas hasta el primero de septiembre de 1950 de conformidad con el paragrafo 16.
			acceptable acceptable acceptable	inacceptable * unacceptable inacceptable	
D : 3900- 3950	13	5		4	1
E : 3950- 4000	47	3	5	12	8
F : 4000- 4063	100	21	40	18	90
G : 4438- 4650	282	14	46	68	225
H : 4750- 4850	134	6	9	30	74
I : 4850- 4995	202	9	8	53	81
J : 5005- 5060	80	6	2	16	21
K : 5060- 5250	-	-	-	-	80
L : 5250- 5450	-	-	-	-	256
M : 5450- 5480	-	-	-	-	83
N : 5730- 5950	-	-	-	-	571
O : 6765- 7000	-	-	-	-	948
P : 7300- 8195	594	61	10	58	694
Q : 9040- 9500	423	32	78	172	281
R : 9775- 9995	125	10	25	100	149
S : 10100-11175	459	28	95	126	263
T : 11400-11700	212	5	33	54	120
U : 11975-12330	408	4	38	101	130
V : 13360-14000	423	7	38	99	142
W : 14350-14990	304	4	51	89	130
X : 15450-16460	437	5	52	77	184
Y : 17360-17700	104	-	26	30	109
Z : 18030-19990	446	3	66	166	161
aa: 20010-21000	263	-	14	13	74
bb: 21750-21850	26	-	6	3	43
cc: 22720-23200	142	-	8	17	68
dd: 23350-24990	368	-	21	41	37
ee: 25010-25600	55	-	2	5	7
ff: 26100-27500	67	-	3	5	7

* Il est à présumer que les nombres de cette colonne seraient notablement plus élevés si certaines des administrations qui ont déclaré les projets de plans inacceptables dans leur ensemble avaient présenté des commentaires détaillés.

* These figures presumably would be considerably augmented if certain Administrations which declared the draft plans to be unacceptable as a whole had submitted detailed comments.

* Es de suponer que estas cifras serían mucho más elevadas aún, si algunas de las administraciones que han declarado inacceptables en su conjunto los proyectos de planes, hubiesen formulado comentarios detallados.

CHAPTER X

PROPOSAL OF THE I.F.R.B. FOR A
SCHEDULE OF IMPLEMENTATION

CHAPTER XPROPOSAL OF THE I.F.R.B. FOR A SCHEDULE OF IMPLEMENTATION1. Principles applicable to implementation

1.1 To minimise operational difficulties and interference problems during the period of implementation, it is desirable that a complete and simultaneous changeover of assignments for all radio services should be avoided.

1.2 Implementation, therefore, should in general be carried out by steps.

1.3 For this purpose, the radio spectrum below 27 500 kc/s should be divided into segments, such as the following :

segment no.	1)	27 500	-	20 010	kc/s
	2)	20 010	-	15 450	kc/s
	3)	15 450	-	11 175	kc/s
	4)	11 175	-	6 765	kc/s
	5)	6 765	-	4 750	kc/s
	6)	4 750	-	2 850	kc/s
	7)	2 850	-	10	kc/s

1.4 Frequencies below 2 850 kc/s may be treated as a separate category and without regard to the implementation schedule established for those frequencies above 2 850 kc/s.

1.5 Reassignments should begin at 27 500 kc/s, and continue downward segment by segment in sequential progression. In this way, the less crowded portions of the spectrum would be implemented prior to the more crowded portions.

1.6 An Interim Period should be designated to permit Administrations to prepare for implementation, and during which they could transfer stations to the new frequencies provided that harmful international interference did not thereby result.

1.7 On the scheduled date for the end of the Interim Period, all out-of-band operations capable of causing harmful international interference should cease, and thereafter all assignment transfers not previously effected should be accomplished during the time schedule stipulated for the segments in which the appropriate new frequencies are located.

1.8 The Interim Period should be followed by a series of Adjustment Periods, one for each segment, each such Period having a duration of approximately one week.

1.9 The date established for the end of the Interim Period should coincide with the start of the Adjustment Period for segment No. 1. During this Adjustment Period all transfers to and within that segment, not already accomplished, should be carried out.

1.10 Similarly, the Adjustment Periods for the remaining segments should follow ad seriatim, each Period to follow immediately that of the preceding segment.

1.11 The assignment plans for the aeronautical mobile and/or maritime mobile services and the provisions contained in the Radio Regulations concerning high frequency ship stations (articles 33 and 34) could be implemented -

- a) by steps as set forth above, or
- b) simultaneously, on the date scheduled for the end of the Interim Period, or
- c) partly by a) and partly by b).

1.12 It is to be noted that one of the main difficulties of implementing the aeronautical mobile bands and the bands allocated to ship stations will arise from the desirability, for practical reasons, of changing simultaneously all the frequencies of each mobile station. This question requires the most careful study.

2. Sequence of Events

The I.F.R.B. suggests that the sequence of events be in the order of paragraphs 2.1 to 2.8, as follows :

2.1 Publication of the New International Frequency List for the radio services of frequency bands for which the Extraordinary Administrative Radio Conference has approved a specific assignment plan, and

publication of the Corrected Frequency List for the radio services or frequency bands for which the Conference has not approved a specific assignment plan.

2.2 Preparation of the Trial Frequency List for the services or bands concerned, based on the data of the Corrected Frequency List and the principles prescribed by the Conference.

2.3 Publication of the Trial Frequency List, followed by a subsequent period for comments and modifications to the Trial List to be received from Administrations, and then the publication of the resulting modifications thereto.

2.4 An Interim Period to allow Administrations to prepare for implementation. During this period Administrations may transfer stations to the new frequencies provided that harmful international interference does not thereby result. All out-of-band operations that may cause such interference to cease by the end of this Period.

2.5 Implementation of segments 1 to 6 ad seriatim during their prescribed Adjustment Periods.

2.6 Implementation of the assignment plans for the Aeronautical Mobile and Maritime Mobile services, including the provisions contained in Articles 33 and 34 of the Radio Regulations, to be effected as may be decided in the light of paragraph 1.11.

2.7 Segment 7 to be implemented either simultaneously with segments 1 to 6, or at any other appropriate time chosen by the Conference, following the general pattern indicated, but taking into account the particular characteristics of the regional allocations and those plans, such as the European Broadcasting Plan, which have been implemented.

2.8 The procedure for the notification and registration of frequencies as prescribed in Article 11 of the Radio Regulations to become effective, for each frequency band or radio service for which an assignment plan has been approved by the Conference upon the date that the implementation of the plan for the band or service concerned has been accomplished.