



**Documents of the International High Frequency Broadcasting Conference
(Mexico City, 1948-1949)**

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INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 401-E

Mexico City, 1949

5 January 1949.

LIST OF DOCUMENTS PUBLISHED BY THE
INTERNATIONAL HIGH FREQUENCY BROADCASTING CONFERENCE
MEXICO CITY 1949.

No. 351 - 400.

No. of Document.	No. of Committee.	TITLE.
351	-	List of Documents published by the International High Frequency Broadcasting Conference, Mexico City, 1948. (No. 301 - 350).
352	-	-Supplement No. 3 to Doc. No. 144-E. Further replies received from various countries to the Planning Committee telegram concerning Imports and Exports.
353	-	-Supplement No. 3 to Doc. No. 145-E. Further replies received from various countries to the Planning Committee telegram on illiteracy, etc.
354	1	-Report of Working Group No. 3 of the Coordinating Committee.
355	6	-Agenda for the 14th Meeting of the Plan Committee. 22 December 1948.
356	4	-Fifth Report of Working Group B to the Technical Principles Committee.
357	4	-Report of the Technical Principles Committee. 19th Meeting. 13 December 1948.
358	United Kingdom	-Proposal regarding the Simultaneous Use of Two Frequencies for the Transmission of a Single Programme to a Given Area.
359	5	-Proposed Agenda. 8th Meeting of the Requirements Committee. 23 December 1948.
360	India	-Proposal for Amendment of Internal Regulations.

No. of Doc	of ment	No. of Committee	TITLE
361		9	-Preliminary Report of the Budget Committee and Additional Budget up to February 15, 1949.
362		2	-Request of the Interamerican Radio Office for Admission as an Observer.
363		6	-Report of the Plan Committee. 12th Meeting. 14 December 1948.
364		3	-Corrigendum to Document No. 319. (concerns the French Text only.)
365		4	-Report of the Technical Principles Committee. 21st Meeting. 16 December 1948.
366		Bulgaria	-Notice concerning Representation of Bulgarian Delegate by Czechoslovakia Delegate.
367		Cuba	-Notice concerning temporary Proxy.
368		Brazil	-Notice concerning temporary Proxy.
369		UNESCO	-Notice concerning temporary Absence.
370		Siam	-Notice concerning Power of Proxy.
371		Dominican Republic	-Notice concerning temporary Power of Proxy.
372		Australia	-Notice concerning temporary Power of Proxy.
373		El Salvador	-Notice concerning temporary Power of Proxy.
374		6	-Overseas Territories of the French Republic and Territories administered as such. Proposal of a Method of Frequency Assignment in the 6 and 7 Mc/s Bands.
375		3	-Report of Working Group C of the General Principles Committee. (50 pages plus appendixes).
376		1	-Summary Report Submitted to the Plenary Assembly. 23 December 1948. (Coordinating Committee.)
377		2	-Nature of Letters of Credence or other Credentials submitted by Participants at the Conference. (This document replaces document No. 212 and

No. of Document	No. of Committee	TITLE
		documents Nos. 236, 252, 279 and 315 which refer to it.)
378	4	-Eighth Report of Working Group A of the Technical Principles Committee for consideration of Committee 4)
279	4	-Ninth Report of Working Group A of the Technical Principles Committee.
380	4	-Fourth Report of Working Group A of the Technical Principles Committee as approved by Committee 4. (This Document supersedes Document No. 213.- E.)
381	Bielorussina SSR	-Declaration of the Delegation of the Bielorussian Soviet Socialist Republic.
382	5	-Fulfilment of the Requirements of Countries in the USSR Plan.
383	Siam	-General Remarks concerning requested programs.
384	3	-Replies to the Questionnaire contained in Doc. 265. (by 52 countries).
385	6	-Report of the Plan Committee. 13th Meeting. 17 December 1948. (See Annex Doc. 394.)
386	5	-Third Report of Working Group B of the Requirements Committee.
387	4	-Report of the Technical Principles Committee. 20th Meeting. 14 December 1948.
388	SCAP	-SCAP Attendance at Meetings of the Conference of the Technical Adviser to the Observer for the Supreme Commander for the Allied Powers.
389	4	-Report of the Technical Principles Committee. 24th Meeting. 20 December 1948.
390	India	-Notice concerning representation of Delegation.
391	-	-Minutes of the Plenary Assembly. Twelfth Session. 17 December 1948.

No. of Document	No. of Committee	TITLE
392	-	-Schedule of Meetings from 3 to 8 January 1949.
393	4	-Report of the Technical Principles Committee. 22nd Meeting. 17 December 1948.
394	6	-Annex to Doc. No. 385. Report of the Plan Committee. 13th Meeting. 17 December 1948.
395	5	-Third Report of Working Group A of the Requirements Committee.
396	4	-Report of the Technical Principles Committee. 23rd Meeting. 18 December 1948.
397	United Kingdom	-Notice of Number of HF Transmitter hours to be submitted to the Chairman of Committee 6. (Supersedes Document No. 318).
398	4	-Report of the Technical Principles Committee. 26th Meeting. 21 December 1948.
399	6	-Preliminary Report No. 4 of Working Group A of the Plan Committee.
400	6	-Report of the Plan Committee. 14th Meeting. 22 December 1948.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 402-E

4 January 1949

Committee 1

COORDINATING COMMITTEE

A g e n d a .

Meeting of 5 January 1949
Plenary Room, 10:00 a.m.

1. Questions forwarded to Committee 1 by the 13th Plenary Assembly:
 - a) Report of Working Group 3 (Document No. 354).
 - b) Proposal of the Delegation of the Bielcrussian S.S.R. on the organization of work (Document No. 381).
2. Date and Agenda of the Plenary Assemblies for the week of 10 January.

(The Committee might plan to schedule a Plenary Assembly for 12 January, morning and afternoon, to examine and approve the report of Committee 4. A second Plenary Assembly might be scheduled for 13 January to examine and approve the report of Committee 5. A third Plenary Assembly might be scheduled for 14 January to examine and approve the report of Committee 3. These are merely suggestions).
3. Consideration of the question raised in Documents 264 and 388 (nature of the participation of SCAP).
4. Miscellaneous questions.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 403-E

30 December 1948

Original: ENGLISH

Committee 4

REPORT OF TECHNICAL COMMITTEE

25th Meeting

21 December
(Morning Session)

1. The meeting started late because the necessary quorem was not present at the time the meeting was due to commence.
2. The Chairman read the following letter from the Chairman of Committee 6:

21st December, 1948

"The Chairman,
Committee No. 4

Dear Mr. Chairman,

At the 12th Meeting of my Committee, held on the 14th December last, the question of the method to be used in assigning frequencies in the bands 7100-7150 kc/s and 7150-7300 kc/s, was discussed at some length. My Committee decided to request Committee No. 4 for specific technical recommendations on this subject, with particular reference to the elimination of possible interference between Amateurs and Broadcasters. It would be of great assistance if this information could be supplied in the form of charts or graphs.

We would be grateful if your Committee could give this problem your earliest consideration.

The Chairman,
Committee 6

3. It was decided that no immediate action should be taken by the Committee since the problem would probably be solved when the report of Working Group A on this subject had been submitted.
4. The Chairman said that discussion on Document No. 213 could now take place. Mr. Sastry asked delegates to submit any amendments they had to suggest to Document No. 213, and then to confine their discussions to their amendments.
5. The delegate of the U.K. recalled the fact that at yesterday's meeting he had raised a point of principle regarding the basis on which the figures in paragraph (8) had been derived and the line of action pursued in arriving at those figures. Mr. Fryer said he had now prepared the following specific proposal to take account of the points he had raised yesterday:

"In this connection it is considered advisable to recommend technical standards corresponding to reception of a quality that will be considered satisfactory by a reasonably high percentage of listeners.

Nevertheless, in view of possible difficulties in achieving such standards it is also considered advisable to indicate for the information of other committees, how the percentage of satisfied listeners is liable to diminish if the protection ratios are reduced below the recommended values."

Continuing, Mr. Fryer said he had in mind that the proposal should be inserted after paragraph (2) on page one of Document 213, so that it would form part of the preamble to the report.

If the Committee decided that the principle underlying the text was correct, and adopted his proposed, he suggested that it should then be decided what constituted a "reasonably high percentage of listeners". He felt that a figure of 60-70% might be adopted. In the second part of the text he had in mind that it was not necessary for Committee 4 to recommend compromise standards. If the Committee recommended the standards necessary, on a technical basis, for satisfactory reception then, as regards additional data it would only be necessary to supply other committees with information, similar to that given in Annex A, so that the other committees could use their own judgement as to how far the protection ratios might be reduced.

6. Dr. Metzler said that he thought the proposal given by Mr. Fryer was very good, and he supported it.

7. The Delegate of Egypt said that he supported the first part of the proposal, but not the second part. If the second part was adopted it would mean that different standards could be applied to different countries.

8. Professor Siforov said it had been agreed at the last meeting that the discussions of the principles involved in Document 213 should be continued at this meeting, and he felt that delegates should be given the opportunity to speak on the problem of protection ratios as a whole.
9. The Chairman said he agreed that delegates were free to speak if they wished, but it had been pointed out at the last meeting that amendments to the document would be considered first so he asked delegates to confine their remarks to that point.
10. The Delegate of the U.S.A. said he supported the text as read out by Mr. Fryer. He felt that the second part of the text was very logical because if other committees had data made available to them in the manner suggested by Mr. Fryer, then they would be able to judge the percentage of satisfaction that listeners would get with any requirement included in the assignment plan.
11. The Delegate of Mexico said his delegation had intended to submit a proposal but unfortunately it had not matured. The essence of the proposal was that any recommendation made by this committee should be easy to apply to all problems requiring solution by the Conference. With regard to the matter under discussion the views of the Mexican delegate could be summarised as follows: "That an equal intensity level for all zones and for all hours should be established."
12. As a clarification to the chair, the delegate of Mexico said that he would submit his text as a separate proposal at the appropriate time.
13. The Delegate of the U.S.S.R. said he could not agree with the U.K. proposal. At yesterday's meeting of Committee 4, Mr. Fryer had stated that the determination of technical standards had no practical value. The Delegation of the U.S.S.R. wondered, therefore, what useful purpose could be served by taking such a decision. It was essential, for the work of the Conference, to adopt definite recommendations which did not lead to misinterpretation. The U.K. proposal suggested two fold standards and in that way it was wrong. This Committee had experienced misunderstandings in connection with recommendations already made to Committee 5, and to prevent a recurrence, this Committee should adopt definite figures as suggested in Document 213.

A number of delegates had referred to the strange principles underlying the figures given in paragraph 8 of Document 213. He would like to refer these delegates to various recommendations:

- (a) In the "Report of the International High Frequency Broadcasting Conference " Atlantic City, Chapter V.A. 3(b) it states: "As far as possible for average propagation and noise conditions the level of the wanted signal should be 40 decibels above the atmospheric noise level."
- (b) In Annex E of the Report of the Geneva Planning Committee it states: "High frequency broadcasting circuits should be engineered on sound engineering principles for which the signal to atmospheric noise and the signal to receiver noise ratios should both be 40 db. Nevertheless, it is realised that it will not be practicable to reach this figure in all cases."
- (c) Dr. Van der Pol's comments on the report of the Geneva Planning Committee make it quite clear that he accepted the fact that a protection ratio of 40 db could not be realised in all cases, and that as a minimum a figure of 30 db should be adopted.

Continuing, the Delegate of the U.S.S.R. said that all these recommendations based on sound engineering practice took into account fading. It would be seen that the figure recommended by Working Group 4A were not too low, but were in fact slightly higher than those quoted above. He did not understand why a number of delegates were opposed to sound engineering principles, and why they wished to increase the protection ratio. If the principle underlying the recommendations of high protection ratios was not sound engineering practice, then it must be the reason put forward by Professor Siforov at yesterday's meeting. Professor Siforov had pointed out yesterday that the reason for certain countries wanting to establish a high protection ratio was to make it difficult for smaller countries to carry on high frequency broadcasting. With a high protection ratio small countries would either be faced with considerable interference from the high power transmitters of the large countries, or else they would be forced to buy large power transmitters themselves. This point of view was egoistical.

Some countries had said that it was not necessary to consider field intensity or power in deciding the protection ratio. This was a naive point of view and was following an ostrich policy. It was necessary to take all facts into account because once a wrong basic standard was adopted then all those that followed would be wrong.

On the basis of sound engineering principles and on the basis of the recommendations of other Conferences the delegate of the U.S.S.R. supported the proposals given in paragraph 8 of Document 213.

Referring to a question of procedure the Delegate of the U.S.S.R. said he could not agree that the U.K. amendment should be voted on first. He felt that a vote should first be taken on the proposal given in Document 213.

14. The Chairman said he was surprised to find that the normal procedure was challenged and he asked the assembly to decide by vote whether the interpretation of the chair was correct.

15. By 25 votes for to 8 against with 1 abstention the procedure suggested by the chair was approved.

16. The Delegate of Italy said he supported the amendment suggested by the delegate of the U.K. because it provided a link between the very high standards required on a technical basis and the practical standards necessary for producing the assignment plan. The point raised by some delegates that a high protection ratio would, on the ground of economy, prejudice small countries was covered by the second part of the U.K. amendment in a very reasonable manner.

17. The Delegate of Bulgaria said that both yesterday and today amendments had been suggested in both clear and veiled terms by certain delegates with regard to high protection ratios. It was no use setting up such high standards if, for economic reasons, a country could not afford to realise those standards. As a representative of Bulgaria he felt he would be betraying his country if he agreed to a principle which prevented his people from speaking.

In conclusion the Delegate of Bulgaria said that he objected to such high standards as suggested in the amendment but supported the recommendations given in Document 213.

18. The Delegate of Roumania said he supported the figures given in Document 213 and agreed with the reasons given by the Delegate of the U.S.S.R. in support of these figures. The U.K. proposal would undoubtedly lead to misinterpretation by other committees.

19. Dr. Metzler said he agreed that there was a certain agreement between the Geneva Planning Committee recommendation and the first part of the proposal in paragraph 8, Document 213. On the other hand the Geneva Planning Committee had considered it possible to reduce the protection ratio to 30 db. He would like to know if this figure of 30 db was purely theoretical or whether there was any practical data on which it had been based. The experiments carried out in Working Group 4A had produced very interesting results. With a protection ratio of 34 db only 30% of the delegates had been satisfied. A similar experiment in the U.S.A.

had shown that only 10% of the listeners were satisfied with a protection ratio of 34 db. In the light of these experiments the figure of 30 db, quoted by the Geneva Planning Committee, was not upheld.

In conclusion Dr. Metzler said he thought it was necessary to maintain, in principle, a protection ratio of 40 db but to reduce the protection ratio to 34 db as a practical expedient.

20. The Delegate of Albania said his delegation supported the adoption of Document 213.

The protection ratio adopted must be reasonable and take into account the interests of all the small countries. The U.K. proposal discriminated against small countries, although the delegate of the U.K. had denied this. Albania, being a small country, opposed the proposal put forward by the delegate of the U.K. and supported the adoption of Document 213.

21. Professor Siforov said that the U.K. amendment would undoubtedly lead to complication when other committees have to interpret it. The recommendation of Working Group 4A had been adopted after taking into account all facts and was a very clear proposal.

The Delegate of the U.S.A. had reproached the Delegate of the U.S.S.R. for not approaching the problem from a scientific point of view. The U.S.S.R. Delegation had approached the problem in the correct manner because they had taken into account all the major factors affecting the decision.

22. The Delegate of the U.K. said he would like to emphasize the fact that this so far as he was aware was the first occasion when protection ratio were being discussed that satisfactory experimental evidence was available. This information should be used as objectively as possible.

He was unable to understand the argument, used by certain countries, that the U.K. proposal discriminated against small countries. If the recommendation was not put in an objective manner it would be doing the small countries a disservice.

Continuing, Mr. Fryer said he was surprised that certain delegates had suggested that the U.K. amendment would give rise to difficulty in application. Other committees had very competent engineers who should be able to read simple tables or simple curves.

He said that he was a little surprised at the comment made by the delegate of Egypt regarding the second part of his proposal. In the light of that comment he suggested that the last lines of the proposal be amended to read: "how the percentage of satisfied listeners is liable to diminish if standards have to be used in practice which are less than the recommended values."

For delegates who were apprehensive as regards the intentions of the U.K. proposal he would like to point out that, if the proposal was adopted, he was going to suggest figures of 60% - 70% for "the percentage of satisfaction". In paragraph 8 he was going to suggest that the figure of 34 db be amended to 38 db while the figure of 20 db would remain unaltered.

23. The delegate of Pakistan said he felt that the second paragraph of the U.K. amendment was in contradiction to the terms of reference of Committee 4 and he suggested that the amendment should be split and put forward as two separate amendments.

24. The delegate of the U.K. agreed to this proposal.

25. The delegate of the U.S.S.R. said he would like to reply to Dr. Metzler. Dr. Metzler had, by inferring that the Geneva Planning Committee report was only preliminary data, tried to weaken the arguments put forward earlier by the delegate of the U.S.S.R. The Geneva Planning Committee had met only a short time ago and the data they had recommended was the latest available to this Committee. It seemed perfectly satisfactory for the Geneva Planning Committee to recommend a protection ratio of 30 db so all those delegates of that Committee should undoubtedly be satisfied with the recommendation (34 db) of Working Group 4-A.

The delegate of the U.S.S.R. said he would again like to stress the fact that the U.K. proposal was inconsistent and vague and would undoubtedly lead to misinterpretation by other committees.

26. The Chairman said he would like to point out that information was available to this Conference which had not been available to the Geneva Planning Committee.

27. Dr. Metzler said he had not wanted to weaken the position of any delegate's statement but he merely wanted to find out the truth. He had stated that a certain percentage of listeners had accepted the figure of 34 db as satisfactory and that was a fact. He still did not know how the 30 db recommended at Geneva had been derived and so it was difficult to form any opinion on that subject.

Dr. Metzler then asked Mr. Sastry if he could give him any explanation on this subject.

28. Mr. Sastry said that the figures were based entirely upon the judgement of the members of the Geneva Planning Committee and that no experimental evidence was available to the Planning Committee.

29. The following delegations requested a secret ballot for the votes on the U.K. amendments:

U.S.S.R.
Ukraine
Bulgaria
Bielorussia
Roumania
Yugoslavia
Czechoslovakia

30. As a result of the secret ballot the first part of the U.K. proposal was accepted by 20 for, to 13 against, with 3 abstentions; the second part of the U.K. proposal, with the amendment there to proposed by the delegate of the U.K. was accepted by 19 votes for to 14 votes against with 3 abstentions.

31. The delegates of the U.S.S.R., Ukraine, Bielorussia, Bulgaria and Roumania all expressed disagreement with the amendments and said they would submit statements in writing.

THE REPORTER

P.N. PARKER.

THE CHAIRMAN

M.L. SASTRY

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948

Document No. 404-E

29 December 1948

Original: FRENCH

Committee 2

REPORT OF THE CREDENTIALS COMMITTEE

Eighth Meeting

21 December 1948.

Committee 2 met on Tuesday, 21 December, at 10 a.m. in the office of the Secretary of the Conference. Mr. L. Villaca Meyer (Brazil) was in the Chair temporarily, assisted by the Vice-Chairmen, Mr. Petro Kito (Albania), Mr. Fryer (New Zealand) and the Secretary, Mr. Dostert.

The Chairman said that in the absence of Colonel Raul de Albuquerque (Brazil) he would be in the Chair temporarily for the meeting of the Committee. He called upon the Secretary.

Mr. Dostert referred to Document No. 212 and to its addenda. The following countries should be added to the list of those which had presented definite credentials:

The Belgian Congo and the Territories of Ruanda-Urundi;
The Oversea Territories of the French Republic and
Territories administered as such (Document No. 315);
The Dominican Republic (Document No. 236);
France - Definitive Credentials (Document No. 252);
Syria - Definitive Credentials (Document No. 236);
Honduras (Document No. 315) had sent telegraphic credentials,
signed by the Minister of Foreign Affairs, and the
Secretariat had telegraphed to Tegucigalpa explaining
that this document should be followed by definitive
letters of credence.

The Republic of Liberia (Document No. 323) had given a proxy
to the U.S.A. Delegation, signed by the Minister of
Liberia accredited in Washington.

Mr. Goroshkin (USSR) said the proxy was incomplete, because it did not confer powers to sign the Final Acts.

Mr. Dostert, on being consulted on the point, agreed with the Delegate of the USSR.

The Delegate of Guatemala said that these questions of representation ought to be cleared up.

Mr. Dostert explained the position. He added that Turkey had presented its definitive credentials, and Cuba had sent a telegram asking Uruguay to represent her.

The Chairman thanked Mr. Dostert. Had delegates any questions to raise?

Mr. Goroshkin (USSR) asked whether delegations had complied with the recommendation of Committee 2 that they should present their definitive credentials by December 15.

Mr. Dostert answered that they had done so, with the exception of Honduras and Iran (provisional) and Liberia (incomplete).

Mr. Goroshkin (USSR) thought that, if they took into consideration the fact that the majority of the powers for signing the Final Acts had been signed by Chiefs of State or Ministers of Foreign Affairs, the Mexico City Conference would become a Conference of Plenipotentiaries. Would countries accredited by Administrative credentials have powers to sign the Final Acts?

Mr. Dostert, on being consulted on the point, said that he was not qualified to answer that question.

Mr. Leproux (France) said that full powers should emanate from a Government.

Mr. Dostert said that in his opinion the matter was one which should be submitted to the Session of the Plenary Assembly on the following Thursday, in order to determine how the character of the Final Acts would be indicated, and how the three types of powers presented by the delegations, viz: (1) Governmental powers, presented by a Chief of State or Minister of Foreign Affairs, (2) powers conferred by plenipotentiaries, and (3) powers conferred by Administrations, could be reduced to uniformity. He thought that Working Group 2 of Committee 1 could perhaps deal with the matter or, if not, Committee 2.

Mr. Petro Kito (Albania) thought that Committee 2 should deal with the matter. Had the Minister of Liberia accredited to Washington any jurisdiction in Mexico?

Mr. Dostert thought that the date December 15 had been set somewhat prematurely, and it was desirable to leave the door open so as to enable the greatest possible number of countries to sign. As regards Liberia, a letter could be sent to the Delegation of the U.S.A. to straighten out the case.

Mr. Goroshkin (USSR) supposed that it would be easier to consult the Government of Liberia directly.

Mr. Leproux (France) said that Mr. Meyer was drafting a text to solve the question of governmental or administrative powers.

Mr. Goroshkin (USSR) said that the question had already been discussed. He proposed to refer it to Committee 2 and to Working Group 2 of Committee 1 in joint meeting, with a view to a definitive solution and subsequent submission to the Plenary Assembly.

Mr. Dostert foresaw difficulties if the joint meeting proposed by Mr. Goroshkin decided that only governmental powers should be acknowledged. More than thirty delegations in that case would be compelled to ask for such powers urgently. And, if later on a decision to the contrary was arrived at, what then?

Mr. Goroshkin (USSR) could not agree with that opinion, because of 64 countries which had presented their credentials the majority had full powers, and only a few, such as the United Kingdom and France, who at present had only administrative powers, would have to ask for supplementary powers.

Mr. Dostert, on being consulted on the matter, thought it would be more simple to ask the Coordinating Committee to call a joint meeting of Committee 2 and Working Group 2 of Committee 1 for the first half of January, to study the case.

The Chairmen presumed that all were agreed as to the proposed joint meeting.

Mr. Dostert said that he would have a new document published to replace Document No. 212.

The Chairman read Document No. 331 from the Oficina Interamericana de Radio, asking to be admitted as an Observer. He imagined there would be no difficulty about that.

Mr. Goroshkin (USSR) said that, before admitting the organization in question, the Secretariat should publish particulars of the case.

Mr. Dostert stated that, according to the information received by the Secretariat, the Oficina was a regional organization corresponding for Latin America to what the IBO represented for Europe. He might perhaps invite its President to call and give more detailed information.

After further enquiries, the meeting adjourned at noon.

The Reporter:
Roberto de Arruda Botelho

The Acting Chairman:
Luis Villaca Meyer.

Note: On the following pages, a rectification requested by Mr. Petro Kito, Delegate of Albania, is published.

The Delegate of Albania stated that on page 2 of Document No. 106, after his speech in the case of Israel, there appeared a statement made by him after the results of the voting on the Canadian proposal concerning the admission of Israel had been announced. His statement was not properly placed on page 2, and the following corrections were called for:

- 1) The last phrase of his speech, which was a repetition of his statement, should be struck out.
- 2) His statement should be transferred to page 6, after the paragraph which indicated the result of the voting on the Canadian proposal.

The Delegate of Albania wished to amend the first sentence of his speech, on page 2 of Document No. 55 to read as follows:

"Mr. Kito (Albania) thought it necessary to take a decision as to the character of the powers. He recalled that, while the first Plenary Assembly in the morning of October 25 considered the present Conference to be an Extraordinary Administrative Conference, in the afternoon session it rejected, by 31 votes against 7 and 4 abstentions, the proposal of the French Delegation to omit the words "Government" and "ratify" in article 18 of the Rules of Procedure."

The Delegate of Albania wished the following paragraph to be added, on page 5 of Document No. 185, in the middle of the page, after his speech and Mr. Dostert's reply:

"Mr. Kito (Albania) stated that he did not see any objection against the admission of the SCAP as an Observer, as authorized by the Administrative Council; but he was categorically opposed to the presence of a technical advisor of Japanese nationality. Japan, he said, had been a Fascist aggressor, and no peace treaty had as yet been signed with her. There were armies of occupation in Japan, which proved that she was still a danger to the human race. Albania, which had been one of the first victims of Fascism and had struggled unrelentingly against Fascist aggression, could not easily forget that aggression. For that reason, as the representative of a people which had suffered much under Fascism, and of a country deeply ravaged by Fascist occupation, he could under no circumstances accept the presence of a Japanese at the Conference. He proposed, therefore, that the technical advisor of Japanese nationality should not be admitted to the Conference."

The Delegate of Albania further wished to amend his speech on page 6, third paragraph of Document No. 185 to read as follows:

"After Mr. Kito (Albania) had declared that the Conference, without waiting any longer for the opportunity, should adopt a decision concerning the presence of the Japanese technical adviser at the Conference"

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 405-E

3 January 1949

Original: SPANISH

Committees 3 and 6

B R A Z I L

Replies of the Delegation of the U.S.S.R. to the Questions
Formulated by the Delegation of Brazil regarding the Soviet Plan and
Conclusions Drawn by the Brazilian Delegation on the
Said Plan

The Delegation of Brazil, at a meeting of the General Principles Committee, had the honor to ask the distinguished representative of the Soviet Union, Professor Siforov, some questions regarding the Soviet Plan. The latter was kind enough to give us concrete replies on the subject. With these replies as a basis, we should like to make some comments which may help us to arrive at a logical conclusions regarding the Plan submitted to this Conference by the distinguished Delegation of the U.S.S.R. The questions, answers, comments and opinion of the Brazilian Delegation are as follows:

I. - Q - On what date was the Soviet Plan terminated?

A - "The Soviet Plan was submitted during the first part of November at one of the plenary meetings"; Professor Siforov said that he did not exactly remember the date. Therefore, the Soviet Plan was terminated at the beginning of November.

II - Q - Is the Soviet Plan based on the requirements submitted to this Conference for the specific purpose of obtaining an assignment of channel-hours?

A - " Yes. All the requirements submitted to this Conference have been considered concretely."

C - In considering such replies, it is necessary to take into account that the Plenary Assembly agreed that for the preparation of a Plan by this Conference the requirements could be submitted up to the deadline of the 5th of November. If the Soviet Plan was submitted to the Conference at the beginning of November, how, then, could the U.S.S.R. technicians really have taken into consideration in a concrete way all the requirements submitted by the various countries which had been given a specific deadline of the first few days in November?

In the case of Brazil's requirements, we thoroughly disagree with Professor Siforov's statements. Brazil has never requested 199 channel-hours; Forms 4 were delivered on the deadline set, viz., November 5, in accordance with the Resolution of the Plenary Assembly. We neither requested anything at Atlantic City nor afterwards but rather within the period agreed upon by this Conference. In the particular case of Brazil, we cannot accept the statements made by Professor Siforov on November 23, 1948 as being categorical.

- III - Q - How many and which are the countries that, according to Professor Siforov's statement of yesterday, constitute the great majority of countries which are in agreement with the general principles of the Soviet Plan: territory, population and languages?
- A - This question has not been answered because Mr. H. J. Van den Broek, the distinguished Chairman of Committee 3, stated that it was impossible for Professor Siforov to clarify it and because the "satisfaction" was plainly shown by the agreement between the results of the Soviet formula and the requirements, as Professor Siforov announced at the previous meeting.
- C - The Delegation of Brazil therefore formulated this other question:
- IV - Q - Does the Delegate of the U.S.S.R. recognize that the Soviet formula has failed in its mathematical application to 17% of the countries of the world?
- A - "The Soviet formula is fair, equitable and objective. It is not like the others, which have no scientific basis, and are like buildings erected on sand. The formula has absolutely not failed."
- C - This Delegation (Brazil) nevertheless is convinced that the formula so highly praised by the Soviet Delegation is not so necessary for the preparation of the Plan. . . . It is merely a point of departure -- which might well be dispensed with -- for an arbitrary assignment of channel-hours to the various countries. We shall not deny the scientific value of the Soviet formula, but nevertheless we believe that the preparation of the Soviet Plan was absolutely unnecessary. In a brilliant explanation of the application of the mathematical formula on December 22, and in reply to the questions formulated by the Delegation of India, the distinguished Professor Siforov, with respect to the assignment of channel-hours to China, said: requirements: 220 channel-hours; area: 3,700,000 square miles; population: 457,000,000; official languages: 3. According to the Soviet formula China would be assigned 489 channel-hours, but the Soviet Plan was kind enough to reduce this number to 185, viz., to a figure 8% below the

requirements. Now we ask: Of what use was the scientific mathematical formula if the Soviet Delegation reduces the results of it as it chooses? On the other hand, take the case of the assignment of channel-hours to Roumania, the calculation of which was also submitted by Professor Siforov, and which is as follows: The formula grants Roumania 33 channel-hours. The Plan arbitrarily and without any scientific or mathematical basis assigns 71 channel-hours to Roumania in consideration of war damages and losses in the conflict, viz., 120% of the result of the formula!

- V - Q - What criterion does the Soviet Plan use for the assignment of additional channel-hours to countries which suffered war damages? Was any mathematical or equitable percentage applied?
- A - "The problem was solved in accordance with the contribution of each country. There is no mathematical or equitable percentage."
- C - It is obvious that Professor Siforov has not sufficiently clarified the basis upon which the Soviet Delegation estimated war damages. On December 23 Professor Siforov stated that the extra 120% was considered necessary for Roumania by the Soviet Delegation! Only 120%! This was considered necessary! It is impossible to find any satisfaction in such a synthetical explanation, which clarifies nothing. We wish to know how the Soviet Plan can make such an offer to the various countries which have suffered war damages and just what are the war damages. We wish to know whether the increase in channel-hours to those countries resulted in a decrease in channel-hours to others which were also in the war and also suffered damages. Professor Siforov has not properly explained this on any occasion.
- VI - Q - Are there other political or affective factors which inspire the sympathy of the Soviet Delegation?
- A - At first the meaning of the word "affective" was not understood. After clarification we were able to substitute the word "sentimental"; Professor Siforov said: "No. The Soviet Plan was not animated by any considerations of sentiment, but by the formula. The only factors taken into consideration were territory, population and languages. Afterwards, other factors, such as war damages, were taken into consideration. The Soviet Delegation felt that some countries should have their requirements increased and others should have them reduced, without any considerations of sympathy, sentiment or politics."
- C - The Delegation of Brazil cannot understand how the U.S.S.R. Delegation could have ignored sentimental or political motives in its Plan, by reason of the very concrete facts we enumerate.

A simple enumeration of these facts will lead us to a conclusion. There is a Brazilian proverb which we wish to recall here which says: "He who divides or distributes something and does not end with the lion's share is either a fool or artless" . . . It seems to us that the Soviet Plan took this proverb into account. Let us look at the figures: The Plan assigns the Union of Soviet Socialist Republics 816 channel-hours. We are certain this figure was a positive result of the formula. . . . The Soviet Plan assigns the 20 Latin-American countries 745 channel-hours! The following statistics confirm this figure:

1. Argentina	64
2. Brazil	84
3. Chile	39
4. Colombia	57
5. Costa Rica	12
6. Cuba	20
7. Dominican Rep.	17
8. El Salvador	20
9. Ecuador	51
10. Guatemala	39
11. Haiti	35
12. Honduras	12
13. Mexico	101
14. Panama	16
15. Peru	58
16. Bolivia	44
17. Uruguay	24
18. Venezuela	16
19. Paraguay	24
20. Nicaragua	12
	<hr/>
	745

Now as to the particular case of Brazil: Notwithstanding its fine language and the explanations made by an eminent scholar like Professor Siforov, the Soviet Plan, in spite of protestations to the contrary, seems to us to be partial. Everyone knows of the contribution of Brazil in men, material and supplies of all kinds, from the beginning of the struggle against Nazi-Fascism. In the quiet of the night and in its own territorial waters the best ships of Brazil's merchant fleet were torpedoed in a cowardly fashion, even before Brazil became a belligerent; Brazilian blood has flowed freely on European battlefields in the conflict for liberty; its strategic areas were placed at the disposal of the Allied Forces and made possible the invasions of Africa and the European Continent; its navigation routes were always at the service of the United Nations; every day Allied ships left our ports filled with material essential for carrying on the war; we lost hundreds of men in the campaign to bring the

Amazon area into production again in order to supply more rubber to the Allies. Why do we enumerate these facts? Because the Soviet Delegation makes it clear that it is necessary to take into account war damages; because the Soviet Delegation makes constant reference to the suffering of countries which were engaged in the combat; because the Soviet Plan works a crying injustice upon Brazil, forgetting the pertinent facts, but still not overlooking the facts with respect to the Balkan countries. We, who wish to forget the war and all its horrors, to enter into a period of reconstruction and to collaborate effectively toward this end, have had to point out again our own contribution and suffering. We do not wish advantages from the sacrifice of others, but neither can we accept sacrifices for the benefit of others who suffered, as we did, and who still suffer as we do, all the consequences of the war. In the case of Brazil, the requirements and the result of the formula were reduced, the same as those of India, the United States of America and other countries. Why? How was our country, with 8,500,000 square kilometers, 48,000,000 inhabitants and one official language, fairly and equitably considered in the scientific and mathematical formula of the Soviet Plan? How could Professor Siforov state that the Soviet Plan and formula met the needs of each country when the plan assigned only 84 channel-hours to Brazil? We have vital communication needs which can be met only by means of high frequencies. Of what use will 84 channel-hours be to cover such an immense territory and unify such a tremendous population? We are forced to a concrete conclusion: either the Soviet Plan is partial and therefore unjust, or else it committed a grave error with respect to our country!

VII - Q - What formula has the Soviet Plan adopted for international transmissions?

A - Professor Siforov answered this question in a manner similar to that in which he answered another question at the previous meeting.

CONCLUSIONS

In connection with the assignment of channel-hours to the various countries, the statements made by the guileless and distinguished Professor Siforov regarding the questions formulated by the Delegation of Brazil have not convinced this Delegation of the justice and fairness of the Soviet Plan. If, in making a fair and equitable distribution the Soviet Plan has taken war damages into account, as well as the figures resulting from its scientific and mathematical formula, we do not understand the ridiculous assignment to Brazil of 84 channel-hours, much less the entering into play of political and sentimental factors. Taking into account motives of fairness and justice, considering war damages and

the real and effective contribution to the United Nations since the beginning of the war, as well as vital needs, the Soviet formula could never have produced a result equivalent to that shown in the Plan prepared by the Delegation of the U.S.S.R.

For these reasons and for the general information of this Conference, the Delegation of Brazil, in the name of justice and equity, from the standpoint of war damages, of the real and effective contribution to the United Nations from the beginning of the world conflict, of vital needs, and furthermore, out of respect to the memory of Brazilian soldiers who fell on battle-fields overseas and our sacrifices up to this date, THE SOVIET PLAN IS ABSOLUTELY UNACCEPTABLE.

The Delegation of Brazil

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 406-E

4 January 1949

Original: FRENCH

Committee 3

PROPOSED CONCLUSIONS AND RESOLUTIONS BASED
ON DOCUMENTS NOS. 375 AND 384 (WORKING GROUP C)
SUBMITTED BY THE CHAIR

In paying high tribute to the work accomplished by Working Group 3-C under the direction of its Chairman, Professor A. L. Bokhari, the Chairman of Committee 3 has the honor to submit to the Plenary Committee a proposal of conclusions and recommendations based on Documents Nos. 375 and 384.

If the Committee adopts the present document as a basis for discussion, the text of the conclusions and recommendations as finally approved by the Committee will become a part of the Final Report which the Committee will submit to the Plenary Assembly.

(Doc. No. 406-E)

IX CONCLUSIONS

a) Results of the work.

1. If the terms of reference of Committee 3,

"To examine and recommend the types of priorities and the general principles which may serve as a basis for the final draft of the High Frequency Broadcasting Assignment Plan or Plans",

are taken literally, it must be admitted that the Committee has only partially carried out its task.

Although the Committee has "considered" the problem of priorities and general principles at length--and under very different aspects--it has not been able to reach a sufficient uniformity of views to enable it to formulate a complete series of "recommendations" or "principles", which would serve as a basis for the preparation by the competent Committee or Committees of an Assignment Plan or Plans.

2. That may seem regrettable to some; but one must perforce bow before the weight of the evidence clearly brought out in the discussions in the plenary Committee and in Group 3-A, as well as in the Replies to the Questionnaire (Document No. 265).

3. It would appear possible, nevertheless, to draw certain general conclusions from this evidence, which may be useful when the draft or drafts of a Plan take shape. It may even be that these same conclusions will make possible the formulation of a modest number of recommendations on specific points.

b) Principles or no principles?

1. On the question of whether the allocation of high frequencies should be based on principles uniformly applied it would seem that the Replies to Question 6 of the Questionnaire furnish the best indication.

Of the 50 Replies, exactly one-half are in the affirmative.

2. It is however noticeable that 41 out of the 46 delegations which replied to Question 7b were of opinion that certain factors should be taken into consideration in any frequency allotment plan, and very different factors at that. It is not very clear how, in the absence of a precisely defined formula, the wishes thus expressed can be met, unless we are to suppose that the motive behind these Replies was mainly opposition to Question 7a, in which these factors are limited to three viz. area, population and number of languages. Of 50 delegations, only 13 took the view that these three factors were really fundamental criteria.

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3. The above paragraphs 1 and 2 should be considered in connection with the opinions expressed in regard to Question 12b. In the case of that Question only 8 delegations were in favor of a plan based solely on technical principles, while 28 delegations were against it.

4. The fact that Question 5 had been detached from the Questionnaire prevented a complete conspectus of all the opinions on the subject of the classification of the different types of broadcasting and the order of priorities to be adopted. But the votes to which reference is made at the end of paragraph V (Working Group A) of the present Report furnish some indications on the subject.

Other indications of the same character are afforded by the Replies to Question 10. The upshot is that the two main broadcasting categories are favored approximately equally by the present Conference.

5. The four last Questions on general principles (Questions 2, 15, 26 and 28) have also given rise to highly contradictory replies. While 25 delegations were in favor of the allocation of a minimum equal number of channel-hours to all countries asking for them, 18 delegations were against such allocation (Question 2). By much the same majority (23 to 19) the delegations were opposed to fixing upper and lower limits in the allotment of high frequencies to any given country (Question 15). Lastly, only 14 delegations out of 41 were in favor of giving preference to services which could not technically be operated in any other way (Question 26), while only 6 out of 33 were for giving priority to particular well established services (Question 26). Under these circumstances the Replies to Question 16 are for all practical purposes valueless.

6. In view of the marked divergencies between the Replies to all the Questions raising the problem of general principles and priorities, it appears that any attempt to apply a formula based on considerations of a general character or statistical data must, at any rate for the moment, be abandoned.

c) Factors to be taken into consideration

1. In spite of the absence of general principles commanding general or almost general approval, a majority - in some cases a very substantial majority - has expressed itself in favor of taking certain factors into consideration.

2. In certain instances, this aspiration was of a somewhat platonic character, as in the Replies to Questions 6 b and 7 b, where, with the sole exception of Mexico, the delegations confined

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themselves to indicating the factors they would like to have considered without adding how that was to be done. In other instances, however, these factors were completely applicable.

3. A fairly large majority for example were in favor of taking into consideration the situation as it is at the present time in the matter of broadcasting (Question 1 a - 38 votes to 11) as well as at a future date to be fixed by common consent (Question 1 d - 35 votes to 10). Similar majorities were for taking into consideration extraordinary circumstances which have had a significant repercussion on the status quo (Question 1 b - 38 votes to 9), especially war damages (1 C - 41 votes to 5). In this last connection, however, there was only a small minority which was prepared to go further, and fix here and now the number of channel-hours intended to compensate for damages suffered during the late war (Question 14).

4. In conclusion, it seems that the Replies to Question 1 a-d may afford the competent Committees certain indications of value.

d) Possibilities of economizing and/or for reducing requirements.

1. No question has elicited as many affirmative replies as that which relates to the possibility of appropriately effected economies in the use of high frequencies (Question 3). Of 52 replies, 50 were in favor of a recommendation for economizing frequencies.

2. The majority of the delegations (33 to 15) did not, however, wish to go so far as to set a limit for the duration of a country's transmissions (Question 17).

3. There was also only a relatively small majority (23 to 14) which was of the opinion, in reply to Question 22, that colonies, overseas territories, etc., should not be allotted frequencies for international broadcasting in cases where those services were already assured by the respective mother country.

4. On the other hand, there was a marked tendency in favor of a reduction in insufficiently justified requirements. Of 49 Replies to Question 4, 39 recommended a refusal to consider the requirements as submitted, and 38 favored insistence on their being technically justified. Again, 23 delegations to 5, and 14 "others" were for a reduction in requirements where such were not based on a criterion of economizing frequencies (Question 11 b).

The fact, however of a country's inability, for technical or other reasons, immediately to use the frequencies assigned to it,

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was not, in the opinion of 34 delegations out of 50 which replied to Question 13 A, a reason for taking back such frequencies partially or wholly.

As to the question whether frequencies not immediately used might be granted temporarily to one or more other countries by means of bilateral agreements (Question 13 b), opinions were much divided, viz. 15 for and 13 against, with 3 abstentions.

5. It is to be noted that, while a large majority was in favor of a reasonable reduction of obviously exaggerated requirements, an even greater majority (41 to 7) was against an "automatic" percentage reduction in the number of frequencies and broadcasting hours requested (Question 24).

e) Miscellaneous questions.

1. A large number of delegations (29 out of 48) thought it advisable to take into consideration the unknown factor of the needs of countries which, for one reason or another, have not submitted Requirements.

2. The idea of dividing the world into zones in order to facilitate preparation of regional plans for high frequency assignment was favorably received by only 11 delegations out of 47 (Question 23).

3. For information on a mainly technical question, 42 delegations out of 50 were in favor of limiting the power of transmitters (Question 20).

4. The need for "special" transmissions (Question 8) apparently is not universally recognized. It was only in the case of a world information service by the United Nations that a majority was available for this category.

5. The question whether a country has the right to refuse broadcasts directed to it, or to demand reciprocity (Question 9), manifestly excited a great deal of interest. It is clear, however, from the Replies that the time has not yet arrived to attempt a regulation in this connection. Many delegations moreover were of the opinion that this Conference is not competent to make such regulations, and suggested that the problem should be referred to other international organizations.

6. A majority (27 to 17) further thought it undesirable to take into account evidence of interest by listeners in programs now being transmitted (Question 18).

7. Of the 49 Replies to Question 21, 27 asserted that the sovereignty of peoples with respect to the organization of their telecommunications by high frequency radio broadcasting should be wholly respected.

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8. The only question in reply to which there was no dissenting opinion was Question 21 b, regarding the possibility of imposing a plan upon countries and, if so how. Of the 44 delegations which replied, none advocated coercion.

Accordingly, the delegations' faith in the value of agreements freely entered into remains intact, which is a gratifying consideration.

X - RECOMMENDATIONS

In concluding its work, Committee 3 submits the following recommendations to the Plenary Assembly:

Section A

1. That when formulating the High Frequency Assignment Plan, there should be taken into consideration:
 - a) the number of transmitters in operation and the volume of broadcasting being carried out at the present time;
 - b) extraordinary circumstances which have had a significant bearing on the position of high frequency broadcasting, with the understanding that this applies to the case of Pakistan and to other similar cases;
 - c) The number of transmitters in operation and the volume of broadcasting being carried out on the date of _____, as well as projects in construction as of that date, in the case of member countries of the I.T.U. which suffered damages during the last war;
 - d) the number of transmitters to be operated and the volume of broadcasting that is expected to be carried out on the date of _____.
2. That, as far as possible, measures should be taken for economizing high frequencies, such as: bilateral exchange of programs, relays, recordings, point-to-point services, improvement of national coverage by other means, etc.
3. That all high frequency requirements be justified technically for the duration of the operation of the said plan.

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4. That the needs of those countries which, for one reason or another, have not submitted requirements, be taken into consideration.
5. That the Conference should decide on a limitation of transmitter power.
6. That the question of whether or not a country has the right to refuse transmissions directed to it, or to claim the right of reciprocity, be referred to the competent international agency.
7. That the Frequency Assignment Plan be an agreement to which all countries have freely consented.

Section B

8. That the countries of the world should not be divided into zones or groups for the purpose of distributing blocks or bands of frequencies in all the high frequency broadcasting bands, leaving to the countries which compose the zone or group the task of partitioning these blocks or bands of frequencies among themselves.
9. That there be no reduction of the excessive number of requirements by the application of proportional percentages to the number of channels and/or the number of transmission hours requested.

Section C

10. That the Plenary Assembly, as well as the competent Committee or Committees, when examining a problem which has already been discussed in the course of the work of Committee 3 but about which there has been no special recommendation, take note of the conclusion or conclusions relative thereto and referred to in a previous paragraph.

Note: As can be seen, only those problems which have produced substantial majorities of opinion in one sense or another have been included in these draft recommendations. Because this procedure is necessarily somewhat arbitrary, Committee 3 will have to decide whether it wishes to add other recommendations or to delete or modify one or more of those proposed above.

The Chairman,

H. J. VAN DEN BROEK

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 407-E

4 January 1949

Original: FRENCH

Committee 3

VATICAN CITY (State of)

CONCLUSIONS

suggested by the analysis of the
Replies to the Questionnaire (Document No. 265)
of the General Principles Committee

The present document is a study of the opinions of the majorities, as shown by at least two-thirds of the votes.

Together with the various conclusions (see below), which embody the Replies made to particular questions, it shows the number of votes given in the same sense and the number of the corresponding Question.

...
.....
...

A method which employs an algebraical formula with a view to evaluating, even approximately, the number of channel hours to be assigned to each country, however desirable, seems in practice impossible.

The 3 basic factors (area, population, languages) referring to interior broadcasting, have been thought insufficient

37 votes Q. 7 a

41 votes Q. 7 b

while the supplementary factors, consideration of which is suggested, are so varied and numerous

see Replies to Q. 7 b

see Appendix B

that it seems hopeless to expect any agreement on a formula which would cover all of them (or at least the more important ones), the more so as the variety of factors would require a series of coefficients of importance, on which an understanding seems impossible.

A method which appeals to an order of priority, defined on the basis of a classification of the different types of transmissions, is also impossible.

It would not have any foundation for lack of a classification accepted by common agreement;

Q. 5

it has not received sufficient support to justify its imposition upon a minority, even in the case of the fundamental division between national (internal) and international (external) broadcasts;

Q. 10

and even the proposal of frequency sharing, with reference to different categories of priority, has been rejected.

33 votes Q. 16

The only thing left then is to take as a basis the requirements of the various countries.

These requirements, however, take implicitly into account the various factors which each country considers important and which cannot be neglected.

Q. 7 b

They further implicitly take into account the number of transmitters and the volume of services,

at the present time, 38 votes Q. 1 a

at a previous date, 41 votes Q. 1 •

projected, 35 votes Q. 1 d

as well as possible extraordinary circumstances which might justify a postponement of the reasonable time limit for carrying out projects.

These are elements which (with the reserve of an opportune selection of past and future dates) should, according to a very pronounced majority opinion, be taken into account.

However, the original requirements should not all be taken into account on the same footing

39 votes Q. 4 a

but must, above all, be justified from a technical point of view,

38 votes Q. 4 b

and satisfy the need for economy of frequencies,

25 votes Q. 11 b

plus 7 others

but, from this point of view, the requirements will be revised and corrected by Committee 5.

Nevertheless, the reduction of channel hours made by Committee 5 is insufficient, and further reductions are necessary.

However, there is an opposition against general reductions applied automatically and uniformly to all requirements, or applied in accordance with a uniform percentage (this decision would seem to be implicit in the Replies to Question 24 a, by which it can be checked), or even in accordance with a percentage in proportion to the channel hours asked for by each country:

41 votes Q. 24 a

or in accordance with other criteria proposed, all of which have either been unanimously rejected or have not found sufficient support, such as:

Aggregate amount of channel hours above a given upper limit to be reduced below such limit (criterion supported by 19 votes as against 23 votes).

Q. 15

Duration of programs above a given maximum length to be reduced below such length (criterion rejected, as against 15 votes, by a majority of 33 votes).

Q. 17

Evidence of interest on the part of listeners, to constitute a claim for priority (criterion upheld by 17 votes, as against 27 votes).

Q. 18

It seems therefore that it is necessary:

First, to try and secure spontaneous reductions in the light of certain criteria which, even if they do not admit of automatic and uniform application to all requirements alike, can nevertheless, and should, be taken into consideration by all, such as:

Possibility of the use of means other than H.F.:

50 votes Q. 3

Bilateral agreements, exchanges of programs, relays, records, services between fixed points, improved reception of national broadcasting services by other means, etc.:

Possibility of limiting the duration of programs:

Q. 17

Possibility of limiting the multiplicity of simultaneous programs with the same destination:

Observance of the dates (to be fixed) with reference to..

Q. 1

It seems that work along these lines might be more satisfactory and more effective, if all delegations were asked to give details to a competent committee of the justification for their requirements, in the light of the necessity of reducing the allotments of channel hours and the various possibilities of reduction in accordance with the criteria which have been indicated.

Group 6-B seems to have already the necessary qualifications for the purpose suggested. It would, moreover, always be possible to add to its numbers or expand its terms of reference.

Secondly, to endeavor to obtain supplementary reductions

- a) on the suggestions of the aforesaid Group in consultation with the plenary Committee (Committee 6);
- b) in accordance with a procedure to be laid down for recourse in the last resort to common reductions for all in conformity with criteria to be selected (same percentage, or proportional percentage, or reduction of the number or duration of programs). There might even be provision for a final revision and correction in quite special cases which no general rule can cover.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 408-E

3 January 1948

Original: FRENCH

Committee 4

This document replaces Document No. 208

REPORT OF WORKING GROUP C OF THE
TECHNICAL PRINCIPLES COMMITTEE

I. TERMS OF REFERENCE

Among the questions constituting the terms of reference of Committee 4, the following questions have been submitted to the Working Group for consideration (See Documents Nos. 40, 78, 93):

Question IX - Technical problems that have to be studied or coordinated on a world basis.

Question X - Consideration of future lines of development of high frequency broadcasting and technical methods of programme exchange in the light of the latest technical advances.

Question XI - Methods of economizing in the use of high frequencies.

II. DOCUMENTS WHICH HAVE BEEN USEFUL IN THE WORK OF THE GROUP.

Recommendations of the International Telecommunication Conference of Atlantic City, 1947 (Page 112, paragraphs 3 and 4).

Report of the High Frequency Broadcasting Conference, Atlantic City, (items B and G and 6) and all other documents of that Conference (especially Document 13 Rhf of the USA and 27 Rhf of India).

Report of the Planning Committee, Geneva Session (especially Appendix E).

Statement by Prof. van der Pol at the meeting of Committee 4 on October 29 (Questions submitted to the C.C.I.R. for study) and the C.C.I.R. document mentioned in his statement.

Document No. 26 presented by the U.S.A. Delegation.

Documents Nos. 58 and 95 presented by Portugal.

Appendix C of the Report of the Planning Committee
(Mexico City Session).

III. THE GROUP HAS HAD 3 WORKING MEETINGS.

The first meeting was held on 12 November 1948 at 3:30 P.M.; in spite of the fact that a notice was posted in good time, only the Delegates of France, Poland, Portugal, and Uruguay were present. Though six Delegates were absent, those present decided, with a view to hastening the work, to proceed to an exchange of preliminary views on the questions submitted to the Working Group for study.

The second meeting was held on 17 November 1948 at 10:00 A.M. The Delegates of the Argentine (as observer), France, Portugal, Sweden, Uruguay and Venezuela were present. The Delegates of Indonesia and Poland had sent excuses for not attending.

The third meeting, held on 22 November 1948 at 11:30 A.M. was devoted principally to the final drafting of the Report. The Delegates of Brazil, France, France Overseas, Poland, Portugal and Uruguay were present.

It is desired to point out that the work of Group 4 C has not been facilitated by the fact only one meeting (that of November 17) was officially reserved for the Group in the weekly schedule of Committee meetings: and that on the other hand, the participation of the several members who had been assigned to take part in the work of the Group has not been as great as could have been wished.

The results obtained by the Working Group will be found in the Annex to the present document.

The Chairman of Group 4-C

C. Mercier

ANNEX 1

RESULTS OF THE WORK OF GROUP 4-C

I. TECHNICAL PROBLEMS THAT HAVE TO BE STUDIED OR COORDINATED ON A WORLD BASIS.

1. Scientific or general technical problems concerning basic data useful in the formulation of recommendations when preparing or modifying a plan.

All the problems concerning broadcasting submitted to the C.C.I.R. for study and listed by Prof. van der Pol (see document CCIR. Stockholm of 1948, List of Questions for Study).

2. Problems more directly concerning the implementation of a plan and the daily operation of transmitters.

a) Analysis of reports concerning sunspot activity and ionospheric phenomena in order to have the necessary information for ascertaining and forecasting the propagational conditions for radio waves, and for putting into operation frequency assignment plans;

b) Analysis and coordination of the monitoring reports of high frequency broadcasting stations received from various sources, in order to check on the operation of the plan. Organization of listening or trial tests (for example on the practical possibilities of simultaneous sharing, on the importance of interference, etc.) for the purpose of determining the most efficient means of using that part of the spectrum reserved for high frequency broadcasting. Various measurements regarding transmissions (especially measurements of frequency and field intensity) wherever useful in tracking down the cause of interference experienced, or in adding to our knowledge of propagation. The methods of measurement used should be standardized.

c) The study of information obtained from countries after the implementation of the plan and the necessary recommendations to be made to ensure orderly and efficient use of high frequencies for broadcasting.

d) Study of all technical and practical questions in relation to the subjective aspect of the quality of reception (modulation band width, fading and distortion);

e) Study of questions concerning the practicability of exchanging programmes (research of the standardization of re-

ording methods, exchange of information on characteristics of recording methods used by different countries, publication of information concerning programmes and time tables, transmitter operation, all data on possibilities of using radio circuits for relay);

- f) Publication of a bulletin or of documents giving the results of observations or work on the problems enumerated above.

Working Group C believes that the preceding items are of particular interest to the work of Committee 7, and recommends that the preceding conclusions be forwarded to that Committee.

II. METHODS OF ECONOMISING IN THE USE OF HIGH FREQUENCIES FOR BROADCASTING

The Working Group recalls that the International High Frequency Broadcasting Conference of Atlantic City has already formulated Recommendations on this subject. (See Atlantic City Report, Chapter V,B.). The Working Group has nevertheless prepared the following additional comments:

1. The Atlantic City recommendations (Chapter V,A,2(a)) stipulated that "normally only one frequency in a band should be used to transmit one programme". These conditions can most often be effectively fulfilled if transmissions are limited to the periods when propagation is least disturbed. On the other hand, periods of rapid variation of ionospheric conditions (rapidly changing OMF) in principle and under conditions stipulated elsewhere by Committee 4, require the use of two frequencies in different bands (Chapter V, A; 2 (c)), but these periods generally coincide with unstable and otherwise unsatisfactory reception conditions.

For the sake of economy it therefore seems advisable to avoid transmitting during these periods--usually short periods in which the OMF varies quite rapidly--whenever the transmissions are not absolutely necessary.

Moreover, even during longer periods when there are rapid ionospheric changes, it is possible to avoid simultaneous use of two frequencies in different bands by sub-dividing such long transmissions, provided that there is no objection on the part of the countries concerned, and provided that each of these periods shall be at least one hour.

2. Study of the field intensity values and the values and the values of the minimum signal/noise ratio might bring out cases where the desired transmission would lead to unsatisfactory

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reception conditions.

Circuits in which the field at the reception area is less than the standards studied by Committee 4 (taking into account the OWF, the power of the transmitter and the gain in the antenna) should be reconsidered from the point of view of their possible improvement.

3. The need for considerable economies in the use of frequencies suggests a recommendation that the use of high frequencies should be avoided whenever the services in question could be operated, under reasonable technical and economical conditions, by the use of low, medium, very high or tropical band frequencies.
4. (a) The Working Group feels that an appreciable economy of high frequencies in the broadcast bands, in combination with the improvement of reception conditions, could be obtained by placing programmes at the disposal of stations for transmission over short or medium distances within a given area. The frequencies used by these stations could either belong to bands other than those of high frequency broadcasting or, even if they belonged to those bands, they could be used simultaneously by several stations. But no real economy would result unless the transmissions by local or regional stations were **subtracted** from, rather than added to, the direct transmissions on high frequencies to the corresponding area.

(b) In accordance with the recommendation already made at Atlantic City (Report of the H.F.B. Conference, Chap. V, B, 3 and 4), the programme may be placed at the disposal of local or regional stations either by means of recordings or by point to point circuits provided that this practice is acceptable to the services concerned and that it does not cause interference to other services.

(c) Attention is also called to the importance of a standardisation of the various means of recording, ~~in~~ order to allow full development of the exchange of programmes. The Conference should take definite action with a view to the study of this question and an early sequel in the shape of practical conclusions. (See Paragraph 2), e) of "Technical problems that have to be studied or co-ordinated on a world basis").

(d) In connection with the use of point-to-point relays attention is drawn to the advantages of S.S.B. transmission and reception and to the use of exalted carriers in the receiving system.
5. (a) In a period of maximum and even average sunspot activity, it would no doubt be possible to use frequencies in the 26 Mc/s

(Annex 1 to Doc. 408-E)

band for an appreciable number of circuits and relays, even though the requirements submitted for this band have been few. It is therefore advisable that, as far as possible, an effort should be made in the construction of receivers to facilitate the use of these frequencies and thereby to diminish the load in the lower bands.

(b) We might also point out the advantages gained by the use of variable selectivity in order to eliminate numerous types of interference without appreciably affecting the actual quality of the transmission, considering the numerous causes of distortion which continually affect high frequency transmission.

(c) In view of the fact that receiving systems employing exalted carrier are capable of reducing the effects of selective fading it is recommended that the development of such receivers be investigated.

(d) Lastly, development in the construction of receivers which permit reception of transmission on frequencies of the tropical bands will aid the use of these bands, and so make possible an economy of frequencies in the Rhf bands.

6. In short, the Working Group recommends:

(a) To avoid, as much as possible, transmissions during periods of very rapid change in ionospheric conditions (in accordance with the decisions taken by Committee 4), if there is no strong reason for continuing the transmissions;

(b) Subject to objections which may be submitted by interested countries, to 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. In each particular case, Committee 5 will propose the most appropriate technical solution, taking into account the preceding suggestions;

(c) To begin to meet only the requirements representing such communications as are assured by satisfactory reception conditions all other requirements to be reconsidered after seeking possibilities of improving reception conditions;

(d) Wherever technically and economically possible, to use other frequencies than those in the high frequency broadcasting bands (low, medium, very high frequencies, tropical bands);

(e) To take advantage of every practical possibility offered by the utilisation of point-to-point circuits (when such practice

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is acceptable to the interested services) and of transcriptions, in order that exchanges of programs between local or regional stations may lead to reductions in the use of high frequencies;

(f) That the Conference lay down general rules leading to the prompt standardisation of recording methods;

(g) That, as much as possible, an effort be made in the construction of receivers to prevent their characteristics from limiting the potential output of all high frequency and tropical broadcasting bands.

III. Consideration of Future Lines of Development of High Frequency Broadcasting and Technical Methods of Programme Exchange in the light of the latest technical advances

The Working Group believes that this question, the wording of which is not very explicit, is closely bound up with the problem arising in connection with the economy of frequencies. The recommendations already made on the economy of frequencies (Chapter II) are accordingly recalled, and attention is more particularly directed to the following suggestions:

The development of telephone circuits (cables or point to point radio circuits), especially in the interior of countries of a certain size, should lead to a greater use of local stations for the transmission of programmes which are at present broadcast on high frequencies for lack of any other possibility;

The standardisation of methods of transcription should allow a limitation of the requirements in high frequencies by facilitating the exchange of programmes, and by the retransmission, under improved conditions, of an important part of artistic programmes by the local broadcasting networks;

An improvement in the construction of receivers should facilitate a more rational use of the highest frequency bands allotted to broadcasting;

Attention is called to the study entrusted to the C.C.I.R., concerning the possibility of employing the system of single side-band transmission. The advantages of using this system are numerous (see Document of the C.C.I.R., Stockholm 1948, attached to Question 24). It is desirable that the work done by manufacturers with the collaboration of the administrations should be coordinated to facilitate the study of the C.C.I.R. and contribute as much as possible to the practical application of this system, particularly in the case of new services to be established where transmitting and reception techniques can be coordinated;

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The above are the only technical observations which the Working Group thinks it reasonably possible to make on the subject at the present moment.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948

Document No. 409-E

4 January 1949

Committee 2

POLAND

The Secretary of the Conference has received a copy of a communication from the Chargé d'Affaires of Poland in Mexico City indicating that from now on the Delegation of Poland will be constituted as follows:

Mr. Jan Drohojowski
Head of the Delegation

Mr. Mieczyslaw Flisak
Delegato

Mr. Adolf Blicher
Delegato

Mr. Yozef Welker
Delegato

Mr. Mieczyslaw Wikinski
Delegato

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948

Document No. 410-E

11 December, 1948

Original: ENGLISH

Committee 4

This Document super-
sedes Document No.
306

Report of Working Group 4-B
of the Technical Principles Committee

Working Group 4-B has held 9 meetings in all. It presents herewith its Report on the subject of directional antennas, the last point in its terms of reference. A draft report submitted by the U.S.S.R. Delegation served as a basis for the discussion of the problem. It was possible on certain points to attain unanimity on the part of the Group, but there were other points on which opinions were still divided.

The Chairman of Working Group 4-B

D. E. METZLER

Annex:
Report.

ANNEX

Report of Working Group 4-B of the Technical Principles Committee Directional Antennas

For the preparation of the present Report the Working Group made a preliminary study of the following documents:

- a) Rhf Document No. 149 of 8 October 1947, "Report of the International High Frequency Broadcasting Conference", (Atlantic City, 1947).
- b) Radio Regulations annexed to the International Telecommunication Convention (Atlantic City, 1947).
- c) Report of the Planning Committee of the High Frequency Broadcasting Conference (Geneva Session, 1948).
- d) Report of the Planning Committee of the International High Frequency Broadcasting Conference (Mexico Session, 1948), PC-Rhf Document No. 79 of 19 October 1948.

The Group draws the attention of Committee 4 to the Acts of the C.C.I.R., Fifth Meeting (Stockholm, 1948), which might be useful in the further study of antennas.

The Group further took note of a work by American engineers, containing a description of BHT antennas, (a copy of which work was supplied by the U.S.A. Delegation to Heads of Delegations), and of Document No. 151 entitled "Some Numerical Calculations of Directional Properties of Certain Horizontal Rhombic Aerials". This document was submitted by the U.K. Delegation.

(An. to Doc. 417-E)

The discussions of the Group dealt with the following points:

- I. Recommendation of certain electric characteristics of antennas, necessary for the elaboration of a draft plan for the assignment of frequencies.
- II. Proposal of a nomenclature and symbols for dipole antennas.
- III. To consider the most commonly employed types of antenna in accordance with the list of particulars supplied by Administrations.
- IV. To recommend methods of determination of the various electric parameters of antennas.
- V. Recommendation of electric parameters for adoption as bases for the elaboration of a plan or plans for the assignment of frequencies.

1

The Group recommends the following definitions (the figures 65, 66, and 67 being those of the relevant paragraphs in the Radio Regulations of the Atlantic City Conference, 1947).

65. Gain of an antenna. The gain of an antenna in a given direction is the ratio, expressed in decibels, of the square of the field intensity radiated in this direction by the given antenna 1/ to the square of the field intensity radiated in its median plane by a perfect half-wave antenna isolated in space, where the fields are measured at a distance sufficiently great. 2/ It is assumed that the real antenna and the perfect half-wave antenna are supplied with equal power.

66. Coefficient of Directivity of an Antenna. The coefficient of directivity of an antenna 3/ in a given direction is the ratio,

1/ When not specified otherwise the figure expressing the gain of an antenna refers to the gain in the direction of the main beam.

2/ The Working Group interprets the expression "sufficiently great" to mean a distance of ten times the maximum dimension of the antenna and in no case less than ten wavelengths.

3/ When not specified otherwise, the figure expressing the coefficient of directivity refers to that in the direction of the main beam. When it is not necessary to take into account antenna and earth losses, the coefficient of directivity as defined above is 2.15 decibels higher than the gain of the antenna as defined in 65. (Radio Regulations of the Atlantic City Conference, 1947).

(An. to Doc. 410-E)

expressed in decibels, of the square of the field intensity radiated in this direction to the mean of the squares of the field intensity radiated in all directions in space, where the fields are measured at a distance sufficiently great. 1/

67. Directivity Diagram of an Antenna

- a) The directivity diagram of an antenna is the graphical representation of the gain of this antenna in the different directions of space.
- b) The horizontal directivity diagram of an antenna is the representation of the gain in the different directions of a horizontal plane or, if necessary, in the different directions of a plane slightly inclined to the horizontal.
 1. The efficiency is the ratio of the power radiated by an antenna to the power supplied to it.
 2. The frequency range of an antenna is the range of working frequencies over which the antenna is able to approximately preserve the gain, coefficient of directivity and efficiency.
 3. As the width of the main beam of an antenna, we take the angle which is formed by the two directions of the antenna for which the field is half the maximum value of the main field.

The Group recommends that:

1. The maximum radiation in the horizontal plane and the angle of elevation of the maximum radiation shall be chosen in such a manner as to provide the most efficient transmission to the intended area of reception.
 2. Radiation in the unwanted directions shall be kept as low as possible.
 3. In the case of short distance broadcasting services the radiation in the vertical plane shall be restricted to that angle necessary to provide reception in the intended area of service, and radiation at lower angles of elevation shall be kept at a minimum.
- 1/ The Working Group interprets the expression "sufficiently great" to mean a distance of ten times the maximum dimension of the antenna and in no case less than ten wavelengths.

(An. to Doc. 410-E)

2

The Group proposes to adopt in future the following designations:

Curtain arrays H or V RA/m/n/h λ

H = Horizontal.

V = Vertical

m = Number of half-wave elements in the horizontal plane.

n = Number of rows in the vertical plane.

h λ = Height above the soil of the lowest row of the array, expressed in terms of the working wavelength.

RE = Active reflector.

RP = Passive reflector.

RA = Reversible antenna

O = Steerable.

f = Working frequency.

a = Azimuth, is the angle of the centre axis of the beam measured East of true North.

X = Rotating field dipole. (Turnstile array)

Observation. A simple dipole antenna is a straight radiator, generally fed in the centre, the maximum radiation of which is in the plane normal to its axis. The specified length is the total length expressed in terms of the working wavelength.

3

The Working Group refers to the inquiry made by Working Group 3-A of the Planning Committee (Mexico City Session), the results of which, appearing in PC-Rhf Document No. 79, Appendix 1, are as follows:

"The analysis related to some 500 antennas and was based on information provided by 20 out of the 34 countries submitting full antenna data on Forms 4. The following approximate proportions were obtained:

Curtain arrays	60%
Rhombic antennas	20%
Other types (including V antennas, single wire antennas and special types)	20%

Working Group 4-B proposes to invite countries which have not yet submitted the information requested on the subject of antennas to be good enough to send it in, either in the form of the values of the electric parameters (as in the standard Forms) or else as details of the dimensions and types of the antennas which will enable the necessary calculations to be made.

4

For the calculation of the gain and of the angular width of the beam radiated by antennas arrays the Group recommends the method suggested by the U.S.A. Delegation in Document No. 18121 - 2/48 entitled "Determination of High Frequency Broadcasting Antenna gain and width of beam", the U.S.A. Delegation having made a correction of 3 decibels in diagram 4 during the discussions of Working Group 3-A of the Planning Committee (Mexico City Session) at the instance of the U.S.S.R. Delegation.

With a view to speeding up the work, the Group recommends resort to the table prepared on the basis of this method, by the Delegates of the U.K. and India, which appears in Appendix I, D of PC-Rhf Document No. 79 of the Report of the Planning Committee (Mexico City Session). 1/

The Group directs the attention of Committee 4 to Document No. 151, submitted by the U.K. Delegation, containing calculations of rhombic antenna radiation diagrams. The Group further recommends the following methods of calculation and charts:

1. Calculation of the gain of rhombic antennas, with angle of incidence 15° , semi-side angle $2\theta = 140^\circ$, as given in the curves appearing on page 5 of PFB Document No. 231, Annex 2, submitted by the U.S.A. Delegation.
2. Chart to determine the angular width of the major lobe in the horizontal plane, showing the width of beam for seven types of rhombic antenna (each with a different angle θ), as proposed by the U.S.S.R. Delegation in Appendix I, C of PC-Rhf Document No. 79.

1/ See also Prof. Dr. van der Pol in Appendix I. A of Document PC-Rhf No. 79.

3. PROPOSAL OF THE MEXICAN DELEGATION WITH RESPECT TO THE SPACIAL DISTRIBUTION OF THE VECTORS OF FIELD INTENSITY WHICH MUST EXIST IN THE PRINCIPAL RADIATION LOBE OF A RHOMBIC ANTENNA. 1/.

In cases where complete data are not available as to the exact form of the principal radiation lobe of a rhombic antenna and only the gain of the same at the elevation angle of the principal radiation is known, the following will be the characteristics of the lobe:

a) The principal radiation lobe will be considered as a solid of revolution whose axis is determined by the direction of maximum radiation.

b) The angular width of the principal radiation beam will be 1.33 times the angle of elevation, i.e., it is considered as representative of a sinusoidal distribution of the radiated field. (100% of the maximum gain in the direction of the elevation angle, 86.6% for an angle which is 2/3 of the elevation angle, 50% for 1/3 of this same angle, and 0% for 0°).

The Group is of the opinion that the information made available on the subject of rhombic antennas is still incomplete and proposes to study the subject further.

The Group regrets to have to record that there is very little in the way of documentary material or calculations in the case of other types of antennas specified in the lists of requirements, and that it is not easy therefore to make recommendations in regard to them. Where no specific information is available as to the directional characteristics of such antennas, they may be taken for the purposes of the assignment of frequencies to be omni-directional.

As regards simultaneous sharing, it is to be assumed that the power radiated by a directional antenna is equal to the power of the transmitter, except in the direction of the major lobe. However, in the case of certain antennas the power radiated in any other direction may attain as much as one-tenth of the power radiated in the direction of the major lobe.

1/ See also Appendix A attached.

Appendix A

Observations of the Mexican Delegation concerning the spacial distribution of the vectors of field intensity which exist in the principal radiation lobe of a rhombic antenna.

Fig. 1 represents the radiation contour in the vertical plane or a symmetrical radiation beam, corresponding to the maximum radiation direction and having the field intensity distribution which has been proposed, i.e., if H represents the maximum field intensity for an angle of elevation Δm , $0.866 H$ corresponds to an angle of elevation of $2/3$ of Δm and $4/3$ of Δm , and $0.5 H$ corresponds to $1/3$ of Δm and $5/3$ of Δm , and for 0° and $2\Delta m$ the field intensity is considered to be zero.

From a study of the attached diagrams of the field intensity in a vertical plane for 4 typical examples of rhombic antennas, it will be seen that the points obtained by the proposed procedure are very close to the theoretical figures calculated by means of classic formulas on rhombic antennas.

Fig. 2 represents the radiation contour in the plane of maximum amplitude, the form of which is identical to that in the vertical plane, since the radiation beam is considered as represented by a solid of revolution. In this Figure it is seen that the angular amplitude is $4/3 \Delta m$.

In support of this consideration, reference is made to Document No. 151 submitted to this Conference by the United Kingdom, in which some numerical calculations on the directional properties of certain horizontal rhombic antennas appear. It will be appreciated from these examples that the angular width obtained directly from these graphs and that obtained by the figure $4/3$ of Δm coincides in many cases while in other cases slight discrepancies appear.

The simple observation of the equipotential contours of the principal radiation beam as they appear in the above-mentioned Document No. 151 indicates that the hypothesis of considering the principal beam as a solid of revolution is acceptable in practice.

In order to apply it, this simple method only requires a knowledge of the maximum gain and the angle of elevation of the principal radiation beam of a rhombic antenna.

Fig. 1.

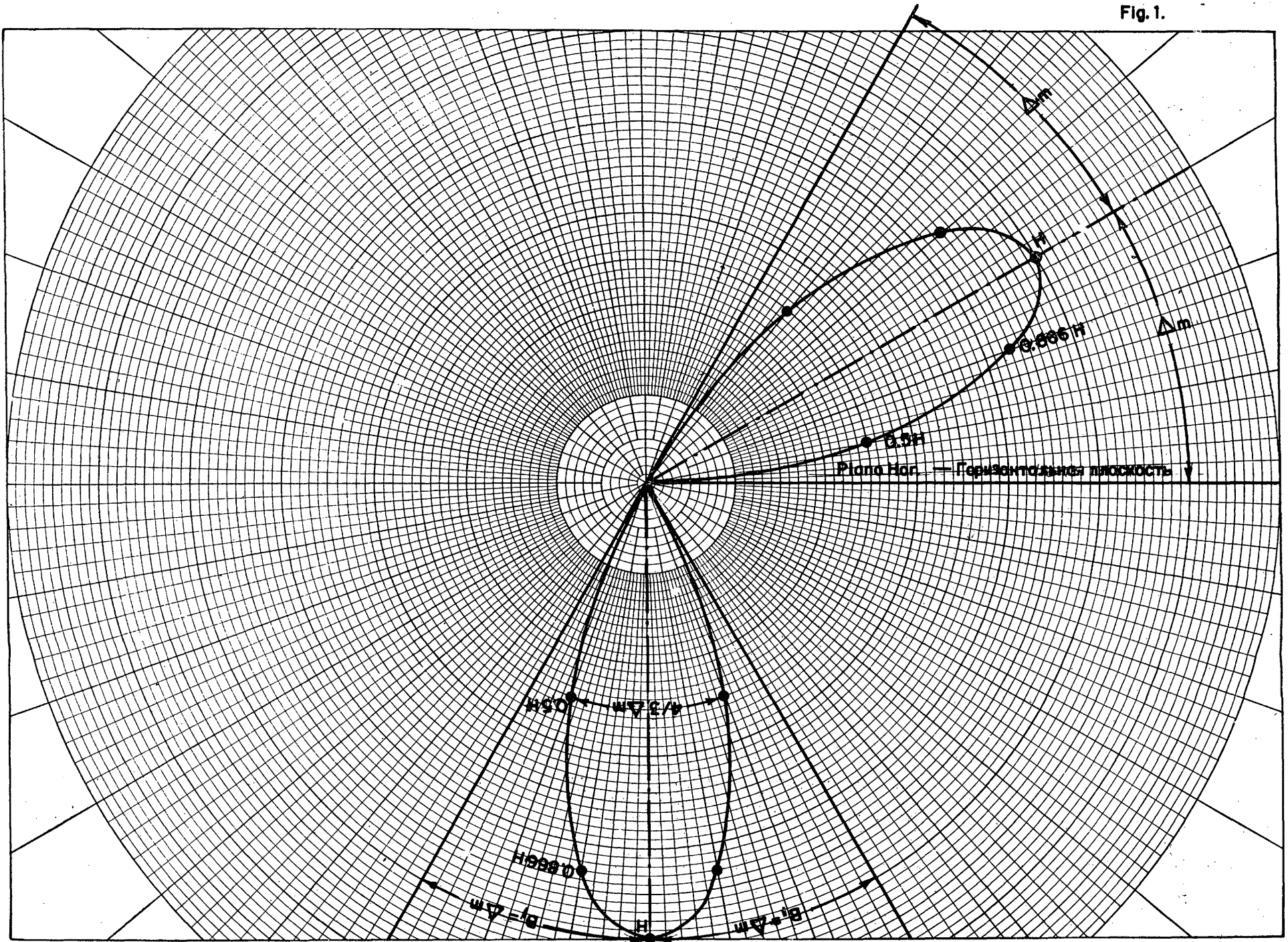
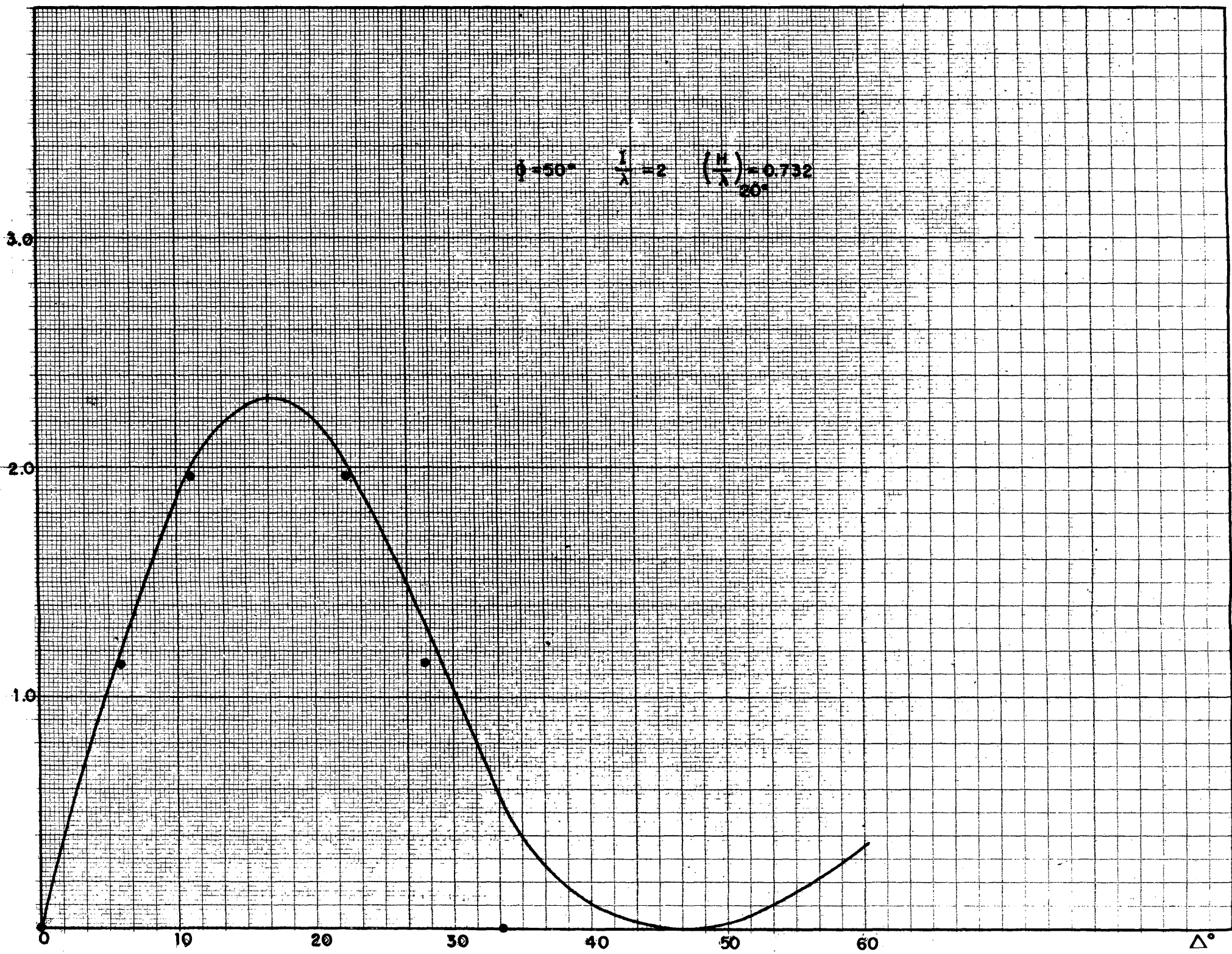
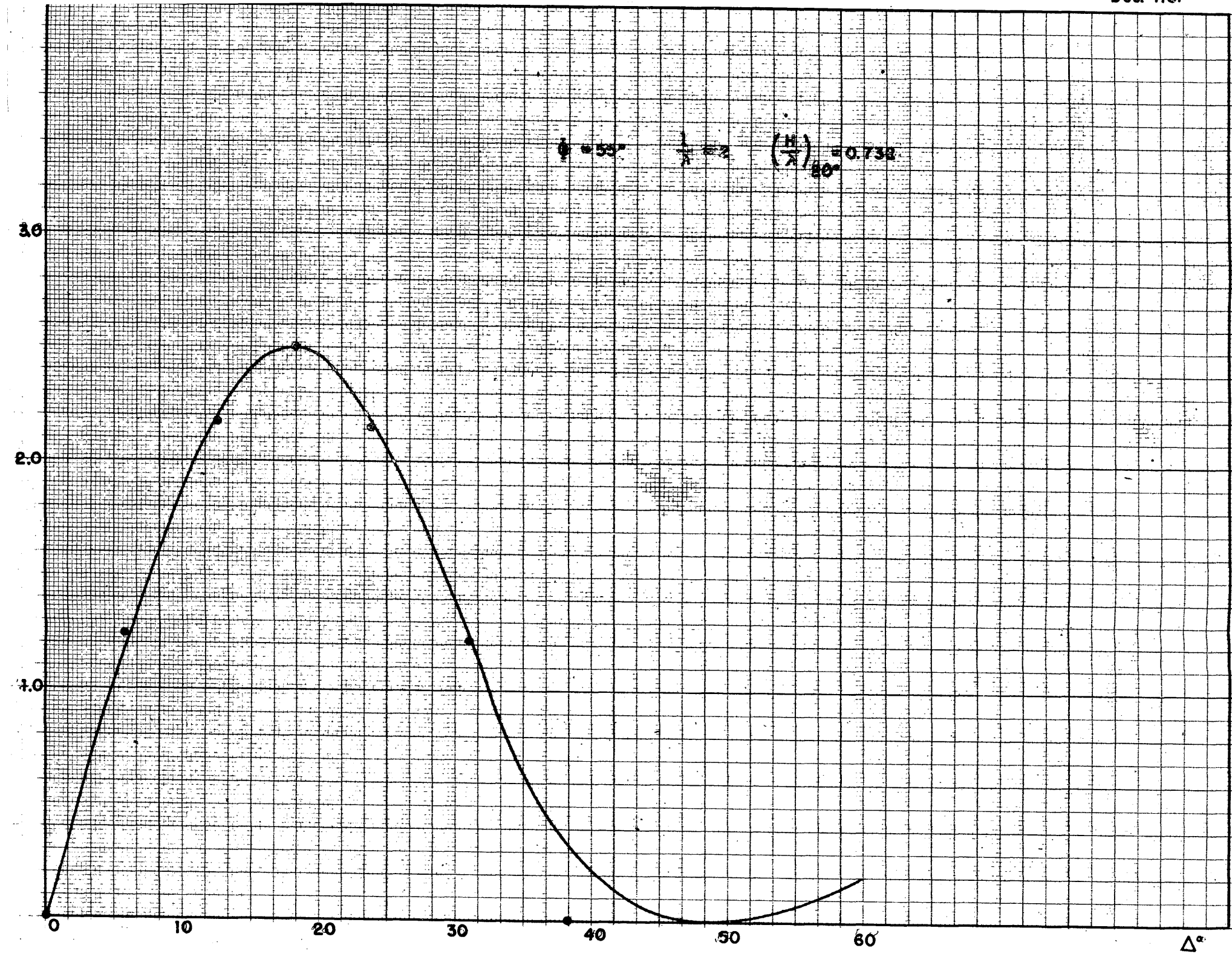
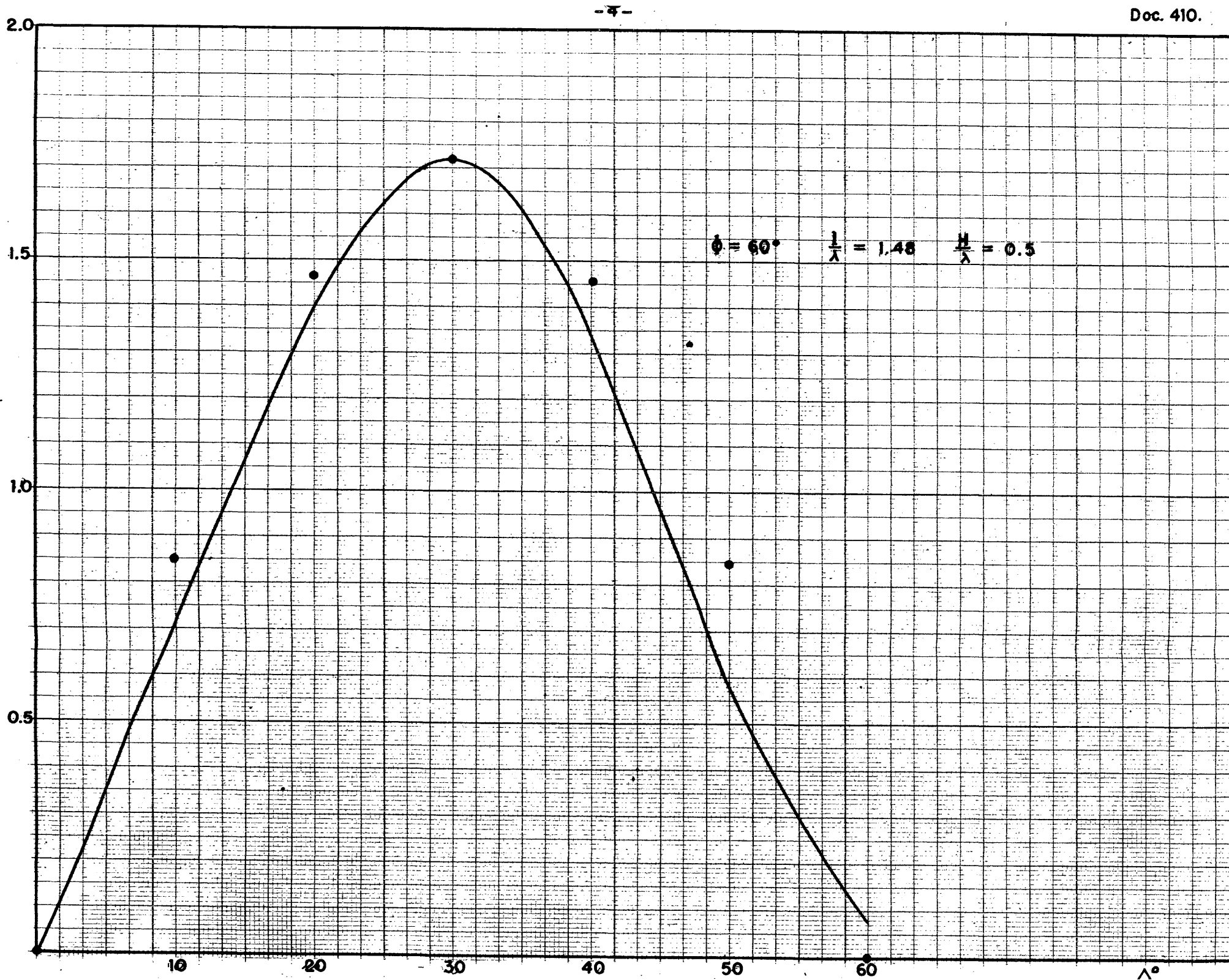
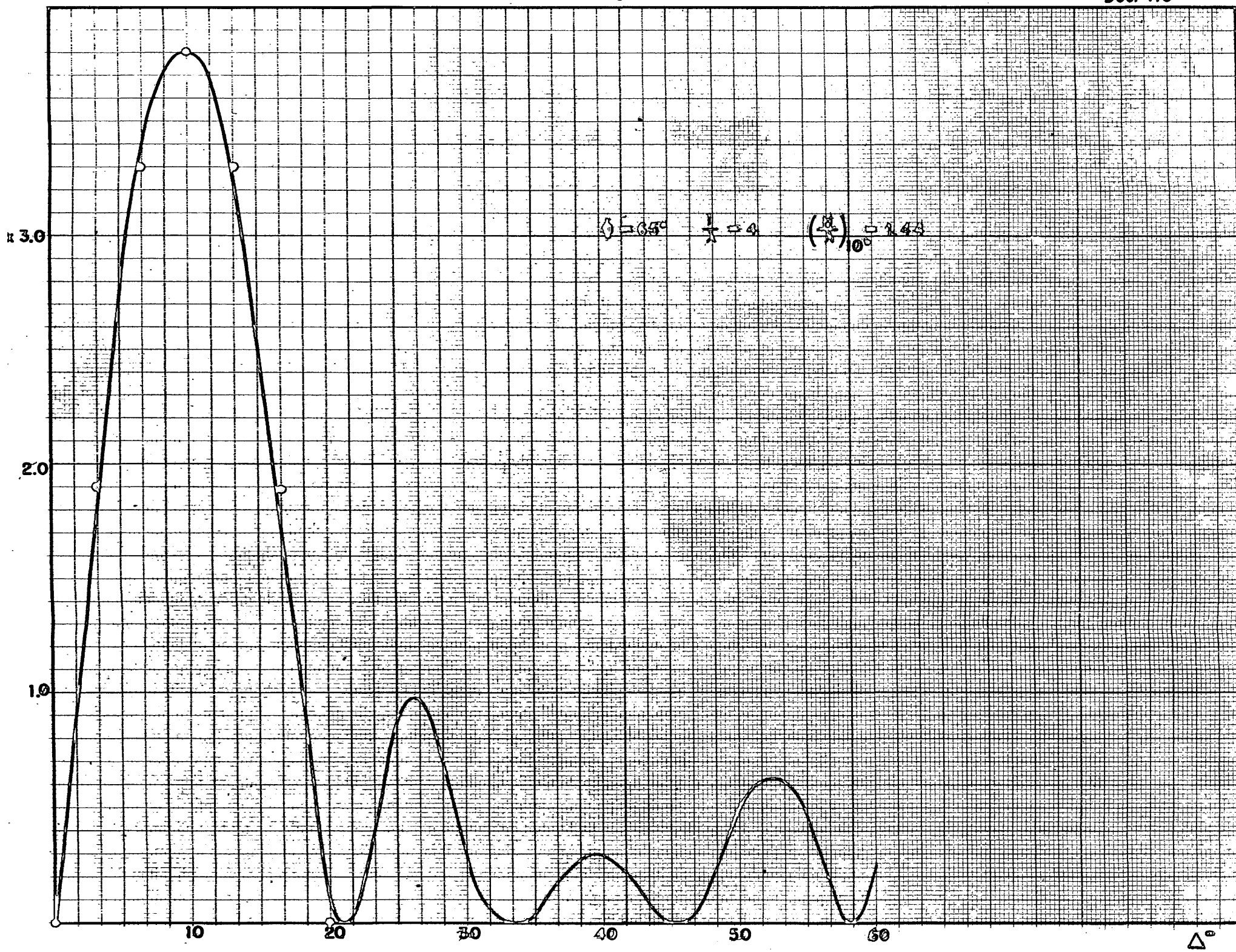


Fig. 2.
 Diag. en el plano de max. Rad.
 Диаграмма максимального излучения в горизонтальной плоскости. (H)









INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 411-E

5 January 1949

Original: ENGLISH

Committee 6

AGENDA FOR THE 15th MEETING OF THE
PLAN COMMITTEE

to be held at 3:30 p.m., 7th January 1949

1. Approval of the Reports of the 12th, 13th and 14th Meetings of the Committee (Documents Nos. 363, 385 (with Annex in Doc. No. 393) and 400).
2. Consideration of action to be taken concerning Doc. No. 374.
3. Report of the Chairman of Working Group A (Doc. No. 399).
4. Report of the Chairman of Working Group B.
5. Report of the Chairman of Working Group C.
6. Report of the Chairman of Working Group D.
7. Continuation of general discussion on the future work of the Committee.
8. Miscellaneous.

Chairman of Plan Committee

Gunnar Pedersen



INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 412-E

5th January, 1949

Original: ENGLISH

Committee 5

DRAFT REPORT OF THE REQUIREMENTS COMMITTEE

Amendments to Document 329-E

Page 1, Paragraph 2, 12th line, after "to the notice of the Plan Committee" add the following:

"It should also be reported that some countries have requested a revision of their requirements which, since they were received after the 5th November, the Committee is unable to accept without the consent of the Plenary Assembly. A list of these countries is given in Appendix A, with recommendations for acceptance where it is known there are extenuating circumstances."

Page 1, insert new paragraph between paragraphs 2 and 3 as follows:

"It must be reported that a number of countries have been unwilling to supply information as regards the number of transmitters in their countries which was requested of them and to this extent, Working Group 5A has not been able to complete its work in accordance with its terms of reference."

Page 2, Paragraph 1, 15th line, after "being passed on to that Committee" add the following:

"There has also been some criticism of the work of the Committee which has culminated in Document No. 334 of the U.S.S.R. Delegation. These criticisms have been fully discussed in Committee 5, which, by a majority vote, decided that the work of the Committee should proceed on its original lines. The view of the majority of the Committee is as follows:

"The criticisms summarised in Document 334 are made on the grounds that the frequencies recommended by the Committee vary materially from the frequencies requested by the various countries. It should be stated first of all that the frequencies recommended are, in fact, the optimum working frequencies required to carry out the specific services as calculated from the OWF curves produced by the U.S. Delegation and recommended for use by Committee 4 for mass calculations which do not require great accuracy (see Documents 89, 158 and 192).

It is understood that these curves were produced subsequent to Circular No. 462 of the N.B.S. and that in their production advantage had been taken of more recent advances in the knowledge of ionospheric conditions. It is well known that propagation data on all frequencies are being gathered together continuously and that the last word in the methods of calculation of propagation conditions has, by no means, been said, but engineers must always be willing to take advantage of new information as it becomes available."

"The majority view of Committee 5 is that it would be doing a disservice to Committee 6 if it used discretion and departed from the value given by the curves and thus recommended frequencies other than those given by the curves which have been agreed for its use. Such a procedure would be tantamount to withholding vital information from Committee 6. Committee 5 regards itself as a "fact finding committee" and considers that it is important that all the facts regarding the services required should be uniformly formulated and that the Plan Committee is the proper authority to use discretion, no doubt in consultation with the country concerned, as to whether the "required" or "recommended" or any other frequency should be actually allocated for a particular service."

"On the question of the accuracy of the curves, though this is entirely a question for Committee 4, it is pointed out that even if the percentage accuracy is as stated in Document 334, it would not be sound practice to depart from the findings in one direction or the other, since there is no guarantee that such a departure would not be in the opposite direction from the true value, thus increasing the possibility of error to double that suggested in the Document. As regards the accuracy of the curves provided by the U.S. Delegation, it would be more exact if these had been worked out for every day of the year and every unit of the sun spot cycle; but a compromise must be made between accuracy and practicability and the tremendous amount of work involved in producing curves for every possible set of conditions makes such a procedure quite impossible in the short time available."

"As regards the criticism that the full theoretical number of curves has not been produced, it should be stated that whenever a particular service is found not to be catered for by the curves already produced, additional curves have been willingly drawn by the U.S. Delegation and nearly every service has now been covered in this way."

"In conclusion it should be stated that if any country is dissatisfied with the calculations produced, it is quite open for it to produce its own figures for the information of the Plan Committee, and discuss the matter when the precise allocation of frequencies is being determined."

"Working Group 5B did not have sufficient technical data to carry out recommendations below 6 Mc/s and therefore was not in a position to recommend frequencies for short distances. Committee 5 calls the attention of Committee 6 to this situation so that Committee 6 can consider these frequencies more carefully."

Page 2, Paragraph 2, 6th line, after "efficient organization which has resulted" add the following words:

"and to Mr. Mather who suggested the idea on which the organization was based and assisted largely in carrying it out and to all the members of the Working Group who have regularly assisted in its labours."

Page 3, insert new paragraph between paragraphs 1 and 2 as follows:

"This opportunity is taken of expressing the warm thanks of the Committee to the U.S. Delegation for the valuable part they have played in providing, through Committee 4, the OWF propagation curves which have been invaluable to the Committee in its work, and for the way in which they have rapidly produced additional curves as soon as these were found to be necessary to complete the work of the Committee."

Page 3, Paragraph 3, 4th line, after the words "large amount of material" add the following:

"and to the other members of the Working Group who have regularly assisted him."

H. Faulkner

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 413-E

Original: FRENCH

5 January 1949

BELGIUM - BELGIAN CONGO

POWER OF PROXY

Mr. RENE CORTEIL and Mr. RAYMOND
HENDERICKX, engineers, mutually confer upon
each other the power of proxy, with the
right to vote, in the event of the absence
of one or the other from the meetings, to
represent, respectively, Belgium and the
Belgian Congo.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 414-E

7 January 1949

Mexico City, 1948/49

CORRIGENDUM

Document No. 391-E.

Paragraph 1.7 should read as follows:

- 1.7 All the plans previously drawn up in Europe (Prague, Lucerne, Montreux, Copenhagen) had been put into force by a text which, hitherto, had been called a convention. This text must exist and its nature must be determined. If this text was not to be a Convention, then it must be borne in mind that certain countries considered ratification by governments, on a reciprocal basis, to be necessary; the term "Convention" was reserved for agreements signed by plenipotentiaries and its use in these circumstances would seem contrary to the provisions of Atlantic City. It would be necessary to determine the form adopted in the preamble, after an agreement amongst the Delegations. If these purely juridical questions were not settled, they would hinder the implementation of the Plan itself. In fact, the main objective of the Working Group was to decide what form it should take in the agreement which was envisaged. This special juridical problem which was dominating the Conference, had nothing to do with the administrative, or other, measures with which the terms of reference of Committee 7 were concerned.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 415-E

7 January 1949

Mexico City, 1948-49

Schedule of meetings from 10-15 January 1949

(Morning)

Date and Room

Comm.or W.Group	Monday 10 Jan.	Tues. 11 Jan.	Weds. 12 Jan.	Thursday 13 Jan.	Friday 14 Jan.	Saturday 15 Jan.	Remarks
Comm.1			PL				
Comm.3	PL	PL		PL		PL	
Comm.4 #	2	2		2	P	2	#or W.Gr.
Comm.5				1	PLENARY		
Comm.5a,b,c	3,4,6,7	3,4,6,7					
Comm.6						1	
Comm.6a	1	1					
Comm.6c	5	5	5	5	ARY	5	
Sub Gr. A of Comm 6d	3	3	3		ASSEMBLY	3	

(Afternoon)

Comm.1							
Drafting Gr.	1						
Comm.3	PL	PL	PL	PL		PL	
Comm.4 #		2	2	2		2	#or W.Gr.
Comm.5a,b,c	3,4,6,7	3,4,6,7	3,4,6,7	3,4,6,7	ELY		
Comm.6	2			1		1	
Comm.6a							
Comm.6d		1	1				
Comm.6c	5	5	5	5		5	
Sub Gr. A of Comm. 6d	3	3	3	3			

CONFERENCE INTERNATIONALE DE
RADIODIFFUSION A HAUTES FREQUENCE

Mexico, 1948/49

Document 416-E-F-S-R

7 janvier 1949

Original: FRANÇAIS

MEASUREMENTS IN THE VERTICAL PLANE OF THE
RADIATION OF A RHOMBIC ANTENNA.

TRACE DU DIAGRAMME DU RAYONNEMENT DANS LE
PLAN VERTICAL D'UNE ANTENNE EN LOSANGE.

PROYECCION EN EL PLANO VERTICAL DEL DIAGRAMA
DE RADIACION DE UNA ANTENA ROMBICA.

ПРОЕКЦИЯ ДИАГРАММЫ ИЗЛУЧЕНИЯ РОМБИЧЕСКОЙ
СИСТЕМЫ В ВЕРТИКАЛЬНОЙ ПЛОСКОСТИ.

Country

Pays

País

Страна Switzerland, Suisse, Suiza, Швейцария

HIGH FREQUENCY BROADCASTING ANTENNA DATA.

DONNÉES SUR LES ANTENNES DES STATIONS DE RADIODIFFUSION
À HAUTES FRÉQUENCES.DATOS SOBRE LAS ANTENAS PARA LA RADIODIFUSIÓN POR ALTAS
FRECUENCIAS.

ДАННЫЕ ПО ВЫСОКОЧАСТОТНЫМ РАДИОВЕЩАТЕЛЬНЫМ АНТЕННАМ.

Long Wire Antennas

Antennes longues

Antenas unifilares largas

Длинно-проводные антенны

Type Type Tipo Тип	A	B	C
Key to table. Légende pour le tableau. Signos conven- cionales. Условные обознач.			
	Single Wire Unifilaire Unifilar Однопроводная	V	Rhombic Losange Rombo Ромбическая

No.	Type Type Tipo Тип	l Meters Mètres Metros Метры	h Meters Mètres Metros Метры	φ Degrees Degrés Grados Градусы	Termination Terminaison Terminación Конечное устройство	Remarks Remarques Observaciones Примечания
5	C	120	20.5	69	600 Ω	Orient

Measurement of field intensity, 27.6.47.
 Mesure d'intensité de champ du 27.6.47.
 Medida de intensidad de campo del 27.6.47.
 Измерение напряженности поля, 27.6.47.

f = 11 Mc/s
 ч = 11 мГц

Distance from the center of the antenna to the measuring point.
 Distance du milieu de l'antenne au point mesuré.
 Distancia del centro de la antena al punto medido.
 Расстояние от центра антенны к точке измерения.

Measuring equipment: Philips field intensity measuring equipment.
 Appareil de mesure: Philips, appareil de mesure d'intensité de champ.
 Aparato de medida: Philips, aparato de medida de intensidad de campo.
 Приспособление для приема: Оборудование для измерения напряженности поля системы Филлипса.

The results of two different measurements according to the position of the loop antenna relative to the cabinet of the measuring equipment.

2 résultats de mesure différents suivant la position du cadre de l'antenne par rapport au boîtier de l'appareil de mesure.

Dos resultados de medida diferentes según la posición del cuadro de la antena con relación a la cabina del equipo de medición.

Результаты двух различных промеров в соответствии с положением замкнутой антенны по отношению к ящику измерительного приспособления.

1st Measurement
 1er Mesure
 1a Medida
 1oe Измерение

2nd Measurement 17° 30'
 2eme Mesure
 2a Medida
 2oe Измерение

0 100 200 300 400 500 600 700 800 900 1000 1100 1200 $\mu\text{V/m}$

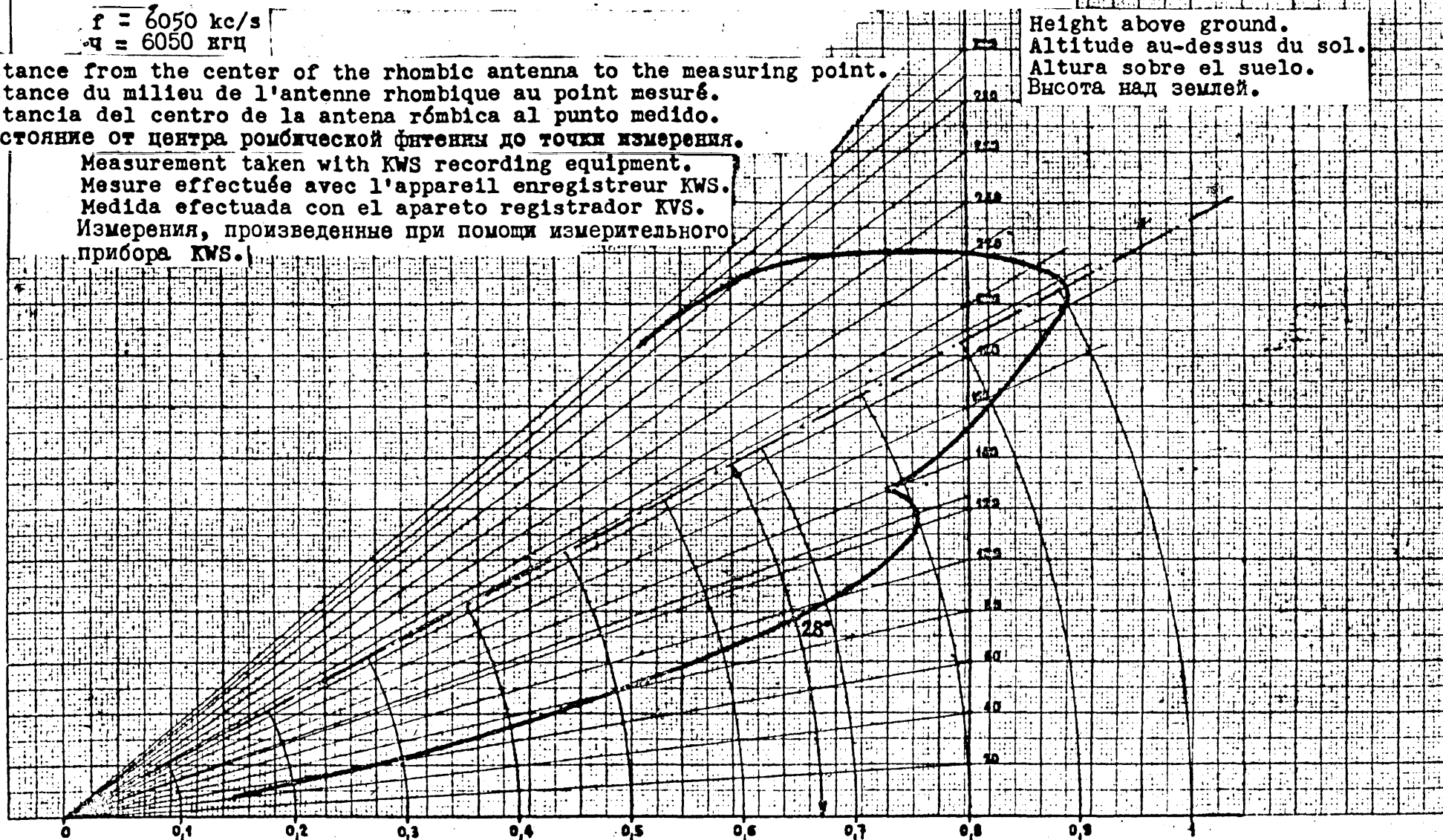
Measurement of field intensity, 27.6.47, in the vertical plane.
Mesure d'intensité de champ du 27.6.47 - Diagramme vertical.
Medida de intensidad de campo del 27.6.47 - Diagrama vertical.
Измерения напряженности поля от 27.6.47 в вертикальной плоскости.

$f = 6050 \text{ kc/s}$
 $\lambda = 6050 \text{ мГц}$

Distance from the center of the rhombic antenna to the measuring point.
 Distance du milieu de l'antenne rhombique au point mesuré.
 Distancia del centro de la antena rómbica al punto medido.
 Расстояние от центра ромбической антенны до точки измерения.

Measurement taken with KWS recording equipment.
 Mesure effectuée avec l'appareil enregistreur KWS.
 Medida efectuada con el aparato registrador KWS.
 Измерения, произведенные при помощи измерительного прибора KWS.

Height above ground.
 Altitude au-dessus du sol.
 Altura sobre el suelo.
 Высота над землей.



Field intensity relative to the principal beam.
 Intensité relative du champ par rapport au rayon principal.
 Intensidad relativa del campo con relación al haz principal.
 Относительная напряженность поля по отношению к главному пучку лучей.

Diagram of radiation in the vertical plane.
Diagramme de rayonnement vertical.
Diagrama de radiación vertical.
Диаграмма излучения в вертикальной плоскости.

Frequency: 8.5 Mc/s $\lambda = 35.15$ m
 Fréquence: 8.5 Mc/s $\lambda = 35.15$ m
 Frecuencia: 8.5 Mc/s $\lambda = 35.15$ m
 Частота: 8.5 МГц $\lambda = 35.15$ м

Measurement along the axis of the antenna.
 Mesure dans l'axe de l'antenne.
 Medida en el eje de la antena.
 Измерения вдоль оси антенны.

Maximum radiation 23°
 Maximum de rayonnement 23°
 Radiación máxima 23°
 Максимальное излучение 23°

Measurement No. 5
 Mesure No. 5
 Medida No. 5
 Измерение № 5

Relative field intensity.
 Intensité relative du champ.
 Intensidad relativa del campo.
 Относительная напряженность поля.

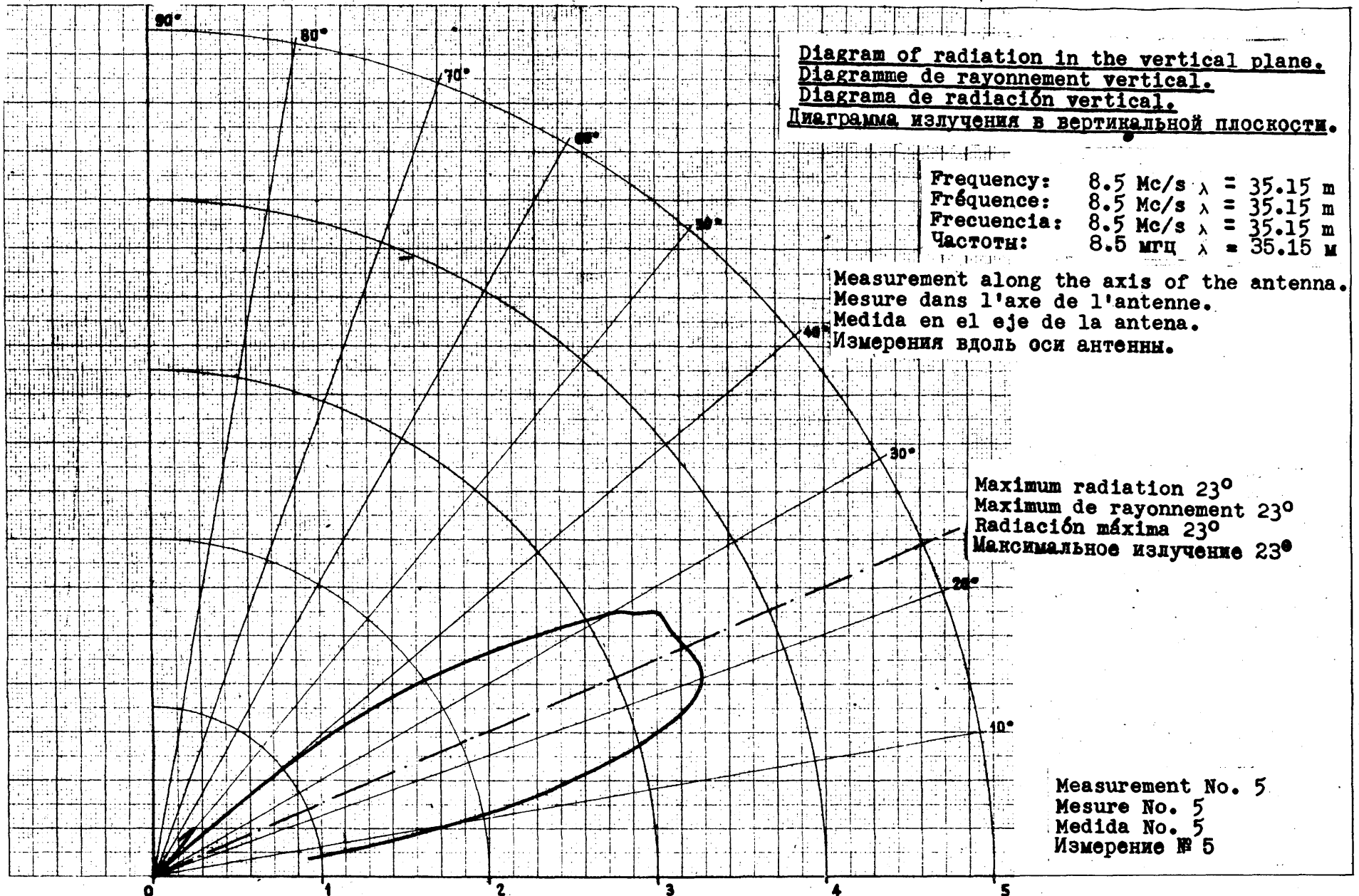


Diagram of radiation in the vertical plane.
Diagramme de rayonnement vertical.
Diagrama de radiación vertical.
Диаграмма излучения в вертикальной плоскости.

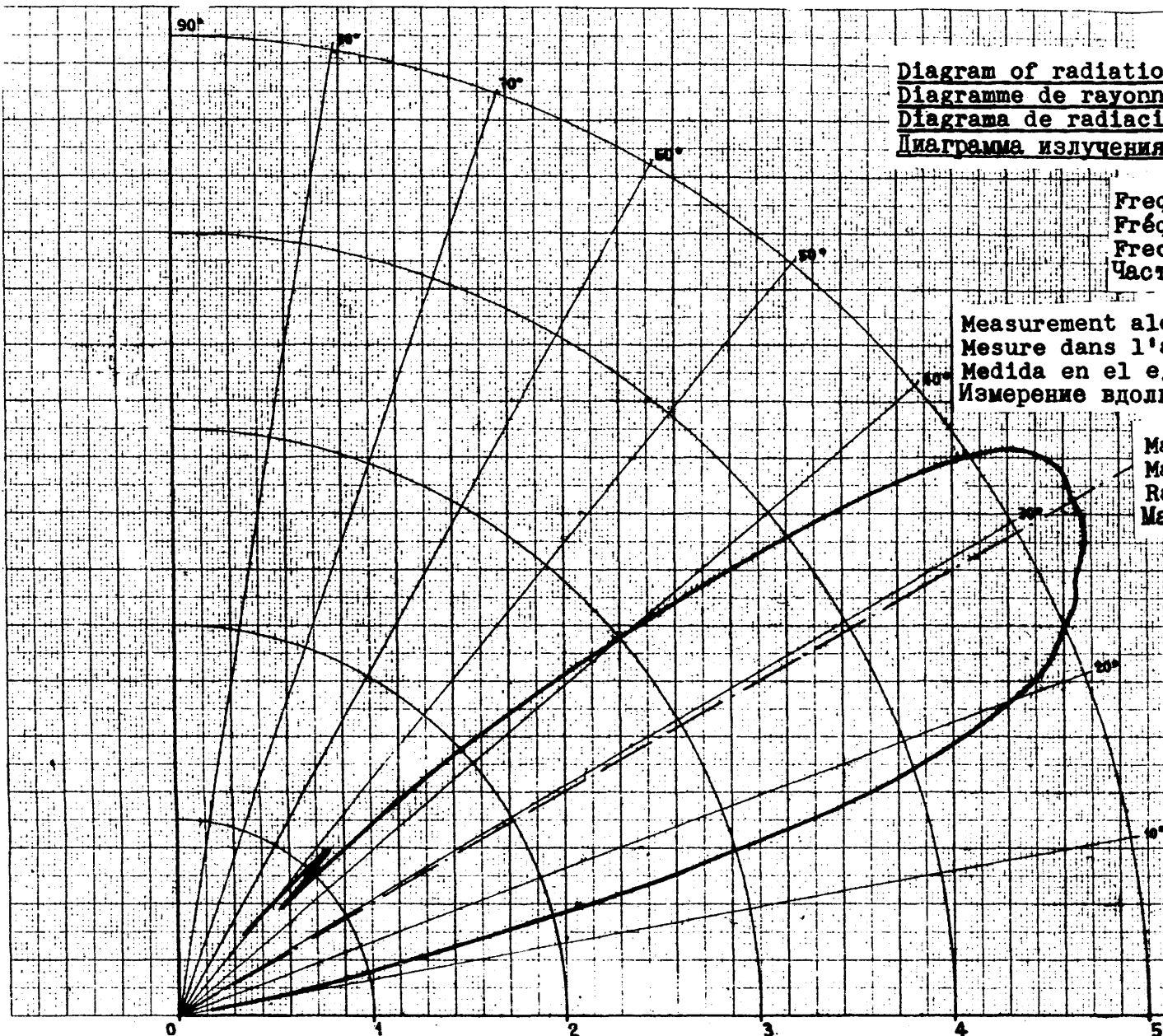
Frequency: 6 Mc/s $\lambda = 50$ m
 Fréquence: 6 Mc/s $\lambda = 50$ m
 Frecuencia: 6 Mc/s $\lambda = 50$ m
 Частота: 6 мгц $\lambda = 50$ м

Measurement along the axis of the antenna.
 Mesure dans l'axe de l'antenne.
 Medida en el eje de la antena.
 Измерение вдоль оси антенны.

Maximum radiation $29^{\circ}30'$
 Maximum de rayonnement $29^{\circ}30'$
 Radiación máxima $29^{\circ}30'$
 Максимальное излучение $29^{\circ}30'$

Measurement No. 10
 Mesure No. 10
 Medida No. 10
 Измерение № 10

Relative field intensity.
 Intensité relative du champ.
 Intensidad relativa del campo.
 Относительная напряженность поля.



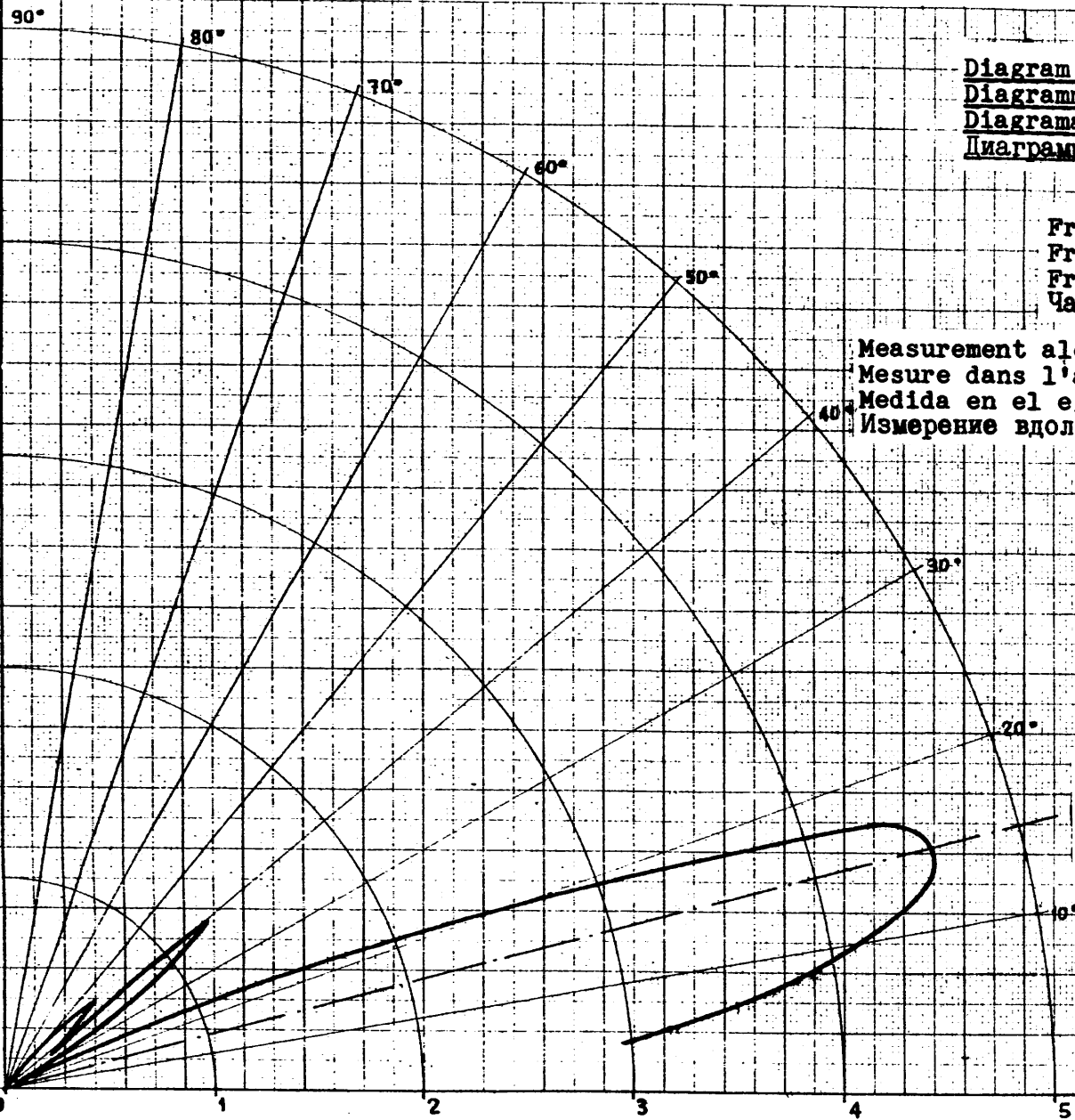


Diagram in the vertical plane.
 Diagramme vertical.
 Diagrama vertical.
 Диаграмма в вертикальной плоскости.

Frequency: 15 Mc/s $\lambda = 20$ m
 Fréquence: 15 Mc/s $\lambda = 20$ m
 Frecuencia: 15 Mc/s $\lambda = 20$ m
 Частота: 15 мГц $\lambda = 20$ м

Measurement along the axis of the antenna.
 Mesure dans l'axe de l'antenne.
 Medida en el eje de la antena.
 Измерение вдоль оси антенны.

Maximum radiation 15°
 Maximum de rayonnement 15°
 Radiación máxima 15°
 Максимальное излучение 15°

Measurement No. 12
 Mesure No. 12
 Medida No. 12
 Измерение № 12

Relative field intensity.
 Intensité relative du champ.
 Intensidad relativa del campo.
 Относительная напряженность поля.

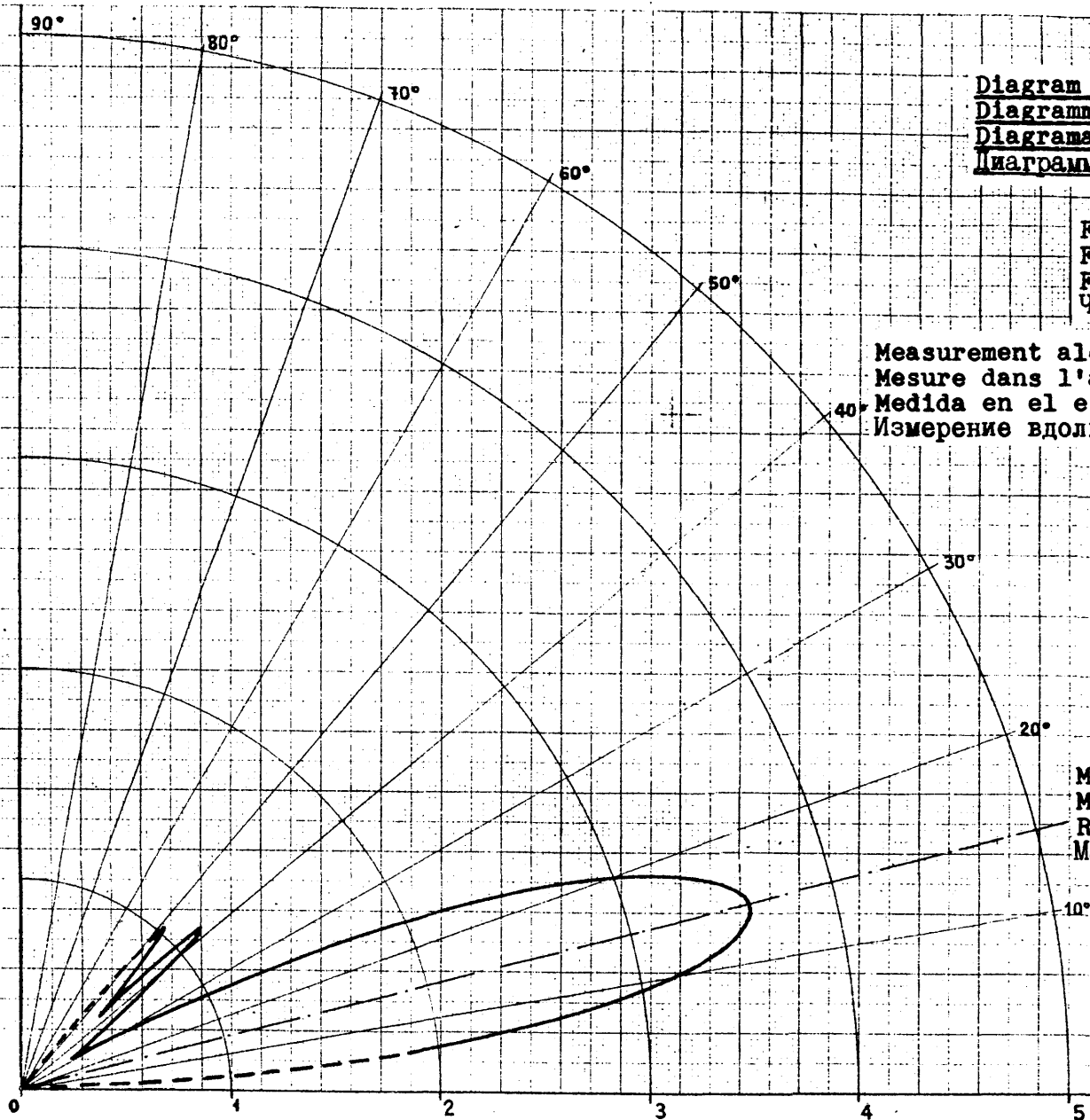


Diagram in the vertical plane.
Diagramme vertical.
Diagrama vertical.
Диаграмма в вертикальной плоскости.

Frequency: 12.5 Mc/s
 Fréquence: 12.5 Mc/s
 Frecuencia: 12.5 Mc/s
 Частота: 12.5 мгц

Measurement along the axis of the antenna.
 Mesure dans l'axe de l'antenne.
 Medida en el eje de la antena.
 Измерение вдоль оси антенны.

Maximum radiation 14°30'
 Maximum de rayonnement 14°30'
 Radiación máxima 14°30'
 Максимальное излучение 14°30'

Measurement No. 13
 Mesure No. 13
 Medida No. 13
 Измерение № 13

Relative field intensity.
 Intensité relative du champ.
 Intensidad relativa del campo.
 Относительная напряженность поля.

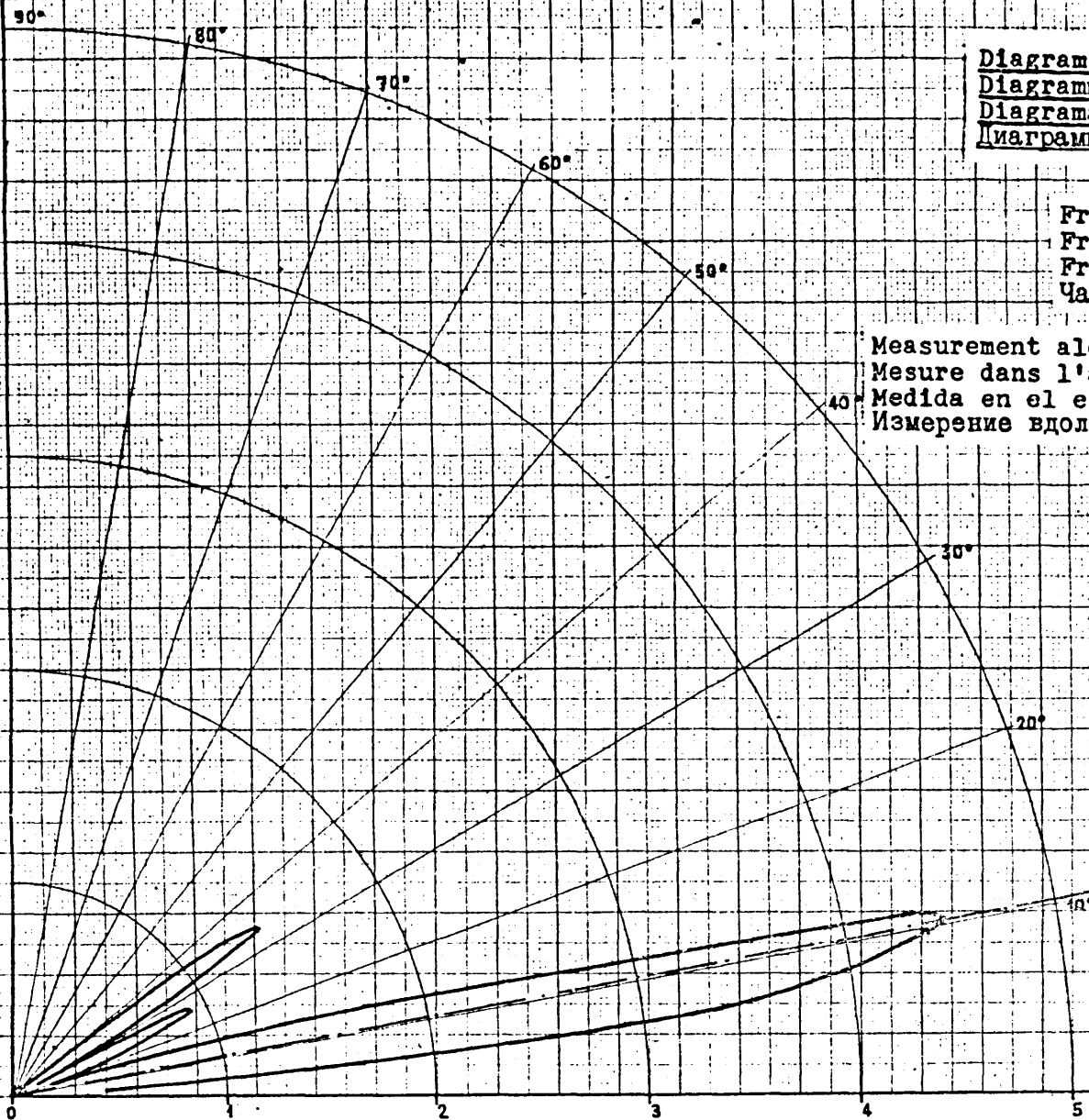


Diagram in the vertical plane.
 Diagramme vertical.
 Diagrama vertical.
 Диаграмма в вертикальной плоскости.

Frequency: 20 Mc/s $\lambda = 15$ m
 Fréquence: 20 Mc/s $\lambda = 15$ m
 Frecuencia: 20 Mc/s $\lambda = 15$ m
 Частота: 20 мгц $\lambda = 15$ м

Measurement along the axis of the antenna.
 Mesure dans l'axe de l'antenne.
 Medida en el eje de la antena.
 Измерение вдоль оси антенны.

Maximum radiation 10°30'
 Maximum de rayonnement 10°30'
 Radiación máxima 10°30'
 Максимальное излучение 10°30'

Measurement No. 20
 Mesure No. 20
 Medida No. 20
 Измерение № 20

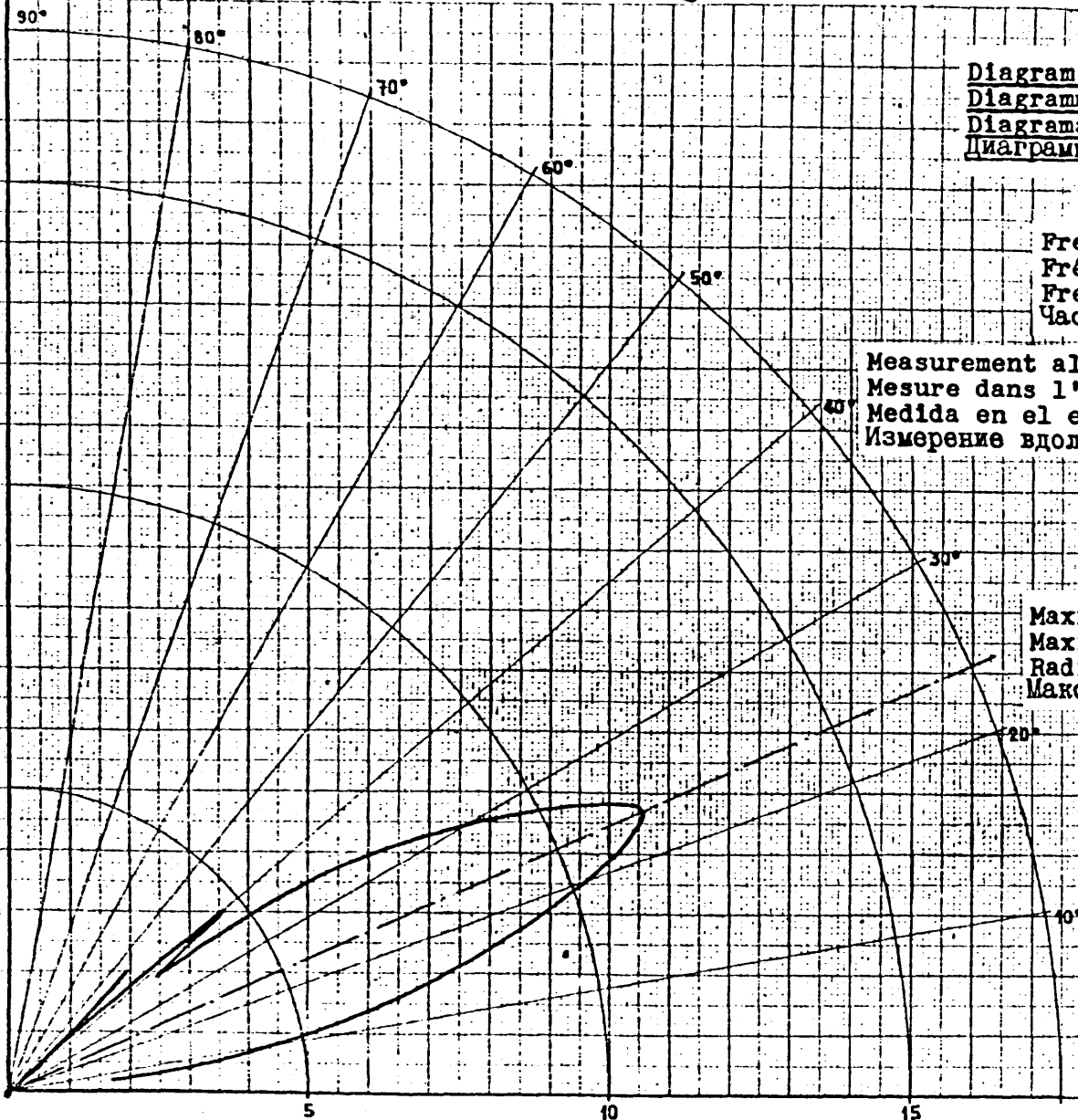


Diagram in the vertical plane.
 Diagramme vertical.
 Diagrama vertical.
 Диаграмма в вертикальной плоскости.

Frequency: 7.5 Mc/s $\lambda = 40$ m
 Fréquence: 7.5 Mc/s $\lambda = 40$ m
 Frecuencia: 7.5 Mc/s $\lambda = 40$ m
 Частота: 7.5 МГц $\lambda = 40$ м

Measurement along the axis of the antenna.
 Mesure dans l'axe de l'antenne.
 Medida en el eje de la antena.
 Измерение вдоль оси антенны.

Maximum radiation 24°
 Maximum de rayonnement 24°
 Radiación máxima 24°
 Максимальное излучение 24°

Measurement No. 22
 Mesure No. 22
 Medida No. 22
 Измерение № 22

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 417-E

7 January 1949

Original: FRENCH

PORTUGUESE COLONIES

Proxy

The Delegation of the Portuguese Colonies begs to state that, in the event of its being unable to take part in the work or of being obliged to remain absent from any of the Committees, it will be represented by the Delegation of Portugal within the respective Committee, with a right to vote.

INFORMATION SUBMITTED TO THE IHFB CONFERENCE BY THE VARIOUS COUNTRIES.

7 January 1949.

COUNTRY	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
	Area of Country Sq. Miles	Area of Colonies Sq. Miles	Population Millions	Popln. of Colonies Millions	Nationals Living Abroad 100,000.	Number Official Languages of Country	Number of Official Languages Colonies	NO. RADIO SETS MFD SINCE 1945		Current no. Radio sets having HF Bands	Imports and Exports Millions of Swiss FR.	Percent Illiterate Population	No. High. Sch. Students	No. University College Tech. Sch. Students	No. High Schools	No. Univer. Colleges Tech. Sch.
AFGHANISTAN																
ALBANIA (PEOPLE'S REP. OF)	11,200		1.25		0.6	2										
SAUDI ARABIA																
ARGENTINE REPUBLIC																
AUSTRALIA	2,974,600	183,600	7.6	1,311,172		1	1	66,000	465,000		17,600	3	281,000	172,000	15,000	
AUSTRIA	32,400		7.1			2					1,000	0	48,390	32,492	166	41
BELGIUM	11,750	SEPARATE	8.1	SEPARATE	4.	3		16,000	220,000		23,000 ⁽⁸⁾	0	112,748	244,223	130	20
BIELORUSSIAN. S.S.R.																
BURMA	261,610		17			9 ⁽⁴⁾						65	17,124	3,042	165	
BOLIVIA	413,000		4.		0.25	1					1,064	60	20,000	7,650	66	
BRAZIL	3,280,000		47.1			1										
BULGARIA	42,900		7.									12	200,621	42,540	287	11
CANADA	3,857,939		12.9			2					36,400	3	345,000	68,000	20,000	
CHILE	286,000		5.6			1		5,000	47,000		3,852					
CHINA	3,865,000		463.5		104.	4 ⁽⁴⁾					5,508	42	1,878,523	155,036	58,920	
VATICAN CITY																
COLOMBIA	533,000		11.			1										
PORTUGUESE COLONIES	812,000		11.4													
U. K. COLONIES																
FRANCE OVERSEAS	3,450,000		55.3			1										
BELGIAN CONGO	927,000		14.5			2						65	8,324	2,623	157	
COSTA RICA																
CUBA	44,200		5.		2.	1					8,172	28	25,318	7,839	21	68
DENMARK ⁽³⁾	17,100	841,000	4.1	0.02	2	2	1	2,760	276,000			0	83,721	16,400	382	
DOMINICAN REPUBLIC	19,120		22		0.5	1					924	37	4,601	8,384	37	
EGYPT	383,000		19.1			1					3,040 ⁽⁸⁾					
EL SALVADOR											495	45	6,749	1,711	95	1
ECUADOR																
UNITED STATES OF AMERICA								3,400,000			139,372					
ETHIOPIA												UNKNOWN	600	613	6	
FINLAND	130,000		4.1		5	2					4,670	0	116,350	29,053	9	
FRANCE	213,000	SEPARATE	41.	SEPARATE		1					14,700					
GREECE																
GUATEMALA	43,000		3.5			1					728	64	5,139	10,848	1122	1
HAITI	10,650		3.		1	1					484					
HONDURAS	59,200		1.2			1						53	4,315	459		
HUNGARY												7	142,362	26,203	986	
INDIA	1,219,600		319		36	16					13,530 ⁽⁵⁾	86	1,980,000	1,020,000	49,500	
INDONESIA	736,000		75		1	17		25,000			2,320	58	250,000	11,500	60	205
IRAN													580	7,659	7	
IRAQ	147,000		5			2						85	22,700	4,500	163	
IRELAND	27,137		3.0			2					4,890	0	41,178	83,884	379	
ICELAND	40,200		0.1		1	1					1,200	0	4,500	2,890	28	
ITALY	120,000	920,000	47.	25	100	1	10					11	478,881	190,861	3242	27
LEBANON																
LIBERIA																
LUXEMBOURG											SEE NOTE 8	0	3,874		13	
MEXICO	767,000		23.9		11	1		800	8,650		5,770	30	53,673	74,180	274	177
MONACO																
NICARAGUA	49,500		1.3		5	1					227	45	3,600	620	34	3
NORWAY	148,626		3.3			1		9,240	282,864		7,810	0	32,600	15,951	300	
NEW ZEALAND	103,416	1461	1.8	0.1		1	1	46,400	40,000		6,000	0	76,700	13,400	268	
PAKISTAN	360,000		80		NOT KNOWN	10										
PANAMA																
PARAGUAY												33	14,697	3,473	71	3
NETHERLANDS AND CURACAO AND SURINAM ⁽²⁾	13,100	65,700	9.6	0.3		1	4				13,820	0	86,499	80,027	317	
PERU												58	58,708	34,423	210	
PHILIPPINES											5,532	51	365,580	83,678	891	
POLAND					86											
PORTUGAL	34,400	SEPARATE	7.7	SEPARATE	15											
MOROCCO ⁽⁷⁾	154,600		8.5		1	4						65	11,700	3,400		
YUGOSLAVIA PEOPLE'S REP.	100,000		16		12	3										
UKRAINE S.S.R.																
SOUTHERN RHODESIA	478,564		5.7			1					1,700	0	4,424	810	17	
ROUMANIA	91,800		15.9		4	2										
UNITED KINGDOM																
SIAM	200,000		18			1					1,065	50	50,895	19,049	571	4
SWEDEN	173,000		6.8		21	1		15,000	535,000		15,930	0	17,500	23,350	103	24
SWITZERLAND	15,900		4.3		2	4		25,000	75,000			0	121,028	19,272		10
SYRIA	72,000		4.		5	1						20	500	23,500		
CZECHOSLOVAKIA	49,400		13.2		21	2		5,000	563,000			0	98,500	65,500	270	
U.S.A. TERRITORIES																
TURKEY	299,891		18.8			1				232,500		64.8	91,700	87,400	351	
UNION OF SOUTH AFRICA																
U. S. S. R.																
URUGUAY	72,600		2.7		3	1		120,000	180,000		2,856	20	253,000	23,500	81	
VENEZUELA	353,000		4.5			1										
YEMEN																
TUNISIA ⁽⁷⁾	48,300		2.2		0.1	1					1,65	25	140,624	1,901	3	
S. C. A. P.	143,000		81.		12	1				150,000						

NOTES (1) AREA DOES NOT INCLUDE CHILEAN ANTARTIC (483,000 Sq. Mls.)

(2) FIGURES FOR CURACAO AND SURINAM GIVEN UNDER HEADING OF "COLONIES"

(3) FIGURES FOR DENMARK INCLUDE THE FAROE ISLANDS. GREENLAND IS GIVEN UNDER HEADING OF "COLONIES"

(4) A DEFINITE ANSWER WAS NOT GIVEN TO THIS QUESTION.

(5) THIS IS THE TOTAL FOR 1945 AND 1946

(6) THIS FIGURE IS FOR 1947 ONLY

(7) SEPARATE FIGURES HAVE BEEN SUBMITTED FOR MOROCCO AND TUNISIA

(8) ECONOMIC UNION, BELGIUM AND LUXEMBOURG

INTERNATIONAL
HI - FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 419-E

7 January 1949

Original: SPANISH

Committee 1

SUMMARY OF THE DECISIONS TAKEN AT
THE MEETING OF THE COORDINATING COMMITTEE

5 January 1949

1. To accept the proposal marked No. 1, of the Delegation of the Bielorussian S.S.R., contained in Document No. 381, with the amendment of the Delegation of Brazil, to the effect that it should begin with the words "To do everything possible to carry out the decisions previously taken".
2. To reject the proposals of the Delegation of the Bielorussian S.S.R. marked Nos. 2 and 3, Document No. 381.
3. To accept the proposal of Cuba, opposed to that of the Delegations of France and Switzerland, of not establishing a time limit for the admission of draft plans or of documents relative thereto.
4. To consider it unnecessary to decide at this date whether the plan is to be based upon one or several seasons.
5. A roll call vote was taken on the proposal already accepted of not establishing a time limit for the admission of draft plans or documents relative to the establishment of a plan, which ratified the aforementioned decision.
6. At the suggestion of the Heads of the Delegations of the Netherlands and Argentina, the Committee postponed to a later date the dispatch of telegrams by the Secretariat to the Administrations of the various countries represented at the Conference, regarding the possibility of authorising the continuation of the Conference beyond the agreed time limit.

To accept the Report of Working Group 3 on modifications of the Rules of Procedure, contained in Document No. 354, with the following amendments:

- a) To omit paragraph three, page 2 of the introduction, which refers to Committee 3.

- b) To delete from paragraph four, page 2, everything following the words "worthy of attention".
 - c) To approve Article 14, with the amendment of the Delegation of India, excluding the application of paragraphs 9 and 13 of Art. 14 as finally combined with Art. 16, (formerly numbers 2 and 6 of Article 16, Document No. 21).
 - d) Article 16, paragraph 6, sub-paragraph 2, should end in singular, "until decisions have been taken on the preceding amendment" instead of "amendments".
 - e) Article 16, paragraph 7, sub-paragraph 1, after the words "original text" there should be added "at dictating speed".
 - f) Article 16, paragraph 7, sub-paragraph 2, to be amended thus: "If the wording proposed by the Chairman is not accepted by the Assembly, "it shall be submitted to a small drafting group, if necessary".... etc.
 - g) To submit paragraph 8, Article 16, to a drafting group, which shall be the same Working Group which drafted the document, with the exclusion of the Delegations of the U.S.S.R. and of Mexico.
8. To confer upon the Drafting Group thus formed the task of establishing an agreement of Article 17 of the Rules of Procedure with the amendments of Article 14, concerning the voting within the Committees.
9. To establish the dates of January 14, 21 and 22 for Plenary Assemblies, to receive, respectively, the Reports from Committees 5, 4 and 3.
10. To remit to the Plenary Assembly the proposal of the S.C.A.P. contained in Document 388, and the proposal of Yugoslavia (Document No. 264).
11. The working schedule for the following week was established.

The Reporter

A. Marti

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 420-E

7 January 1949

Mexico City, 1949

MINUTES OF THE PLENARY ASSEMBLY

Thirteenth Session

23 December 1948 (Afternoon)

The Chairman, Mr. Miguel Pereyra, opened the meeting at 3.45 p.m.

Delegations present: People's Republic of Albania, Argentine (Republic), Austria, Belgium, Belgian Congo, Bielorussian Soviet Socialist Republic, Bolivia, Brazil, Popular Republic of Bulgaria, Canada, Chile, China, Colombia (Republic of), Colonies, Protectorates and Overseas Territories of the United Kingdom, Cuba (temporarily represented by Uruguay), Czechoslovakia, Denmark, Dominican Republic, Egypt, Ecuador, El Salvador (represented by Guatemala), Finland, France, Guatemala, Hungary, India, Iceland (represented by Denmark), Indonesia, Iran (represented by Switzerland), Italy, Luxembourg (represented by the Netherlands), Mexico, Monaco, Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Paraguay, Poland (Republic of), Portugal, Portuguese Colonies, Overseas Territories of the French Republic, French Protectorates of Morocco and Tunisia, Popular Republic of Roumania, Sweden, Switzerland (Confederation), Siam (temporarily represented by Overseas Territories of the French Republic), Syria, Territories of the United States of America, Turkey, Ukrainian Soviet Socialist Republic, Union of South Africa, Union of Soviet Socialist Republics, United Kingdom, United States of America, Uruguay (Oriental Republic of), Vatican City, People's Federal Popular Republic of Yugoslavia, Venezuela (United States of).

Also present: Mr. L. Barajas, Vice-Chairman of the Conference.

Other members: Mr. Hernandez Catá y Galt of the ICRB.

The following were represented by observers: Israel, Mongolia (Popular Republic of), OIR, United Nations and the Supreme Command for the Allied Powers (SCAP).

Secretariat: Mr. L. E. Dostert, Secretary of the Conference.
Mr. M. Jeanneret, Assistant Secretary.

I. CONSIDERATION OF POINT ONE OF THE AGENDA: APPROVAL
OF THE MINUTES OF THE 9th, 10th and 11th PLENARY SESSIONS
(DOCS. 179, 235 and 280).

1.1 The Assembly approved without amendment the minutes of the 9th, 10th and 11th Plenary Sessions, Docs. 179, 235 and 280.

1.2 Mr. Fontaina (Uruguay) and Mr. Arkadiev (USSR) stated that they had not had time to study the documents in question adequately. They would therefore reserve their opinion upon them and, if they wished to make comments, they would submit them later in writing.

II. CONSIDERATION OF POINT TWO OF THE AGENDA: PROPOSED
AMMENDMENTS TO THE RULES OF PROCEDURE (DOCS. 271, 354, and 360).

2.1 Mr. Arkadiev (USSR) declared that he had been unable to study these documents, which had only been very recently distributed. He asked that they be first examined by the Coordinating Committee, as this would be a more correct procedure.

2.2 The Chairman regretted that the USSR Delegation had not been present at the meetings of Working Group 3 of the Coordinating Committee. He complied with the request of Mr. Arkadiev that documents 271 and 354 should be referred to the Coordinating Committee in order to be considered at its next meeting, which would probably be held in the middle of January.

The Chairman then presented to the Assembly document 360, which contained the proposal of the Delegation of India for amendments to the Rules of Procedure.

2.3 Mr. Sastry (India) said that he had two reasons for proposing the amendment contained in doc. 360: firstly, to ensure that the Rules of Procedure should tally with the corresponding part of the Atlantic City Convention, especially as regards voting procedure in the committees. Secondly, his amendment would, in his opinion, speed the work of the committees.

In this respect, he recalled that in two meetings of Committee 4 much time had been spent in waiting for a "quorum".

2.4 Mr. Arkadiev (USSR) was not opposed to doc. 360 in substance but thought it more convenient to refer the document first to the Coordinating Committee, which would submit it to the Plenary Assembly with such comments as it thought fit.

2.5 Mr. Fontaina (Uruguay) agreed with the Delegate of the USSR, stating that the agenda had been distributed late and that the Delegations had been unable to study the documents under discussion. Finally, he recalled that in a previous Plenary Session the Assembly had passed a resolution that no documents, emanating from a working group, could be considered by the Assembly without previous examination by the appropriate committee.

2.6 The Chairman said that the main purpose of this Plenary Session was to deal with a number of questions of procedure, in order to concentrate the activities of the Conference in January on the technical matters, which formed the most important and delicate part of its work. Moreover, the proposal now before the Assembly did not originate in a working group but had been presented directly to the Plenary Assembly by the Delegation of India. The document had been distributed two days previously and must, therefore, be examined at this session.

2.7 Mr. Arkadiev (USSR) seconded by Mr. Sterling (USA), declared that the proposal of India had the same object as that of the Delegation of Mexico, namely, to amend the Rules of Procedure, he therefore proposed that document 360 should be referred to the Coordinating Committee for study, in the same way as docs. 271 and 354.

2.8 The Chairman then put to the vote the Soviet proposal to refer doc. 360 to the Coordinating Committee.

The result of the voting was: 37 votes in favour of the Soviet proposal, 8 against and 5 abstentions.

2.9 The Assembly approved the proposal of the Soviet Delegation.

2.10 The Secretary said that it would be necessary to modify the terms of reference of the Coordinating Committee in the light of the proposal just approved; and that this modification was required to simplify the procedure in the future. Indeed, this was the second time that procedural difficulties had been caused by certain matters, presented to the Plenary Assembly by "ad hoc" working groups set up by the Coordinating Committee.

2.11 He therefore proposed that the following be added to the terms of reference of this Committee:

"In addition to the terms of reference conferred upon it during the opening week of the Conference, Committee I will have the following tasks:

1. "to examine any draft concerning the text of the agreement preceding the plan or plans."
 2. "to examine any question pertaining to the Rules of Procedure of the Conference."
- 2.12 Mr. Lalić (Yugoslavia) thought that the proposal of the Secretary was logical. He recalled that the Assembly had decided at a previous session that Working Group 2 of Committee 1 would examine questions relating to the text of the agreement preceding the plan or plans. He had objected to this decision, considering that the attributes of Working Group 2 encroached upon those of Committee 7 (Implementation).
- 2.13 Mr. Arkadiev (USSR) drew attention to his statement in the previous session on the terms of reference of Working Group 2. He could only accept the second part of the Secretary's proposal, namely that relating to examination of any question pertaining to the Rules of Procedure of the Conference.
- 2.14 Mr. Bivar (Portugal), seconded by Mr. Fontaina (Uruguay), proposed that the composition of the Coordinating Committee be modified by including the heads of Delegations, who were not already represented in the Committee in their capacity as chairmen or vice-chairmen of other committees.
- 2.15 Mr. Saleh (Syria) proposed that votes be taken separately on each of the two parts of the Secretary's proposal.
- 2.16 Mr. Sterling (USA) considered that any proposal, concerning an amendment to the terms of reference of a committee, should be submitted in writing and he therefore moved that the Secretary's proposal be included in the agenda of a subsequent Session.
- 2.17 The Chairman said that the previous voting would be nullified if an agreement was not reached on the Secretary's proposal; it was impossible to entrust a committee with a task which was not within the terms of reference allotted to it by the Plenary Assembly.
- 2.18 Mr. Faulkner (United Kingdom) proposed the following amendment to the text of the first paragraph of this proposal: the words "preceding the plan" to be replaced by "accompanying the plan".
- 2.19 Mr. Arkadiev (USSR), seconded by Mr. Kito (Albania), did not agree with the use of the word "accompanying", as proposed by the United Kingdom Delegation.

- 2.20 Mr. Faulkner (United Kingdom) then proposed the following text: "proceeding and/or following the plan."
- 2.21 Mr. Sterling (USA), seconded by Mr. Arkadiev (USSR), proposed that the consideration of these important matters be adjourned to a subsequent session.
- 2.22 Mr. Lalić (Yugoslavia) also seconded the United States proposal that the discussion be adjourned until a later session, adding that the proposal of the Delegate of Portugal should also be taken into consideration.
- 2.23 Mr. Albuquerque (Brazil) proposed that a vote be taken on the second part of the Secretary's proposal, namely, that relating to the Rules of Procedure and that the first part of the proposal be considered at a subsequent session.
- 2.24 The Chairman then put the second part of the Secretary's proposal to the vote, with the following results: in favour of this proposal 50 votes, 3 against and 5 abstentions.
- 2.25 The Assembly approved paragraph 2 of the proposal of the Secretary.
- 2.26 The Chairman said that the proposal of the Delegation of Portugal, relating to the composition of the Coordinating Committee, was now before the Assembly. The purpose of this proposal was that the Committee, now formed by the chairmen and vice-chairmen of the other committees, should include the heads of Delegations not already represented in the Committee.
- 2.27 Mr. Jacques Meyer (France) wanted clarification of this proposal. If the heads of Delegations were also to be included in the Coordinating Committee, then he wished to know what would be the object of having what in effect would be two Plenary Assemblies to consider the same subjects.
- 2.28 Mr. Bivar (Portugal), seconded by Mr. Fontaina (Uruguay), stated that the attributes of the Coordinating Committee had now been increased so that they went far beyond those appropriate for a normal Coordinating Committee. This Committee would consider very important matters and it was natural that all Delegations should be represented in it, in order that they might express their opinions.
- 2.29 Mr. Arkadiev (USSR), in opposing the proposal of Portugal, said that a new name would have to be given to this Committee, if its composition was modified in the manner suggested.

- 2.30 Mr. Gross (Roumania) agreed with this statement and said that what was really being considered was the creation of a new Plenary Assembly. Moreover, if each Committee had clear and specific terms of reference, he could not understand why the Coordinating Committee should be given tasks within the competence of Committee 7 (Implementation).
- 2.31 Mr. Andrada (Argentine) declared that it was logical for the Coordinating Committee to be similar in structure to other committees, once it was decided that it should be concerned with amendments to the Rules of Procedure. Therefore, he agreed that all Delegations taking part in the Conference should sit and have a vote in this Committee.
- 2.32 The Chairman then put the proposal of Portugal to the vote, of which the results were: 33 votes in favour of the proposal, 24 against and 4 abstentions.
- 2.33 The Assembly approved the proposal of Portugal, that the Coordinating Committee should be enlarged by the admission of the heads of Delegations not already represented in it.
- 2.34 Mr. Jacques Meyer (France) wished to clarify his previous statement and correct the interpretation which some Delegations had given to it. He had, in fact, voted in favour of the proposal. He had simply asked a question, which had not been answered and he was, therefore, raising it again. The Coordinating Committee, in accordance with the proposal just approved, was a replica of the Plenary Assembly. Under these conditions, he wondered if the Committee could now have the same object as that for which it had been created, since more clear and specific attributes would have to be given to it in the light of its enlargement. This seemed all the more necessary, as the voting would have not been worth the trouble if the Committee was to be left with terms of reference that were too restrictive.
- 2.35 The Chairman stated that a certain extension of the functions of the Coordinating Committee had been made, when the second part of the Secretary's proposal was approved by vote.
- 2.36 Mr. Lalić (Yugoslavia) said that he had abstained from the vote on the extension of the terms of reference of the Coordinating Committee and had voted against the proposal of Portugal. The extension of these terms of reference was a dangerous precedent and practically amounted to the elimination of Committee 7 (Implementation), since the Coordinating Committee had assumed tasks within the competence of Committee 7.

- 2.37 The Chairman pointed out that the Coordinating Committee, now enlarged, owing to the proposal approved, could appoint a Working Group, composed of the chairmen and vice-chairmen of the committees and give it the task of establishing the schedules of meetings.
- 2.38 Mr. Albuquerque (Brazil) wished to make 3 points:
1. The new composition of the Committee did not, in any case give it the character of a "Little Assembly", as some Delegations called it. The role of the Plenary Assembly did not consist in the number of its members but in its specific attributes, - and the Coordinating Committee would not have the latter;
 2. It was not correct to say that the attributes of the Coordinating Committee were being increased.
 3. There was no doubt that the voting procedure in Committee 1 must be changed.
- 2.39 The Chairman, in order to clarify the situation, proposed that the Plenary Assembly decide by a new vote whether the Coordinating Committee should be composed of the chairmen and vice-chairmen of committees and by the heads of Delegations not already represented in the Committee; or whether it should only be composed of the heads of Delegations.
- The result of the vote was as follows: in favour of the first proposal 37 votes, 17 against and 2 abstentions.
- 2.40 The Assembly thereby confirmed the previous vote that the Coordinating Committee be composed of the chairmen and vice-chairmen of committees and also of the heads of Delegations not already represented in the Committee.
- 2.41 Mr. Jacques Meyer (France) declared that, as a result of this voting, some Delegations would be entitled to more than one vote in the Coordinating Committee.
- 2.42 The Chairman said that, on the contrary, by this vote the Assembly had overcome the anomaly which had always been present in the work of the Committee. However, in order to settle this aspect of the question once and for all, he proposed to put to the vote a resolution that each Delegation represented in the enlarged Committee 1 should be entitled to one vote only.

- 2.43 Mr. Faulkner (United Kingdom) stated that article 1, paragraph 3, sub-paragraph 2 of the Atlantic City Convention specified that no country should be entitled to more than one vote.
- 2.44 The Chairman then put his proposal to the vote, of which the results were: 45 votes in favour, none against and 11 abstentions.
- 2.45 The Assembly agreed that each Delegation in the Coordinating Committee would have one vote only.
- 2.46 Mr. Schaeffer (Morocco and Tunisia) made the following statement:

"The Plenary Assembly has desired to extend the terms of reference and the composition of Committee 1, which was previously entrusted with the major task of the coordination of the work of the committees and was therefore composed of their chairmen and vice-chairmen. The Delegation of Morocco and Tunisia, taking this into account, has on several occasions asked that a proposal be submitted to the Assembly to the effect that two organs, which have become indispensable to the Conference, should be clearly separated at this stage of its work:

- "1. A new Committee 1, with the terms of reference previously mentioned, but without the task of coordinating the work of the committees.
- "2. A Coordinating Group, composed as it was originally, which would be entirely devoted to the coordination of the work of the committees.

"My Delegation is convinced that the Assembly will have to return to this question and it protests against a measure depriving the Conference of a committee devoted exclusively to a task of coordination, whose usefulness has been proved by all the Conferences of the ITU. My Delegation also **considers** that, at this stage of the work, it is far more important to devote time and effort to the concrete results of the work of the committees rather than to tardy amendments of the Rules of Procedure.

"It takes note, however, of the Chairman's proposal to set up as a Working Group of Committee 1 the old Coordinating Committee. We consider that this measure is a makeshift, because this Group should have direct relations with the different committees, whose work it is to coordinate. We hope, nevertheless, that this Group will be able to cope with the lack of liaison between the committees which has, hitherto, considerably hindered the progress of the Conference."

2.47 Mr. Lalić (Yugoslavia) associated himself with the above statement of the Delegate of Morocco and Tunisia.

2.48 Mr. Arkadiev (USSR) stated that, as a result of the proposal just approved, several points had to be clarified which, in his opinion, might lead to changes in the very structure of the Conference; nor had the various Delegations been able to study this proposal previously. He considered that the only logical proposal was that presented by the United States Delegation, requesting that the discussion be adjourned until a later Plenary Session. Since this proposal had not been approved, the Soviet Delegation reserved its position and would submit its objections in writing at a later date.

2.49 Mr. Sastry (India) declared that he had abstained from voting on the grounds that voting on such matters was superfluous. As far as he knew, the Assembly had not met any cases where a Delegation could hold more than one vote.

All that was needed was to change the composition of the Coordinating Committee from the chairmen and vice-chairmen of Committees to the heads of Delegations. The Atlantic City Convention had already established how many votes a Delegation might hold and it was unnecessary for the Plenary Assembly to take a new decision on this matter.

2.50 The Secretary summarized the decisions taken in the Plenary Session:

1. Extension of the terms of reference of the old Committee 1 so that it might study amendments to the Rules of Procedure;
2. Enlargement of Committee 1 by including the heads of those Delegations which were not already represented in it;
3. The decision that, under the new composition of Committee 1, each Delegation should have one vote only, with the exception of those Delegations, which held a proxy given by another Delegation.

2.51 The Chairman then submitted to the Assembly the first part of the Secretary's proposal, giving Committee 1 the authority to consider the draft text of the agreement connected with the Plan, in view of the intervention of the United Kingdom on this point.

This text was now read as follows:

"Committee 1, as newly composed, will have the following additional mandate: the consideration of any draft text pertaining to the general agreement connected with the Plan."

The Assembly then voted upon the text of this proposal with the following results: 38 votes in favour of the proposed text, 10 against and 9 abstentions.

2.52 The Assembly approved the text of the first part of the Secretary's proposal relating to the terms of reference of Committee 1.

The meeting was adjourned at 6.10 p.m. and resumed at 6.45 p.m.

III. CONSIDERATION OF POINT THREE OF THE AGENDA:
APPLICATION BY THE "OFICINA INTERAMERICANA DE RADIO" FOR
ADMISSION TO THE CONFERENCE AS OBSERVER. (DOCS. 331, 362).

3.1 The Assembly agreed that the "Oficina Interamericana de Radio" be admitted to the Conference with the status of observer.

IV. CONSIDERATION OF POINT FOUR OF THE AGENDA: THE REPORT OF THE BUDGET COMMITTEE (Doc. 361).

- 4.1. Dr. Andrada (Argentine), Chairman of the Budget Committee, stated that the Committee's report was only of a preliminary nature and that a final report would be submitted to the closing Plenary Session of the Conference.
- 4.2. The Budget Committee had taken into account the system for financing the Conferences of the Union, namely by means of advances from the Swiss Government. It had also taken into consideration the decision, taken by the Plenary Assembly on November 24th, to prolong the Conference until January 31st, 1949. It was therefore necessary to compare the actual expenses incurred with those, which the Administrative Council had approved for the Conference; this would enable the Assembly to approve the additional sums necessary to cover the expenses incurred up to the end of the Conference. The Secretary could then inform the Secretary General of the ITU what additional advances would have to be requested from the Swiss Government.
- 4.3. It could be noted from Annex I of Doc. 361, containing the expenses relating to the Secretariat established for the Conference by the Union, that the Administrative Council had approved a Budget of 1,010,000 Swiss francs, on the basis of the Conference lasting until December 31st. This budget was based solely on the expenses incurred for the Secretariat set up by the ITU, and did not include those incurred by the inviting government. When the estimate made by the Administrative Council was compared with the actual expenses up to December 31st, an economy was shown of 30,000 Swiss francs, which might possibly be increased to 40,000 francs depending on the credit balances remaining in Geneva and in the recruiting account with the United Nations at Lake Success.
- 4.4. This result was due, firstly to the prudence and sense of economy shown by the Secretary of the Conference and, especially, to the understanding and good will of the Mexican Administration, which had shown no hesitation in the solution of difficulties and which had made every effort to decrease the expenses of the Conference. Mention should also be made of the excellent rooms, in which meetings were held daily and which had been placed at the disposal of the Conference by the inviting Government without charge. This constituted a very important economy.
- 4.5. The expenses incurred by the inviting government up to December 31st were 1,044,070 Mexican pesos (Annex II of Doc. 361); this represented, at the established rate of exchange, about 614,000 Swiss francs.

- 4.6 The Budget Committee considered these expenses perfectly justified, especially if the length, the complexity of the preparatory work and the many activities of the Conference itself were taken into consideration. The Committee had only praise for the Mexican Government and the general Secretary of the Union in the steps which it had taken for organizing the Conference.
- 4.7. The Committee in Annexes III and IV gave the figures to cover the cost of the Conference until February 15th.
- 4.8. The Committee had considered it necessary and wise to give an estimate (Annex V) of weekly expenses, to cover the eventuality that the Conference might be prolonged even after February 15th. The calculation had been made on the basis of previous weekly expenses at the rate of 108,000 Swiss francs. This sum included both the expenses incurred by the Secretariat established by the ITU and those incurred by the Mexican Government.
- 4.9. These figures were also in accordance with the estimate of 100,000 Swiss francs, to cover a 10 to 12 day extension of the Conference, as set out in Doc. 248 of the Administrative Council and in Doc. 229 of the Conference (Annex II).
- 4.10. In conclusion, he wished to give his warmest thanks to the Mexican Government and to the Secretary for their valuable cooperation provided at all stages of the work.
- 4.11. Mr. Faulkner (United Kingdom) stated that the experience gained at several conferences had shown that work increased as time went on. He hoped that the Committee had taken this factor into account and asked if measures had been taken to this effect.
- 4.12. Dr. Andrada (Argentine) declared that in his opinion the measures taken were sufficient to meet the expenses of a possible prolongation of the work of the Conference. He considered that the Secretariat would be able to coordinate the work in such a manner as to ensure that it would not be too heavy.
- 4.13. The Secretary, referring to Mr. Faulkner's question, stated that the estimates rested on the expenses for the present staff. A slight margin had been provided for unforeseen expenditure and he considered that the figures now submitted to the Assembly would enable the normal volume of work to be handled, which the Conference might place upon the Secretariat in the future. However, if it should be faced by an unexpected burden of work, the Secretariat could always have recourse to the Budget Committee by requesting additional funds to meet a particular situation. It was better to base the report on a normal amount of work rather than on unforeseen contingencies, which could always be submitted to the Budget Committee for consideration.

- 4.14. Mr. Arkadiev (USSR), referring to the preliminary character of the report, wished to know how the Committee could make a practical analysis of the expenses of the Conference. In addition, expenditure had been estimated for a period extending to February 15th. The Assembly had decided to prolong the Conference until January 30th and not until February 15th.
- 4.15. Dr. Andrada (Argentine) said that the estimates contained in the report had been drawn up in order to check the expenses incurred under the approved budget and to provide for future expenses, taking into consideration first those entailed by the prolongation of the Conference.
- 4.16. The Committee had felt it advisable to provide for expenses covering a period beyond the date of January 31st, 1949 as fixed by the Plenary Assembly. Experience had proved that it was most probable that the work would be continued after the date set and the Conference would then find itself in a difficult situation, if it had not taken steps to obtain the necessary funds.
- 4.17. The Secretary declared that the Mexican Administration and the Secretariat had given the Budget Committee complete information on the expenditure incurred, down to the smallest details. If the Committee had been unable to examine the detailed information provided, it was not lack of information but of time, which was responsible. The Delegate of the USSR could be certain that the Mexican Administration and the Secretariat would provide the Committee with similar information in detail, before it submitted its final report.
- 4.18. Mr. Lalić (Yugoslavia) agreed with the statement made by the Secretary.

As a member of the Administrative Council, and the Budget Committee, he wished to draw attention to the considerable economies which had been achieved, thanks to the measures taken by the Secretary. The latter had engaged a large number of the staff in Mexico and most of the personnel coming from Europe had been engaged as from New York, which measure had led to appreciable economies in travelling expenses. The Committee had estimated the expenditure up to February 15th, 1949, although it had been decided that the Conference should end on January 31st; but in this respect he wished to confirm the remarks made by the Chairman of the Committee. Indeed, it was only after the Chairmen of the Committees had expressed doubts on their ability to meet the target dates fixed for the completion of their work, that the Budget Committee had thought it expedient to estimate expenditure up to February 15th.

4.19. Mr. Arkadiev (USSR), referring to the conclusion in Section VII of the report, had no objections to points 1 and 2, but thought that point 3 might be set aside for consideration at the end of January.

4.20. The Secretary declared that he had expressly asked the Committee to include point 3 in the conclusions for the following reasons:

The Swiss Government had agreed to continue advancing funds for 1949, since the ITU did not have a working capital fund. It was extremely inconvenient for the Secretary-General of the Union to be called upon to make repeated requests for advances of funds. Point 3 had been included in the conclusions simply to enable the General Secretariat of the Union to inform the Swiss Authorities that, if the Conference was prolonged beyond February 15th, 1949, the sum required would be of the order of 108,000 Swiss francs per week. This would permit these authorities to take the necessary steps, on the basis of as complete information as the General Secretariat was able to supply on this question. This measure did not of course mean that the Conference was to last beyond February 15th, but was simply designed to facilitate the task of the Secretary General of the Union and the Swiss Government.

4.21. Mr. Arkadiev (USSR), while recognising the practical nature of the Secretary's point of view, proposed the following new text for point 3:

"To authorise the Secretary, Mr. Dostert, to inform the Secretary General of the ITU of the amount of weekly expenses required in case the Conference should extend beyond February 15th."

4.22. Dr. Andrada (Argentine) shared the opinions of the Secretary and had no objections to the proposal of Mr. Arkadiev (USSR), which was seconded by Mr. Lalić (Yugoslavia).

4.23. The Assembly unanimously approved the report of the Budget Committee (Doc. 361) with the amendment proposed by the Delegate of the USSR.

V. CONSIDERATION OF POINT FIVE OF THE AGENDA: RESOLUTION NO. 68 OF THE ADMINISTRATIVE COUNCIL CONCERNING PROPOSED FUNCTIONS FOR THE VICE-DIRECTOR OF THE C.C.I.R. (Doc. 325).

- 5.1. On the proposal of Mr. Lazareanu (Roumania), it was agreed to refer the above document to Committee 7 (Implementation).

VI. CONSIDERATION OF POINT SIX OF THE AGENDA: MISCELLANEOUS SUMMARY REPORT SUBMITTED TO THE PLENARY ASSEMBLY BY COMMITTEE ONE. (Doc. 376)

- 6.1. The Chairman stated that a meeting of the Coordinating Committee had been held on the morning prior to the Plenary Session. At this meeting the Chairmen of Committee 3, 4 and 5 had said that it was most unlikely that the final reports of their Committees would be ready for consideration by the Plenary Assembly at the beginning of the week commencing January 3rd. The Coordinating Committee had considered the effect of these circumstances on the work programme previously planned for the periods December 27th to December 30th and January 3rd to January 8th. However, it had been unable to reach a final decision and the matter was therefore referred to the Plenary Assembly.

- 6.2. Mr. Arboleda (Colombia) proposed that the Assembly "instruct the Secretary not to establish an agenda from December 24th to January 3rd."

The reasons for which he made this proposal were as follows:

1. If approved, it would give the Secretariat time to eliminate the existing backlog in the documents of the Conference.

2. A large number of Delegations were leaving Mexico during the period mentioned, and would return on, or after, January 3rd. The proposal would avoid the re-consideration, when these Delegations returned, of the subjects which the Committees would have discussed during their absence.

3. Christmas and the New Year had a human and religious value, which made this season unsuitable for carrying on the work of the Conference. It would be far better if this period were used to provide both the Delegations and the Secretariat with a rest.

- 6.3. Mr. Kito (Albania) drew attention to the decision, taken by vote, at the 12th Plenary Session to work during the period of December 27th to December 30th. If the Conference had a recess during these days, it would entail a serious loss of working days for the Committees and would be very costly. He could not agree with the Delegate of Colombia. There would be no lack of

delegations to carry on the work since 35 Delegations had, by vote, expressed their readiness to work from December 27th to December 30th.

- 6.4. Mr. Egorov (Bielorussia) then made a statement, the text of which was later published in Document No. 381.
- 6.5. Mr. Bivar (Portugal) was in sympathy with Mr. Arboleda's proposal but could not support it for practical reasons, arising from the heavy cost of the Conference and from the excessive delay which its work would suffer, if the proposal were accepted.
- 6.6. Mr. Burian (Czechoslovakia) shared the opinions of Mr. Egorov (Bielorussia).
- 6.7. Mr. Arboleda (Colombia) asked that a vote be taken on his proposal whilst Mr. Kito (Albania) seconded by Mr. Lalić (Yugoslavia) said that the Assembly should, in fact, first decide whether the debate should be reopened, upon this matter.
- 6.8. The Secretary stated that the Plenary Assembly, at its 12th session, had decided to meet on January 3rd, 4th and 5th in order to examine the reports of Committees 3, 4 and 5. If the Assembly now wished to vote upon the Albanian proposal and if the decision previously taken was maintained, it remained to be seen if the Chairmen of these Committees could give an assurance that their respective reports would be ready in time.
- 6.9. Mr. Fontaina (Uruguay) asked the Assembly to give its decision on the Colombian proposal. In fact, several Delegations were going to leave Mexico during this period and it was unlikely if dates were established for the work, that this work could be carried out in a practical manner or that firm decisions could be taken. Therefore, it was unrealistic to accept the argument that the expense involved would amount to 108,000 Swiss francs a week. The money would in any case be spent and could not be recovered, assuming that dates were established and the work achieved no practical results, because the latter had to be reviewed when the majority of the Delegates returned.
- 6.10. Mr. Naranjo Goncao (Venezuela) proposed that the vote on the reopening of the debate be carried out by secret ballot, and this proposal was supported by the Delegations of Uruguay, Argentine and Colombia.
- 6.11. Mr. Van den Broek (Netherlands) protested against the holding of a secret ballot, as this was a question for which one should have the courage of one's convictions.

6.12 The Secretary declared that the subject of the vote, now to be taken, was whether or not the Plenary Assembly wished to reopen the debate on its previous decision with regard to the work programme from December 27th to 30th.

The result of the secret ballot was: 38 votes in favour of reopening the debate, 18 against and 1 abstention.

6.13 The Plenary Assembly therefore decided to reopen the debate on this matter.

6.14 Mr. Van den Broek (Netherlands) stated that he had abstained from the vote in order to mark a protest against the holding of the secret ballot. He considered that a disservice had been done to the Assembly in insisting that this procedure be adopted and he requested that it should not be adopted when the matter was discussed in substance.

6.15 Mr. Fontaina (Uruguay) stated that, at the last Plenary Session, nobody had objected to the use of a secret ballot when a vote of confidence was passed in the chairman of Committee 3; under these conditions, it was not right to talk of courage or fear in the attitude to be adopted towards the elimination or maintenance of the work programme. During the Atlantic City Conference, his Delegation had voted against the use of the secret ballot.

6.16 Mr. Arboleda (Colombia) seconded by Mr. Andrada (Argentina), said that the Assembly should now decide upon his proposal, which was based on an amendment excluding the previous proposals. He moved that the vote should be by secret ballot.

6.17 In reply to a statement by Mr. Ouspenskii (Ukraine), that he had been denied the floor, the Chairman declared that the debate had lasted long enough and that the important thing was to consult the Assembly.

6.18 Mr. Lalić (Yugoslavia) said that the votes should be carried out according to the chronological order of the proposals. If the Chairman decided to give priority to the proposal of Colombia, then he would like to know on which provisions of the General Regulations the Chairman based this procedure.

6.) The Chairman stated that the debate could be finished if the proposal of Colombia was accepted. He would submit it first to the Assembly, as it provided the quickest method of bringing the debate to an end and was, moreover, the proposal which was most different from that of the Coordinating Committee.

20 Mr. Lalić (Yugoslavia) did not agree with the Chairman and Mr. Lazareanu (Roumania) said that the Delegations would have no opportunity to express their opinions, if the Assembly took a vote without preliminary discussion.

6.21 The Chairman stated that prolonged discussion had taken place on this subject especially during the 12th Plenary Session, and that opinions had been expressed with great clarity and at sufficient length.

6.22 Mr. Sastry (India) was in favour of voting on the amendment most contrary to the proposal of the Coordinating Committee, namely, on that of the Delegate of Colombia. He asked the Chairman to put to the vote a motion by which the Assembly could decide if it wished to continue the debate or to pass on to consider the proposal of Colombia.

6.23 The result of the vote was the following: 9 Delegations were in favour of continuing the discussions, 43 were against and 5 Delegations abstained.

6.24 The Assembly thereby decided to vote on the Colombian proposal that no agenda be drawn up during the period December 24th to January 3rd.

6.25 The Secretary stated that, even if no agenda was drawn up, the Secretariat would have a considerable quantity of documents to translate and reproduce in four languages and that, consequently, the money spent during this period would not be a loss for the Conference.

6.26 A discussion then ensued in which Mr. Fontaina (Uruguay), Mr. Lazareanu (Roumania) and Mr. Albuquerque (Brazil) took part. In addition, the Delegations of Brazil, Argentine, Guatemala, Cuba and Venezuela moved that a vote be taken by secret ballot on the amendment of the Delegation of Colombia; whilst Mr. Bivar (Portugal) declared that he would not take part in a vote by secret ballot on this question.

6.27 The Secretary stated that the vote would take place upon the following resolution:

"The Plenary Assembly decides to hold meetings of Committees and Working Groups during the period December 27th to December 30th."

6.28 The result of the vote by secret ballot was: 26 votes in favour of holding meetings of Committees and Working Groups, 30 against and 1 abstention, whilst 8 Delegations did not take part in the vote.

- 6.29 The Assembly decided not to hold meetings of Committees or Working Groups from December 27th to December 30th.
- 6.30 Discussion then took place on the work programme for the first week of January, taking as a basis the proposals contained in Doc. 376.
- 6.31 The Secretary then read out the schedule of meetings for the period January 3rd to 8th, 1949, taking into account that January 6th was an official holiday and that January 8th would be a normal working day, this latter measure being proposed by Mr. Jacques Meyer (France).
- 6.32 Mr. Lalić (Yugoslavia) then stated that the vice-chairman of Committee 7 (Implementation) had asked to resign. He requested the Assembly to address its warm thanks to Mr. McKay (Australia), the vice-chairman, for his invaluable cooperation.
- 6.33 The Assembly passed a vote of thanks to Mr. McKay (Australia) and the Chairman suggested that he be replaced by Mr. Bivar (Portugal). This suggestion was greeted by applause.
- 6.34 Mr. Bivar (Portugal) thanked the Assembly, assuring it that he would do his best to cooperate in the common work and to help Committee 7 to fulfil the task allotted to it.
- 6.35 Mr. Arkadiev (USSR) drew attention to the proposal which the Delegation of Bielorussia had presented previously and the Chairman moved that this proposal be dealt with at a meeting of the Coordinating Committee on January 5th.
- 6.36 Mr. Ouspenskii (Ukraine) stated that 3 proposals remained for consideration by the Assembly and that the proposal of Bielorussia should be discussed immediately and put to the vote.
- 6.37 The Secretary recalled that the proposal of Bielorussia was that no more new proposals be accepted, tending to modify the structure of the organs of the Conference and that meetings be limited to the examination of the draft plan submitted hitherto; and finally that the next meeting of the Coordinating Committee should be devoted to the examination and approval of proposals which had a bearing on the drawing up of the High Frequency Broadcasting Plan.
- 6.38 Mr. Green (New Zealand) regretted that he could not discuss this subject, without having previously been able to study it in document form. He proposed that the meeting be adjourned and that the debate be closed in a genuine spirit of Christmas and of good will.

6.39 After statements by Mr. Mevorah (Bulgaria), Mr. Lazareanu (Roumania) and Mr. Albuquerque (Brazil), Mr. Henderickx (Belgium) proposed that the Assembly decide immediately by vote whether it should discuss the proposal of Bielorussia and he moved that no more statements on points of order should be permitted.

6.40 The Assembly decided to refer the proposal of Bielorussia to the Coordinating Committee which was to meet on January 5th.

The voting was as follows: 46 votes in favour of the above decision, 10 against and 2 abstentions.

6.41 Mr. Egorov (Bielorussia) stated that he would present his proposal in the form of a document, which would be on the agenda of the meeting of the Coordinating Committee to be held on January 5th.

6.42 Mr. Albuquerque (Brazil), Mr. Fontaina (Uruguay) and Mr. Arkadiev (USSR) expressed their thanks to the Mexican Authorities and gave their best wishes to the various countries represented at the Conference, as well as to the families of the Delegations present.

6.43 The Chairman, in the name of his country, thanked the Delegates for these cordial words and expressed his own good wishes for the happiness of all Delegates during the festivities of Christmas and New Year.

The meeting rose at 11 p.m.

The Assistant Secretary:

T. Wettstein

The Secretary:

L. E. Dostert

APPROVED:

The Chairman

M. Pereyra

The Rapporteurs:

G. H. Campbell

J. E. Castaingt

E. Sanchez Lafaurie

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 421-E

7 January 1949

Original : ENGLISH

Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

Fifth Meeting
6/8 December 1948

The Committee met at 10 o'clock with Mr. Faulkner in the Chair. The agenda proposed by the Chairman in document 266 was approved by the Committee.

- I. Consideration was then given to the minutes of previous meetings of the Committee. Corrected minutes for the 2nd, 3rd and 4th meetings, as finally approved by the Committee, are contained in the revised documents of 121-E, 124-E and 194-E, respectively.
- II. The Chairman then called the attention of the Committee to point II of the agenda to the effect that in accordance with the decision mentioned in par. 2 of the 4th session of Committee 5, a letter was sent to the Chairman of Committee 6, the text of which can be found in par. 8 of document 227. This letter, the Chairman further stated, was prepared in consultation with the chairmen of the three Working Groups.
- III. The Chairman took advantage of the presence of the delegate for India to express his thanks to Committee 4 for having given priority to the definition of such terms as "service Areas" and "difficult circuits". The Chairman remarked that these definitions are contained in a letter which will be published shortly in document form, and that discussion of this matter had best be postponed until an appropriate test was available.
- IV. The Chairman then asked Mr. Aurini, chairman of Working Group A, to read a report on the recent activity of this Group. The text of this report is contained in document 250.

As a result of a question raised by Mr. Aurini, there followed a lengthy discussion concerning acceptance, by Working Group 5 A, of additional requirements presented after November 5th, by the Belgian Congo and the Union of South Africa on the one hand, and El Salvador, Guatemala and the Netherlands West Indies on the other.

It was finally decided by a show of hands that these additional requirements should be accepted tentatively by the Committee and referred by the Committee itself to the Plenary Assembly of the Conference for a decision.

After the vote was taken, the Soviet delegate stated that he had previously requested the floor in order to find out the exact nature of the modifications which were being submitted to a vote. As he had not been granted the floor, he had not been able to participate in the vote and felt that the rules of procedure had thus been violated by the Chairman.

The delegate for Cuba then pointed out that it would be preferable to substitute the word "presented" for "published" in the last line of par. 1, point 1, chapter A, of document 250. The Committee agreed.

The delegate for BSSR, in turn, mentioned that he also had been refused the floor before the vote was taken and felt that the rules of procedure had been violated.

The Chairman apologised to both the Russian and the Bielorussian delegates for not having granted them the floor, stating that he had not seen them raise their hands.

The BSSR delegate then made the following statement:

Declaration of the Bielorussian SSR Delegation

In his report (document No. 250, Section 1), the Chairman of Working Group 5A has indicated that for the preparation of Forms A his Working Group has used, for a number of countries, the Comments and Information submitted by the countries in connection with the report of the Planning Committee.

Considering that this fact represents a transgression of the terms of reference received by the Committee and its Working Groups from the Conference, which clearly stated that Group 5A should study and "make an analysis of Forms 4 and Forms 3", and of no other documents, the Bielorussian SSR Delegation deems it necessary to voice a protest against such a transgression of the Terms of reference and insists upon an urgent amendment of Forms A for a number of countries which would adapt them to the requirements on Forms 4.

This is all the more necessary because the arbitrary use of various documents excludes the possibility of a correct analysis of the countries' requirements in Group 5B and creates a situation in which, for a number of countries (Venezuela, Morocco and Tunisia, Australia and New Zealand),

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the number of channel-hours, frequencies and directions of broadcasts required by the country becomes artificially increased in comparison with their requirements on Forms 4.

In a letter addressed to the Chairman of Committee 5 on the 16th November 1948, the Bielorussian SSR Delegation had already raised the question of the inadmissibility of similar occurrences, but up to now no decision has been taken on this matter. Considering the foregoing, we most energetically insist upon an urgent correction of the errors allowed by Group A, upon a strict compliance with the terms of reference received by Groups 5A and 5B and upon preparing Forms A and B2 in such a way that they should reflect all the data contained in a given country's requirements on Form 4, for all countries without exception.

After this statement, the Cuban delegate pointed out that, while he was in agreement with the delegate of the BSSR, he felt that the problem should nevertheless be considered by the Plenary Assembly. He then explained that in Spanish the word modify would not necessarily mean to add or to insert. He concluded that if countries such as El Salvador and Guatemala sent in their requirements after the dead-line, they should be allowed to explain in full before the Plenary Assembly the reasons for their having done so; furthermore, in no case whatsoever, either in a working group, or in a committee, should consideration be given to modifications made to Forms 4 which may imply an increase in requirements or frequencies.

The Cuban delegate added that any such deviation would imply a change in the terms of reference of the Committee.

The Chairman pointed out that further discussion of this matter would constitute a serious waste of time, since the question had already been submitted to a vote. He explained that he, as Chairman, knew of no date or decision to prevent acceptance of modifications, except November 5th. He also mentioned that since some Forms 4 had been submitted a year ago, it was only natural that some modifications would be necessary.

The delegate of India agreed with the Chairman, and mentioned that this was really a question for the Plenary Assembly to decide.

Mr. Aurini, chairman of Working Group 5A, then made the following statement concerning the criticism of his group made by the delegate for the BSSR:

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"Mr. Egorov, who now takes part in the work of Group 5B, pointed out to our Chairman, Mr. Faulkner, that the data concerning Norway on Form B2, do not agree with the requirements submitted by that country. Further investigation would have revealed that Form A submitted by Norway to group 5A did not agree with the requirements contained in Form 4, but rather with documents of an informal nature.

"Furthermore, Mr. Egorov claims to have encountered the same difficulty with regard to other countries.

"In this connection, I should like to repeat that, in accordance with the terms of reference of Group 5A, Forms A have been completed in consultation with the delegations of each country on the basis of the official documents of this Conference, to wit, Form 4 printed in the Blue Book, Supplements 1, 2, 3, 4-1, 4-2 and the white and yellow documents containing information, changes or supplementary data published before November 5, 1948.

"The differences noted by the chief of the BSSR delegation with regard to the data contained in Norway's Form 4 and those contained in her Form A result from the fact that in compiling Norway's Form A Working Group 5A had to take into account, not only the data contained in Norway's Form 4, but also the schedule corrections presented in yellow document No. 19, October 20, 1948, thus well before the deadline of November 5, set by the Plenary Assembly during its 5th meeting, on October 27th, this deadline being the last possible delay accorded to countries for the presentation of their requirements based on Form 4.

"Group 5A followed the same procedure in compiling the Forms A of other countries presenting additional requirements before November 5.

"I think that Mr. Egorov's remarks result from the fact that he does not recognize as official the white and yellow documents submitted by the various countries and that, furthermore, according to Mr. Egorov, these documents should not have been taken into consideration by Group 5A.

"Since this question is of the direct concern of the Secretariat, I should like to ask the Secretary General of the Conference, here present, to clarify this point".

Mr. Dostert explained that the information contained in the white and yellow documents had been officially requested by the Planning Committee, an official organ of the Conference,

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and officially presented by the delegations; that, furthermore, they had been printed at the expense of the Union and that, therefore, there could be no doubt as to their official character.

The delegate for the BSSR replied by stating that the Working Group 5A had no authority to make use of the white and yellow documents and insisted that the terms of reference of this Working Group should be respected.

The Soviet delegate felt that the Committee should abide by the rulings of the Atlantic City Conference, which mentioned only Forms 3 and 4, without taking into account the white and yellow documents now under discussion. In his opinion, these documents were of an informal nature only and if Committee 5 accepted any additional request or supplementary information as contained in these documents, such a procedure should be considered illegal. A decision in this regard could come from the Plenary Assembly only.

The UK delegate pointed out that this question had been already discussed in the Working Group. In submitting their additional information, many countries stated that their yellow document should be considered as an amendment to their Form 4. The Working Group just followed the instructions received from each country concerned. If this procedure were erroneous, it would be up to the Plenary Assembly to decide whether the countries themselves were wrong.

After a lengthy discussion centering on the above points, the Chairman proposed the following resolution:

"It is considered that this Committee has acted within its terms of reference in taking into account any changes or requirements presented by the countries in any form, after submission of the original Forms 4, i.e. after January 15th, 1948, but by November 5th, 1948."

The Committee, by a show of hands, accepted this resolution by a vote of 27 for and 7 against.

The meeting then adjourned, it being understood that it resume on Thursday December 8, 1948.

At the beginning of the second part of the meeting, Thursday Dec. 8th, the Chairman asked Mr. Aurini to conclude his statement with regard to the criticisms formulated by the delegate for the BSSR.

Mr. Aurini said:

"After the explanation given by the Secretary General of the Conference concerning both white and yellow documents - all of which are official in nature and not informal - and after approval of the agenda proposed by the Chairman of Committee 5 during the session held last Monday, I believe that the honorable chief of the BSSR delegation could well admit that, contrary to the statement which he made in a letter to Mr. Faulkner, Group 5A gave no preference whatsoever to any country, and that all were treated equally. Finally, Group 5A scrupulously observed its terms of reference. The Group worked very hard under difficult conditions, owing to the restricted number of its members and especially because it requested help from no one."

The BSSR delegate replied by insisting that preferences had been given, because changes had been made by use of the white and yellow documents and that, furthermore, several countries had thereby obtained a considerable number of additional channel-hours. Such a procedure, he felt, was contrary to our terms of reference.

The UK delegate pointed out that Document 250, page 2, par. 3, last line, should read "Netherlands West Indies" instead of "Indonesia".

The Chairman of Working Group 5B, Mr. Walker, was then asked to comment on the high-lights of the report of his Group, Document 268.

After commenting on his report, Mr. Walker raised the question as to when it would be desirable to submit the frequencies recommended by 5B to the countries for approval.

It was decided that, since this question concerns both Working Groups 5B and 5C, it would be preferable to postpone discussion of the matter until after the chairman of Working Group 5C had had a chance to read his report.

The text of this report is contained in Doc. 289. After having read his report, Mr. Smirnov stressed 6 basic reasons which, in the opinion of a Soviet expert, constituted the cause of the divergencies existing between the frequencies requested by the countries and those recommended by Group 5B. In order to remedy this situation, the Soviet expert had made several recommendations which Mr. Smirnov also read. These reasons and recommendations are contained in Doc. 289.

In reply, Mr. Walker first remarked that the main tools which Working Group 5B had at its disposal were the propagation curves, adopted by the Conference. It was not up to this Committee to criticize these curves.

Mr. Walker also pointed out to Mr. Smirnov that several of the definitions provided by Committee 4 were difficult to work with, especially that describing difficult circuits. With regard to a lack of propagation curves stressed by Mr. Smirnov, Mr. Walker explained that 337 different curves were now available and additional curves were being constantly supplied by the US delegation with a minimum of delay when requested by Group 5B. Furthermore, the members of Group 5B now have considerable experience in using these curves, therefore, the statement made in this general connection by the Soviet expert was unfounded and unfair. With regard to point 3 raised by Mr. Smirnov, Mr. Walker remarked that the tables indicating intermediary distance factors had been distributed to members of the Working Group some 10 days ago. In conclusion, Mr. Walker mentioned that the MUF calculation is a very complex operation and that it is difficult to complete such calculations on short order. He nevertheless hoped that calculations should be completed before the end of the Conference. Mr. Walker stressed that it would be too late now to stop the work of Group 5B or to change its working procedures. However, if dissatisfaction existed, he would welcome the opinion of the other members of the group in this regard.

The Chairman felt that the US delegation should be thanked for having gone to so much trouble and expense in preparing the propagation curves. In his opinion too, such criticism of the curves was unfair.

The delegate of the French Overseas Territories also agreed; he further suggested that the entire question be considered by the Working Groups themselves. In this regard he pointed out that, as a rule, the difference between the frequency requested by a country and the frequency recommended by Group 5B was not great; such differences as did exist were due largely to a lack of precision in the information supplied by the country itself rather than to a lack of technical data. In the case of divergencies between a frequency requested and the frequency recommended, Working Group 5B should uniformly assign the optimum frequency, leaving the final decision to Committee 6. Furthermore, he felt that in difficult cases where a considerable difference between requested and recommended frequencies existed, it would be preferable to consult the countries concerned before submitting Form B2 to Group 5C.

The Indian delegate concurred in the opinion of the Chairman concerning the US propagation curves. However, he pointed out that Committee 4 had recommended these curves as an approximate guide for purposes of consultation by countries which had not been in a position to undertake the necessary research. He then called the attention of the delegates to Document 122 which outlines the working procedure of Group 5B. He also reminded the delegates of the Indian reservation contained in Document 124.

The BSSR delegate strongly supported the recommendations made by the Soviet expert in order to speed up the work of Group 5B. He recalled that the most difficult task of this Conference was to establish optimum frequencies to be used for the next 10 years and that the utmost quality should govern our work. Nevertheless, this task was being delayed by the lack of sufficient curves. In spite of their usefulness, practical experience shows that these curves have not been sufficiently well established. Furthermore, since the countries have already checked their requirements carefully, he urged that, if only a small difference exists between requested and recommended frequencies, the original should be kept, if possible. The UK delegate explained that the major difficulty involved in this question arose out of a lack of well defined geographical areas for the calculation of OWF curves. The matter had been further complicated by the fact that several countries have subdivided areas. In this connection, he submitted the following resolution:

Committee 5 decides that in cases where there is a difference of more than one high frequency broadcasting band between the requested frequency and the optimum working frequency shown by the Conference propagation curves, Working Group 5B shall be empowered to interview the country concerned and to examine the data on which the original request was based. If this data is found to be more applicable to the particular service area than the Conference propagation curves the frequency recommended shall be made to conform with the requested channel and an appropriate explanation made in the remarks column of Form B.

The US delegate mentioned that he had first accepted the UK resolution in principle, but after some consideration, remained hesitant, especially as regarded the meaning of several terms as necessary data. He then asked when Form B2 should be submitted to the country for approval.

He felt that submission should not take place before the Forms had reached Working Group 5C, since this group must work with recommended frequencies and not requested frequencies.

The Chairman then summarized the different points of view and called the attention of the Committee to the proposed target date and to its terms of reference, wherein the Committee's task is stated to be one of fact-finding, and not of "discretion". The Chairman suggested that in view of the target date and the terms of reference, Forms B2 be submitted to the countries for approval after Group 5C shall have completed its work. The forms could then be passed on to the Planning Committee for final decision.

The US delegate agreed and added that, if this procedure were maintained, he felt confident that Group 5B would be able to meet its Dec. 20 deadline for the June season.

The USSR delegate stressed that the work of Group 5B should not be speeded up to a point where it would lack quality. He urged the Committee to authorize Group B to study, with the help of experts and of Committee 4, all possible methods with which to perfect the results of its work. He did not believe that the procedure of consulting the countries would greatly slow up the work of Group 5B. On the contrary, this work is at times faulty, and prior consultation with the countries concerned would prevent Group 5C from working with erroneous data.

The Indian delegate again called the attention of the Committee to the terms of reference of Group 5B, contained in document 122, where it is specified that upon completion of the calculations for each country, these will be submitted to the delegation concerned for approval.

The Canadian delegate then made the following observations:

1. So far the analysis of the requirements of three countries has been completed by 5B and could be submitted to the delegations concerned for approval; the analysis of the requirements of approximately 22 other countries is complete, except for DC and NC.(#); but could not yet be submitted for approval.

2. If we submit the forms to the delegations for approval, before they go to 5C, in many cases this would mean that we are passing on only the original request, in other words, we would calculate frequencies for only those countries that wish us to do so.

3. In many cases, the reception area includes many zones on the map. Are we to believe that our present operations are not satisfactory for these cases?

(#) "Difficult Circuit" and "No curves".

Mr. Walker recalled the decision taken at the last session of the Committee. In this connection, 5B must give uniformity to the requirements; transmit them to 5C, which in turn will submit them to the delegations concerned and finally to Committee 6.

In view of the fact that debates were getting somewhat out of hand and since it was quite late the Chairman proposed that he discuss the question with the chairmen of Working Groups. Debates could then be resumed at the next meeting of the Committee, and he hoped that a suitable solution might be found in the meantime..

The meeting adjourned at 2 p.m.

The Reporters:

A. Blanchette
A. Wolf

The Chairman:

M. H. Faulkner

(Note of the Secretariat: This Document was received by the Secretariat on the 7th January 1949)

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 422-E

7 January 1949

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Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

6th Meeting

13 December 1948

The meeting was opened at 10 a.m. with Mr. Faulkner (UK) in the Chair.

The Chairman briefly outlined the discussion which had taken place at the previous meeting, Monday, December 13. Since that date, a meeting of the Chairman with the heads of the Working Groups had taken place. Furthermore, the report of Working Group 5 C had been printed and circulated as document No. 289. The Chairman asked Mr. Smirnov, Head of Group 5 C, to comment on point (a) of this report.

Mr. Smirnov, in accordance with the decision taken at the above meeting by the chairmen of the various Working Groups with regard to frequencies lower than 6 Mc/s, stated that it would be necessary to take into consideration, for final reference to the PFB, the recommendations of Working Group 5 B, and to make use of Form 1 for this purpose. In his opinion, however, the decision of the chairmen should be confirmed by the plenary meeting of the Committee. As Chairman of Group 5 C, he thought it essential to take these recommendations into account, independently of any future decision as to who should analyse them.

The Chairman felt that there was no doubt whatsoever that these frequencies came within the terms of reference of Committee 5 and he proposed therefore to add to the terms of reference of Group 5 C the following amendment:

"To schedule for all countries the requirements for which Working Group 5 B find that the OWF's lie below the 6 Mc/s Broadcasting Band".

The delegate of Mexico, supported in part by the Cuban delegate, formally opposed any such changes in the terms of reference of the Committee. In his opinion, this Conference was convened to consider only those frequencies which lie above the 6 Mc/s broadcasting band. Those frequencies below the 6 Mc/s band come within the jurisdiction of other bodies, especially the PFB.

There followed a lengthy discussion on this question, during which the delegates of the UK and the USSR submitted amendments to the text proposed by the Chairman. The Chairman felt that these amendments were concerned with details which could be settled within the Working Groups and requested that they be withdrawn. This was done. The Committee then approved the Chairman's proposal, the delegates of the Belgian Congo and the French Overseas Territories having made the following reservations:

1. Committee 5 should not schedule recommendations to Committee 6, but only observations and facts.
2. It is understood that, before Forms B2 are referred to Committee 6, the countries concerned will be able to comment on the recommended frequency range.
3. It is also understood that each country will be able to discuss fully with the Working Groups of Committee 6 all definite frequency allocations and all requirements to be sent to the PFB in order to complete the work of Committee 6.

Question d (1) Doc. 289, which had been discussed by the Working Groups was accepted without debate. It was agreed that it would be necessary for the countries concerned to give first priority to the consideration of Forms B2 if delays were to be avoided.

Question b - Document 289. The question of the increase of requirements for some countries by Working Group 5B.

The Chairman made the following statement and proposal on this question:

"This question has been debated at great length in the Working Groups but a solution has not been agreed.

"The question arises as a result of the recommendation from Committee 4 which has now been published as Annex A, Document 274.

"This document has been read by Working Group 5B and the correct propagational conditions can only be met by serving each Area served by a transmission as defined by Committee 4 separately. Naturally this assumption leads to the requirement of additional frequencies in all cases where the country's requirement was to serve more than one area served by a transmission as defined by Committee 4.

"Reference has been made to the Chairman of Committee 4 who states that it was not the intention to increase the use of frequencies in this

may, but only as a rule to enable the Working Group to permit the use of more than one frequency per programme if the country had proposed this in its requirements.

"However, this is not clear from the text of the document as written and it can well be argued that the document should be used to ensure that the frequencies proposed are propagationally correct for the service required on the basis of the propagation curves which are at the disposal of the Working Groups.

"This then is the question to be decided and I should state that the two different points of view are very strongly held by the two sides.

"One method of attack would be to refer back the document to Committee 4 for clarification, since the difficulty lies in the interpretation of that document.

"As Chairman of this Committee, I am, however, very perturbed at the delay that such a course would entail in our work. We have only seven working days in which to complete our task and since I regard this work as the most important, from a priority point of view, facing our conference at the present time, and furthermore that the Plan Committee requires it before it can commence work on a plan, I feel strongly that this aspect of the matter should receive earnest consideration.

"I therefore make the following compromise proposal from the Chair in the hope that it will be acceptable to all and have the advantage of not in any way delaying our work.

It is resolved that:

- (1) Working Group 5 B should be allowed to continue its work on exactly the same lines as at present.
- (2) That in making out the channel loading forms, Working Group 5 C should enter all frequency requirements arrived at in this way as dotted lines, with a suitable note so that Committee 6 would be fully aware of the facts.

Thus we should be maintaining our role as a fact finding Committee and presenting all the facts within our knowledge to Committee 6."

In reply to this statement, Mr. Walker, Chairman of Group 5 B, stressed the fact that neither Group 5 B nor 5 C can change the requirements submitted by the countries. The terms of reference of 5 B allow this Group to record requirements only. It is not within the power of the Group to refuse requirements, although its analysis may result in the recommendation of increased or diminished channel-hours.

Mr. Walker then stated his opinion that Group 5 B should use the definitions precisely as worded by Committee 4 or ignore them completely. He nevertheless felt that Working Group 5 B did not possess sufficient data to apply such a specific definition as that of "service area" and that up to now, Group 5 B had not been able to conform fully to the Atlantic City rulings owing to the lack of a definition for this term.

With regard to the proposal of the Chair, Mr. Walker pointed out that if Working Group 5 B was to consider all countries on a footing of equality, there should be no difference between solid lines and dotted lines on the various Forms, in order to ensure uniformity in the work of the Group. Each receives as much consideration as the other; therefore there is no real difference between the two.

In conclusion, Mr. Walker emphatically stressed that if a plan is to emerge from this Conference, it will have to be developed on a uniform basis, namely, the propagation curves approved by the Conference, and according to which Working Group 5 B has made its recommendations.

This opinion was supported by several delegations.

During discussion of this point, two additional views were presented concerning the use of economy and/or uniformity in recommending frequencies.

The USSR delegation, supported by the delegates for the BSSR, Albania and Roumania, strongly urged that the utmost economy be used in recommending frequencies. In the mind of the delegate for Roumania, it would be expedient to recommend the number of channel-hours requested by the countries even in those cases where the propagation curves indicated that an increase was necessary. The statements of the Albanian and the BSSR delegates follow:

The delegate of Albania shared the viewpoint of the delegate of the USSR and other delegates. The decision of the Plenary Assembly of October 27 and the principle of economy of frequencies - considered in the light of the fact that the requirements were three times more than the available channels - made it imperative not to listen to new claims, but to make reductions on fair and equitable lines. It was only by such methods that it would be possible to speed up the work and to arrive at concrete results. To consider the possibility of increases would only complicate the work. The question of increases was not a technical question: it was a question of principle, affecting the future of the Conference, and as such of interest to all delegates. If Working Group 5 B was going to take increases into account, he could only repeat that it would be acting in opposition to the decision of the Plenary Assembly of October 27. That decision, establishing November 5 as the time-limit for the submission of requirements, concerned those countries which had not as yet submitted any requirements: it did not entitle countries, which had done so, to increase the requirements they had submitted.

The delegates of the French Overseas Territories and of China were of the opinion that Group 5 B should carry on its work as in the past; furthermore, information requested of the countries concerning service areas would automatically bring about a decrease in frequency requirements, since these areas had not always been clearly delimited.

In this connection the Argentine delegate made the following statement:

"The Argentine Delegation believes that consideration of the increase of frequencies is of relative value only, in the absence of statistical information as to the results obtained by Working Group 5 B.

"As to procedure, the Argentine Delegation considers that it is inadequate to take as a basis frequencies for which countries have asked to serve a particular reception area, because, if the technical calculations indicate that more than one frequency is necessary, Form B 2 must show it.

"The use of inadequate frequencies is equivalent to a waste of channel-hours in connection with the allocation of the same; for which reason the Argentine Delegation proposes:

"That Working Group 5 B should continue its work in the same form as hitherto: and that, if an increase in frequencies requested results from its work, the country concerned should itself reduce them to the original amount to agree with Form B 2.

"I will illustrate the proposal by an example. Suppose that a country erroneously asked for a single frequency to serve a reception area. Then, if the technical conditions require the use of two, the requirement will have been increased by ten channel-hours.

"Assume further that the number of channel-hours requested by the country in question is 100, and that the findings of Working Group 5 B increase the number to 110 channel-hours: then that country must be given the opportunity to:

1. "reduce the requirements to conform with the original request for 100 hours, either by using only one frequency and so limiting the time of reception, or by reducing the number of hours of service to the area in question.
2. "indicate whether it has the transmitters necessary for the transmissions concerned."

The USSR delegate then read the following resolution:

"It is proposed that Working Group 5 B:

1. Allow a country two frequencies in different bands for the transmission of the same program on condition that these frequencies have been requested by the country and that the length of the reception zone is in accordance with the decision of Committee 4;
2. Allow a country one frequency for the transmission on one irrespective of the length of the reception zone, if the country has requested only one frequency in its requirements."

The Chairman pointed out that this resolution reflected only one of the points of view whereas his own proposal, now under discussion, was a compromise solution between both points of view. He proposed to take his own proposal first and on the proposition of the delegate for the USA it was agreed to take it in two parts.

Paragraph 1 of the proposal was accepted by a vote of 22 for and 6 against, whereas paragraph 2 was rejected.

The BSSR delegate insisted that there were two resolutions to be voted upon, since the USSR proposal had been supported by at least one other delegation, but the Chairman ruled that the proposal just accepted by Vote was exclusive of any other proposal to amend the methods of work of Working Group 5 B.

The Chairman's ruling in this regard was then submitted to the Committee for approval and was upheld by a vote of 21 in favour and 8 against; the BSSR delegate protested that this was a violation of the procedure established in the internal regulations of the Conference.

The meeting adjourned at 2 p.m.

The Rapporteurs:

A. Blanchette
A. Wolf

The Chairman:

H. Faulkner

DECLARATION OF THE DELEGATION
OF THE BIELORUSSIAN SSR.

The Chairman of the Committee has recommended to the Groups a working method which is based on an erroneous interpretation of Document No. 274. The result is that:

- 1) Two frequencies will be allotted to each reception area (ratio of the greatest difference to the smallest difference exceeding 2.5), independently of whether they are asked for, or not, by the country concerned, and of whether they are, or are not, rendered necessary by the conditions of wave propagation.
- 2) This procedure will lead on the one hand to an artificial increase in the total number of channel-hours asked for by the country concerned, and on the other hand will complicate to a considerable extent the subsequent analysis of the countries' requirements as made in accordance with the recommendations adopted in this connection at the Atlantic City Conference.

A working method of this kind is not in conformity with the terms of reference which the Conference has given to Committee 5, and should for that reason be rejected.

We are of opinion that the recommendations in Document No. 274 do not entitle us to accept any proposals other than those submitted by the USSR Delegation, that is to say:

1) To give a country two frequencies for transmissions to a reception area, the extent of which (within the meaning of Document No. 274) is such as to render obligatory the use of two frequencies in adjacent bands when propagation conditions are difficult, where such frequencies have been asked for on Form 4 by the country concerned.

2) If a country has asked for a frequency for transmissions to a reception area, the extent of which is not specified, it should be allotted a frequency, after specifying in agreement with the country concerned, the numbers of the areas for which the optimum working frequency has been chosen.

We have no right to allot supplementary frequencies or to increase the number of channel hours asked for by countries.

We wish the above declaration to be inserted in the Minutes.

ANNEX 2 to Doc. No. 422-E

STATEMENT OF THE DELEGATION OF FRANCE OVERSEAS TO BE
ADDED TO THE REPORT OF THE MEETING OF COMMITTEE 5 OF 13 DECEMBER
1948

The Delegation of the French Oversea Territories, in order to avoid any misunderstanding, wishes to explain the reasons for its votes at the last meeting of Committee 5.

To Question No. 1: "Shall Working Group 5 B continue to work in accordance with the same method?", the Delegation of France Overseas voted in the affirmative because, in its opinion:

a) It is undesirable to change working methods continuously, because in the end it results only in loss of time and in a lack of uniformity of results.

b) Up to the present, in the majority of cases, Working Group 5 B has not, for reasons of common sense, applied the definitions of Committee 4.

The Delegation of France Overseas has expressed its point of view on the subject sufficiently and thinks it unnecessary to go into further detail concerning the reasons for its position, which are the same reasons that made it oppose consideration of point No. 2: "if the statistical information presented by Group C included the recommendations of Group 5 B concerning the assignment of additional frequencies".

The Delegation of France Overseas has voted negatively in order to save time for Group 5 B, in order to economise frequencies, and for reasons of common sense, but it believes that with this interpretation of point No. 2 the vote did not exclude the study of the Russian proposal.

For this reason, when the Chair asked whether the Russian proposal, should be examined, the Delegation of France Overseas assented, without expressing thereby any disapproval of the Chairman's opinion, but only a different interpretation of the previously cast votes. In this respect, the Delegation of France Overseas believes that the most adequate measures against an increase in the number of frequencies recommended by Working Group 5 B, measures which, by the way, are being used by that Group, are:

1. To interview the delegations of the different countries in order to ascertain exactly the zone to be served;
2. To remit Form B-2 to all delegations in order to obtain from them their observations as to the number and order of magnitude of the frequencies proposed by Group 5.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 423-E

7 January 1949

Original: ENGLISH

Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

7th Meeting

15 December 1948

The meeting opened at 10:25 a.m. with Mr. Faulkner, U.K. in the Chair.

The Chairman proposed that the Committee proceed with the consideration of the Agenda and expressed the hope that it would be possible to complete it at this meeting. The Committee approved. In agreement with a decision taken at the last meeting, the Chairman asked the Soviet and BSSR Delegates to make a statement regarding definitions contained in Document 274. These statements follow.

"In the course of its last plenary meeting, Committee 5 decided to recommend the assignment of additional frequencies and corresponding channel hours to the countries, inasmuch as such a recommendation arises from the decision taken by Committee 4.

"Accordingly, a substantial number of countries are allotted additional frequencies for short distance transmissions and quick communications, which frequencies have not been requested and in no way correspond to the difficult circuits in question in the resolutions adopted at Atlantic City.

"This procedure is explained, to a great extent, by the fact that Committee 4 defined in an incorrect and vague way the cases in which these assignments are necessary.

"Furthermore, the Soviet Delegation proposes to send Document No. 274 to the Technical Committee to be reexamined with a view to a more exact definition of the question of assignment of additional frequencies.

"The Delegations of the U.S.S.R. and of the S.S.R. of Bielorussia reserve the right to raise in the Plenary Assembly the question of additional assignments proposed in Document No. 274."

The Chairman then submitted to the Committee the question whether Document 274 should be returned to Committee 4 for further study. The Committee decided by a vote of 19 to 13 not to do so.

The Chairman then proceeded with the original Agenda and made the following statement with regard to point c of Document 289:

Question (c)

The question of the fact that the recommended frequencies in most cases do not correspond with the frequencies requested by the countries.

"I think it might be worthwhile before discussing this question if I make a short review of the position as I see it as Chairman of this Committee. Under the present arrangements, Committee 5 will pass on to Committee 6 the following information:

- (1) Form A in respect of each country which summarizes in standardized form the programme requirements of the country and gives additional information as to the power in the antenna and the particulars of the antenna in use.
- (2) Form B, which summarizes the information of the requirements, country by country, giving particulars of the site of the transmitter, area and zone to be served, the distance of the transmission. The principal information on the form, however, is the frequency band requested by the country, the time of operation of the transmission and the recommended frequency band and time of operation. The recommended frequency band is the band which is arrived at by the reference to the only data we have officially available and that is the Optimum Working Frequency curves which have been approved for use for mass calculations by Committee 4. In addition to this information there will also be available a statement as to whether the country agrees or disagrees that the recommended frequency is satisfactory.
- (3) Form C is a band loading chart which plots the recommended frequency and the time of transmission for each band so that the total channels necessary to provide a service to all the countries on the basis of the recommendations can be found. This, therefore, will give information as to what proportion of the total demands of the countries, reckoned on a standardized basis, can be met.

"In making the plan it is assumed that all this information will be utilized by Committee 6 who alone have the task of using discretion in the allocation of the actual frequencies to be used in making the plan. They will therefore be in a position to decide any cases in which the country is not willing to accept the recommended frequency, whether or not the reasons advanced are such that it would be preferable to allot the required frequency rather than the recommended frequency and they will be in a position to discuss these questions with the country concerned in cases where full agreement is not reached as to the use of the recommended frequency. The Requirements Committee will then be placing at the disposal of the Plan Committee the full facts of each case which I, as Chairman of this Committee, regard as our prime function as a fact-finding Committee.

"If we use our discretion by any of the methods which have been proposed we withhold from Committee 6 information which, in my opinion, might be of great use to them in preparing a plan, since it might suggest a possibility of accommodating service in a less loaded band for which there would be no room available in another band.

"It is clear that the curves in use give only approximate value since no propagation data can be said to be precise, but nevertheless it enables the recommended frequencies to be standardized on the soundest basis that is available to the Conference and leaves full discretion to Committee 6 to take whatever action it considers best, no doubt in consultation with the country concerned, when allocating its frequencies."

The Delegate for Roumania, as a member of Group 5-B contested the fact that the difference between frequencies requested and frequencies recommended should reach such a high ratio as 60-80% of all cases. If this be true, it meant that Group 5-B had been arbitrarily recommending frequencies. In resume, he stressed the necessity for Group 5-B to recommend the frequency requested by each country in all cases of very small discrepancies between requested and recommended frequencies. Czechoslovakia supported this position.

The Delegate for Canada then made the following proposal:

"On Wednesday afternoon, December 8, the Canadian Delegation put a proposal to Working Group 5-B; this proposal at least in part, was a solution to question a, part 3, of Document 289. The Canadian Delegation requests that this proposal be included in today's minutes."

The Delegate of India requested that the Canadian Delegate read the proposal.

The proposal which was put to Working Group 5-B is as follows:

- "1. Determine which countries desire to have Working Group 5-B calculate their frequencies. This in effect will constitute approval of the work of 5-B. If possible a delegate of the country should be present when the calculations pertaining to his requirements are being made.
- "2. Countries not included in "1" shall calculate their frequency requirements jointly with a representative of Working Group 5-B using:-
 - (a) Conference Propagation Curves.
 - (b) Any additional data or information they may feel is applicable, as bases for the frequencies selected. Upon completion, this would also constitute approval by the country of the form E2."

The Delegate for the U.S.S.R. felt that the report of Working Group 5-C had centered the attention of the various delegations on the necessity for a closer examination of the frequencies recommended by Group 5-B, by raising a number of questions concerning the working methods of that Group. Soviet propagation experts had made a serious analysis of the work of 5-B and would soon publish their findings. The Soviet Delegate then passed on to criticize severely the work of Group 5-B, repeating in part arguments which are found in Document 289.

In conclusion, he recommended:

- (1) That if frequencies requested differ from those recommended by not more than one band, it would be expedient to keep the original request;
- (2) That in establishing a Plan, Committee 6 take into account the frequencies requested by countries but only if they so insist.

The Delegates for Czechoslovakia and B.S.S.R. supported this recommendation.

Before passing on to other matters, the Chairman wished to know the attitude of the Committee with regard to the Canadian proposal.

The Delegate for India supported the Canadian proposal.

The Delegate for the B.S.S.R. then insisted that the proposals be voted upon in chronological order, namely, that of the Soviet Union, that of the U.K. proposed at a previous meeting and finally that of Canada.

Mr. Axon of the U.K. felt that his proposal regarding the work of 5-B had been annulled by the vote taken at the previous meeting in this regard.

The Chairman explained that the decision taken at the last meeting applied only to point 3 B of Document 289 and not to point 3 C.

The Argentine Delegate recalled that a proposal, known as proposal A, had already been submitted to, and discussed by, Working Group 5-B on December 12. He asked Mr. Walker what had happened to this proposal. Mr. Walker pointed out that, if the Committee is to change the working methods of 5-B at each meeting, all the work of this Group would become derisory and futile. He explained at length the working methods of Group 5-B, which, furthermore, had received the approbation of the Chairman of this Committee as well as of the Chairmen of the Working Groups. The report of Mr. Smirnov, he felt, contained many criticisms, but none of a constructive nature. He then refuted the arguments and allegations contained in page 4 of Document 289.

The Delegate for the French Overseas Territories opposed the Canadian proposal and fully supported Mr. Walker. He proposed to repeat the vote taken at the last session of the Committee concerning the work of 5-B.

The Delegate for the U.K. was very pleased to hear that the Roumanian Delegate proposed to have the requirements of the countries respected as frequently as possible. Furthermore he pointed out that Form B2 prepared by 5-B would contain all the information required. He felt that this information would probably be of even greater use to Committee 6 than the final analysis made by Group 5-C, since these Forms contained data concerning both the frequencies requested and the frequencies recommended, along with the remarks of the countries concerned. In conclusion, he supported the Delegates for the French Overseas Territories and the United States in that Group 5-B should be allowed to carry on its work.

He also suggested that the Secretariat make 2 copies of each Form B2, one to go to Committee 6 immediately.

The Canadian Delegate offered to withdraw his proposal and, in this connection, made the following statement; after which he supported the position taken by Mr. Walker.

"The Canadian Delegation wishes to point out that a request was made to have the proposal of December 8 included in the minutes of today's meeting. The Canadian Delegation believed that at that time (December 8) the proposal was quite applicable, but now at this late date, it may not be desirable to change the present methods in Working Group 5-B. The proposal was made for the following reasons:-

1. Working Group 5-B would have additional help.
2. Working Group 5-B would have approval of its work.
3. Working Group 5-B would not be recommending frequencies that are impossible for a country to use.
4. Working Group 5-B would not be recommending more simultaneous frequencies than a country has transmitters.
5. If a delegate was present, the intended zone of reception could be clarified.
6. The presence of a representative of Working Group 5-B would ensure that the requirements were uniform and that the directives of Committee 4 were adhered to.
7. One interview with each country would be all that was necessary to settle many problems.
8. And finally, the Canadian Delegation believed this was a compromise proposal.

"However, if the Delegations who supported the proposal are agreeable, the proposal will be withdrawn and the Canadian Delegation will support the opinion of Mr. Walker and many others on the suggestion that Working Group 5-B continue in its present manner without any reservations."

The Delegate for the Soviet Union repeated that he had been painfully surprised by the low technical standards of the work of Group 5-B. As a member of this Committee, he felt ashamed that the work of our Committee should be so mediocre. If, as Mr. Walker said, the requirements and comments of the countries are to serve as the final basis for the work of Committee 6, what would then be the use of the work accomplished by 5-B? These remarks were supported by the Delegates for Roumania and Albania, the latter wishing to see the work of 5-B assume a more realistic approach.

The Delegate of Albania said that Working Group 5-B should, in its scientific and practical work, make an effort to be as realistic and as fair as possible. He said that the Form B submitted by Group 5-B regarding Albania's needs contained recommendations which differed greatly from the requirements submitted. He added that the British Delegate agreed with the Roumanian Delegate that the recommendations of Group 5-B should approximate as closely as possible the requirements of each country. On the other hand, he said, the British Delegate had expressed the opinion that Committee 6 should take into consideration the requirements of the countries and not the recommendations of Group 5-B. The Delegate of Albania asserted that he accordingly did not see what good Working Group 5-B was if its recommendations were not to be used as a working basis for Committee 6 at the time of the drawing up of the Plan. He thought that Committee 5 should take a decision which would direct the work of Group 5-B toward a realistic course in order that it might serve as a working basis for Committee 6.

In conclusion, he supported the Soviet proposal and declared his opinion that it did not change the terms of reference of Group 5-B but rather constituted a useful and indispensable directive for the orientation of the work of that Group toward a fair and practical course.

The Delegate of the U.S.A. explained that the first and only condition which would give value to our work is that of research undertaken on a uniform basis, as provided by the propagation curves approved by the Conference. Otherwise it would be impossible to make a plan.

The Chairman then proposed that, since the resolution submitted by the Delegate for the French Overseas Territories was more general in scope than that of the Soviet Union, it overrode the latter and should be voted upon first. Furthermore, the French Overseas Territories' motion was concerned with all of the activities of Group 5-B.

The Soviet Delegate, supported by the B.S.S.R., was of the opinion that his proposal should be voted upon first and that one proposal did not exclude the other, as seemed to be the opinion of the Chairman.

The Chairman was not opposed to having the Soviet motion voted upon first if that were desired and asked the Committee's opinion in this regard. The Soviet proposal was rejected by a vote of 26 against and 10 for.

Upon the request of the Chairman, the Delegate for the French Overseas Territories read his proposal, the text of which follows:

"Committee 5 decides definitely that Working Group 5-B must continue its work according to methods now utilized."

This was adopted by a vote of 28 in favour to 10 against.

The Delegates for the U.S.S.R. and B.S.S.R. then made the following statement:

"In the course of its last plenary meeting, Committee 5 decided that Working Group 5-B must abide by the definitions contained in Document 274 whenever it was a question of formulating recommendations on the subject of frequencies.

"Our Delegations think that this decision refers to the requirements submitted by all the countries. However, we have noted that recommendations have not been formulated on the basis of the definitions of the Document in question for countries whose requirements have already been examined by Working Group 5-B before receiving Document 274 from Committee 4, viz., before about 7 December 1948.

"One could not admit the situation which has arisen in Group 5-B. In another connection, it would be advisable to submit the requirements of all the countries to a uniform study and to analyze them in order to make sure of their agreement with the resolutions adopted at Atlantic City.

"Based on these considerations, our Delegations protest against such a discrimination of certain countries. Furthermore, they recommend that the Plenary Assembly notify the Chairman of Group 5-B to remedy this situation immediately.

"The requirements in the high frequency bands submitted by some countries such as the British Colonies, South America, etc., have been met, although the reception areas are at distances not exceeding 0-100, 0-300 km, and can readily be served by means of frequencies in the tropical band and by the use of decimetrical waves.

"As this procedure also contradicts the recommendations of Atlantic City, we believe it is necessary to analyze separately the requirements submitted by these countries and to recommend assignment to them of frequencies in the appropriate tropical bands or frequencies in other broadcasting bands."

The Committee proceeded to consider the remaining items on the Agenda and in connection with new target dates, the Chairman suggested that it would be preferable not to set a deadline for the work of the various Groups, but that they do their utmost to the task of completing their analyses. The countries were also urged to return Forms B2 as soon as possible and that top-priority should be given to this task. The Chairman also suggested that ways and means of passing the information on Forms B2 to the Planning Committee should be considered within the Working Groups.

The meeting adjourned at 1:45 p.m.

The Reporters:

A. Blanchette
A. Wolf

The Chairman:

H. FAULKNER

(Note from the Secretariat: This Document was received by the Secretariat on the 7th of January 1949)

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 424-E

7 January 1949

Original: ENGLISH

Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

8th Meeting

23rd December 1948

The Committee met at 11:30 a.m. with Mr. Faulkner (United Kingdom) in the Chair.

The Committee then approved the Agenda proposed by the Chair (Document 359).

In connection with the minutes of previous meetings, Mr. Smirnov, delegate of the U.S.S.R., felt that discussions were being summarized too briefly, and requested that henceforth they be presented in a more detailed manner. The Committee did not object.

The Chairman then gave the floor to Mr. Aurini, Chairman of Working Group 5A, who read a report on the work of his Group. This appears in Document No. 395.

Consideration was then given to part 1 of Mr. Aurini's report concerning those countries which had not sent in the necessary information regarding the number of transmitters and receivers. The Chairman asked the delegate of the B.S.S.R., as one of the countries concerned, if he would now be in a position to supply these data.

In reply, the B.S.S.R. delegate asked why the report of Working Group 5A did not contain an indication as to how much use was made by Group 5A of information contained in the yellow and white documents. He then went on to emphasize that, with regard to transmitters, Bielorussia had submitted all pertinent information in its Form 4.

The United Kingdom delegate then pointed out that, according to its terms of reference, Working Group 5A had been instructed to get information concerning the number of receivers and transmitters in each country.

The Chairman again asked the B.S.S.R. delegate if the information was on its way.

The U.S.S.R. delegate pointed out that, in the opinion of the Soviet delegation, all information necessary for the elaboration of a plan was submitted by Bielorussia and the Soviet Union in their original Forms 4 and in several other documents presented before the beginning of the Conference. For that reason, the Soviet delegation did not submit the data requested concerning the number of transmitters and receivers, since this information was not considered opportune or necessary to the development of a plan.

The Chairman then explained that, since all the information requested would not be made available, Working Group 5A would not be able to complete its terms of reference in this connection. He therefore proposed to mention this deficiency in the report of Committee 5 to the Plenary Assembly.

The Chairman also asked whether steps should be taken to get information concerning transmitters and receivers from those countries which were not attending the conference.

In this regard, Mr. Aurini stated that appropriate telegrams had already been sent to each.

The Committee then passed on to consideration of part 2 of Mr. Aurini's report; Mr. Axon (United Kingdom delegate) who had been dealing with this part of the work in Working Group 5A was asked to comment on it. Mr. Axon's comments have been incorporated in Document 395 and will appear in the final report of the Committee.

The Committee decided to submit these observations to the Plenary Assembly, recommending acceptance in those cases having extenuating circumstances and leaving to other countries the possibility of explaining why they requested such changes after the 5th November deadline.

The Committee agreed.

Mr. El Bardai, delegate of Egypt, explained that the Egyptian delegation arrived on November 3rd and was on the high seas when the November 5th deadline was set by the Conference. The delegation was therefore not in a position to submit its requirements before November 5th.

It was decided to recommend the acceptance of the Egyptian requirements as if presented before the November 5th deadline.



The U.S.S.R. delegate then explained that much time had elapsed since November 5th and that the countries had had sufficient time to make any changes which they deemed necessary. Working Group 5A therefore should accept no more changes as from tomorrow.

After a lengthy discussion on this subject, in which took part the delegates for the U.S.S.R. French Overseas Territories, Canada and the United Kingdom, it was agreed that, with regard to Yemen, Saudi Arabia, Bulgaria and Yugoslavia, the deadline should be December 27th; for all other countries, the deadline would be to-day, it being understood that this deadline applied only to Working Group 5A.

II

In the absence of Mr. Walker, Chairman of Working Group 5B, Mr. Mather, Canada, who had been appointed acting Chairman, presented the report of this Group, the text of which appeared in Document No. 386.

After this report was read, the delegate for the B.S.S.R. raised the question of reconsidering Forms B in the light of Document 274. He hoped that this question would be included in the report of Working Group 5B. Furthermore, the report should specify those countries which had completed Form B for all seasons, and those which had done so for the June season only.

The U.S.S.R. delegate in turn commented on Mr. Mather's report. He mentioned four points in particular:

- (1) He asked why the working hours of Working Group 5B had been reduced yesterday to half a **day only, when there** was so much work left to be done.
- (2) He mentioned that it would be desirable to give the countries a deadline of one week, during which to consider Form B2, submitted to them for approval.
- (3) He supported the statement of the delegate for the B.S.S.R. concerning reconsideration of requirements in the light of document 274, feeling that it would be wrong not to allow the 15 countries which have presented their requirements before publication of document 274, to have their requirements reconsidered.

- (4) He pointed out that Working Group 5B does not correctly assign frequencies for distances of less than 800 km. This matter should be discussed, and a decision taken in this regard by the Committee.

Mr. Mather replied by stating, in regard to point 1, that the work of the Group depended largely on the cooperation of each delegation. If these did not cooperate, the Group had to slow down its work. Furthermore, he pointed out that the B.S.S.R. delegate had approved the half working day proposed by Mr. Walker and accepted by the Group.

He accepted the suggestion contained in point 2 of Mr. Smirnov's statement, and the Committee agreed.

He also agreed to point 3 above, provided that an appropriate list of countries be given to Working Group 5B. Mr. Smirnov promised to provide this list.

With regard to point 4, he pointed out that Working Group 5B was working with the propagation curves and the frequencies below 6 Mc/s had been recommended where necessary.

The delegate for the French Overseas Territories recommended that Working Group 5B be allowed to continue its work as in the past, and in accordance with the vote taken in this regard at the Committee's last meeting. On the subject of frequencies outside the short wave broadcasting bands, he felt that this question should be left to Working Group 6B which had just been established in order to study this problem.

The B.S.S.R. delegate explained that, in regard to the working hours of Group 5B, no decision had been taken. The question had only been raised. Furthermore, he mentioned that a deadline of 1 week was more than enough; 2 or 3 days should be quite sufficient in his opinion.

There followed a general discussion concerning the recommendation, by Working Group 5B, of frequencies in the medium and very high frequency bands for short distances. It was acknowledged that Working Group 5B did not possess all the technical data and directives necessary to decide this question adequately, and that the Group should continue its work according to methods used in the past, limiting itself to indicating, in the frequency column of Form B2, vertical incidence frequencies, or those pertaining to

other distances, when necessary. Since the bulk of the problem came under the terms of reference of Working Group 6B, especially created to handle this question, it was decided that this phase of the question be left in its hands.

The delegate for the U.S.S.R. then proposed to add to the final report of Committee 5 the following paragraph: "Group 5B did not have sufficient technical data to carry out recommendations below 6 Mc/s and therefore was not in a position to recommend frequencies for short distances. Committee 5 calls the attention of Committee 6 to this situation, so that Committee 6 can consider these frequencies more carefully".

The Committee agreed.

III

The floor was then given to Mr. Smirnov, Chairman of Working Group 5C who read the following report:

"Up to December 23 the Working Group 5C has filled in Forms C, reflecting the band loading for each country, for the following numbers of countries:

SEASON.	<u>PARTLY COMPLETED</u>			<u>COMPLETED</u>		
	MAX.	MED.	MIN.	MAX	MED.	MIN.
June	13	16	16	15	15	13
Equinox	21	23	23	2	1	-
December	20	20	20	3	3	3

"The work of Committee 5, therefore, is fully completed for the June Season for the following countries:

- | | |
|----------------------|------------------------|
| 1. Switzerland | 9. Guatemala |
| 2. Albania | 10. Peru |
| 3. Finland | 11. Roumania |
| 4. Bielorussian SSR. | 12. S.C.A.P. |
| 5. Costa Rica | 13. South Rhodesia |
| 6. Ethiopia | 14. Tangier |
| 7. Greece | 15. U.S.A. Territories |
| 8. Monaco | 16. U.S.A. |

"Data for the other countries has not yet been received from Group 5B.

"From the foregoing information it can be seen that the volume of work accomplished is not very large; however, Group 5C could have accomplished more if more data had been received from Group 5B."

This report was accepted without discussion.

IV

It was decided that Working Groups A, B and C should work during the week between Christmas and the New Year.

The Chairman then proposed that discussion of his draft report to the Plenary Assembly be postponed until a future meeting.

The meeting adjourned at 1.45 p.m.

The Reporters:

A. BLANCHETTE

A. WOLF

The Chairman:

H. FAULKNER

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 425-E

7 January 1949

Committee 5

Corrigendum to Doc. No. 382-E

We request the following correction to be made to the Document No. 382-E of the Soviet Delegation.

In Table I, in column 3, for Vatican it should read 80 and in column 12, also for Vatican it should read 12.

The relative percentage of Area for Monaco shown in Table I as 10% should be corrected to read 0,00001 %.

In the same Table the area of the Peoples' Republic of Roumania is given as 99.6 thousand sq. miles; should be corrected to read 95,6 thousand sq. miles.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 426-E

8 January 1949

Original: FRENCH

Committee 2

PEOPLE'S REPUBLIC OF ALBANIA

Power of Proxy

The Delegate of the People's Republic of Albania announces that, in the event that it becomes impossible for him to take part in the work of any Committee or that he is forced to be absent therefrom, he will be represented in the appropriate Committee by the Delegation of the U.S.S.R., with full voting powers.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 427-E

8 January 1949

Mexico City, 1948/49

NOTICE FROM THE SECRETARIAT ON THE SUBJECT

UNITED STATES TRANSIT VISAS

Certain formalities in connection with issuance of U.S. transit visas will normally result in a delay of several days. Participants in the Conference who may require such visas are urged to submit their requests to the U.S. Consulate one week prior to their proposed departure.

L.E. DOSTERT
Secretary of the Conference.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 428-E

8 January 1949

Original : ENGLISH

Committee 2

P O L A N D

The Delegation of the Hungarian Republic is authorized to represent the Delegation of Poland at meetings of all Committees on which the latter is represented, whenever the Delegation of Poland is unable to be present.

The above authorization comprises the right of the Delegation of the Hungarian Republic to vote on behalf of the Delegation of Poland, under the conditions defined above.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 429-E

8 January 1949

Original: ENGLISH

Committee 2

Corrigendum to Document No. 377-E

No. 44, page 4, Paraguay, should have been as follows:

44. Paraguay - Letter of Credentials signed
by the Minister of Foreign Affairs and
Cult.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 430-E

8 January 1949

Original: ENGLISH

Committee 2

EL SALVADOR

Proxy

In view of the temporary absence of the Delegation of Guatemala, the proxy of the Delegation of El Salvador, hitherto exercised by the Delegation of Guatemala, is now, upon instructions received by telegram, conferred upon the Delegation of Uruguay.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 431 - E

8 January 1949

Original: FRENCH

Committee 2

H U N G A R Y

Proxy

The Delegation of the Republic of Poland is authorized to represent the Delegation of Hungary at the meetings of all Committees in which the latter takes part, whenever the Delegation of Hungary is unable to attend.

This authorization confers upon the Delegation of Poland the right to vote in the name of the Delegation of Hungary in the meetings of Committees under the above mentioned conditions.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

México City, 1948/49

Document No. 432-E

8 January 1949

Original: FRENCH

T U R K E Y

Comments regarding the information concerning
Turkey appearing in the Conference documents

The Delegation of Turkey notes that, in spite of the information furnished by the Turkish Broadcasting Administration on different occasions, whether in accordance with the decisions of the International High Frequency Broadcasting Conference at Atlantic City or in reply to the requests of the Planning Committee (Geneva and Mexico City Sessions), certain errors exist in the figures for frequencies registered, area, population, and imports and exports as given in Appendices B of the Reports of Geneva and Mexico City, as well as in other Conference documents. We have thought it advisable accordingly to reproduce the data in question in accurate form as follows:

1. Frequencies registered: 12 (see Forms 4),
2. Information requested in Chapter VII of the Report of the Planning Committee (Geneva):

a)

No. of the Requirement	Trans-mitter	Pro-grams	Time GMT	Area to be served	Azimuth of the Principal beam in Degrees from True North
1 and 2	Ankara I	A	05-22	Central and Southern Europe, Balkans and Near East	Omnidirectional
3, 4 and 5	Ankara II	B	01-04 12-14 17-19	North America (U.S.A. and Canada)	327

6,7 and 8	Ankara II	C	11-12 16-17 22-24	South America; (Brazil, Argentina, Paraguay, Chile)	249
9, 10 and 11	Ankara II	D	04-06 10-11 24-01	Far East (China, Japan)	64
12 and 14	Ankara II	E	07-08 14-16	India	104
13 and 15	Ankara II	F	08-10 21-22	Australia	104
16	Ankara II	G	19-21	Western Europe	294

b) Since our requirements, in the common interest of all countries, have been reduced from the beginning, to the strictly necessary minimum, it is quite impossible to give an exact order of importance or priority to the programs above indicated.

c) Number of transmitters in service:
1 20 kW transmitter (Ankara I)

Number of transmitters under construction:
1 100 kW transmitter (Ankara II. It is planned to bring this transmitter into service in April 1949).

d) For information as to antenna characteristics, see our Form 4 A-2 and 4 A-4 attached to our requirements.

e) 1. Area of the country: 299 891 square miles.
2. No colonies.
3. Population of country: 18 790 174 (1945 census).
4. No colonial population.
5. Insufficient information to give an exact figure.
6. Official language: Turkish
7. No colonies.
8. Geographical position and characteristics of the country: Turkey extends from East to West between 44° 47' 50" and 25° 39' 52" East longitude, and from North to South between 42° 05' 56" and 35° 49' 0" North latitude. The shape of the

country suggests a rectangle whose width varies between 500 and 700 km. and whose length exceeds 1500 km. The country is bordered on the North by the Black Sea, on the West by the Aegean, on the South by the Mediterranean, Syria and Irak, and on the East by the USSR and Iran. Turkey is a mountainous country. Its eastern part is bordered by mountains reaching 5 165 m. The altitude of the chains extending to the North and South along its shores exceeds 3 500 m. The center of the country, all the corners of which are surrounded by mountains, is in the form of a desert plateau reaching an altitude of 1 000 m.

9. Importance of the role played by broadcasting: To keep the world in general and Turkish nationals living abroad informed as to social, cultural and economic issues in Turkey. To make Turkey known to the world in all aspects and to encourage the possibilities of reciprocal knowledge and understanding. To give authentic and objective information as to world events and to contribute to the cause of peace

3. Year	Imports	Exports	
1946	223 931 229	432 094 468	Turkish pounds
1947	685 003 317	625 243 952	" "

4. There are no short wave receivers manufactured in Turkey. Number of receivers in use: 232 500. Almost all of them are equipped with short wave bands.

5. Percentage of illiteracy: 64.8%

Number of pupils in secondary schools: 91 700
Number of students in universities, institutes and technical schools: 87 400
Number of secondary schools: 351

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 433-E

7 January 1949

Original: SPANISH

Committee 1

B R A Z I L

Proposal intended to expedite the termination of the Conference

This Conference, which has been meeting since 22 October 1948, has not yet reached any concrete proposals to enable it to attain its objective of preparing a frequency assignment Plan for the various countries. For this reason, the Delegation of Brazil takes the liberty of submitting the following considerations to the Delegates:

- 1) that it is impossible to continue this situation indefinitely;
- 2) that after 3 months' work it is now time that at least the principles of priority to serve as a guide in the preparation of the Plan referred to were determined;
- 3) that much time is lost in discussions which, so far as results go, are absolutely useless both in the Committees and the Plenary Sessions of the Conference, some speakers allowing themselves to be carried away by the heat of debate or other considerations;
- 4) that each week represents an expenditure of 108 000 Swiss francs, or approximately 186 300 Mexican pesos, and that therefore the cost of this Conference up to its end, which seems unpredictable, will reach astronomical figures;
- 5) that the Delegations have their personal budgets and these are considerable, which is equivalent to saying that the expenditures of the Conference added to those of the Delegations represent a substantial burden on the various Administrations.

For the which reasons the Delegation of Brazil:

P R O P O S E S :

- A) that after January 20 no proposal of a Plan be accepted by the Conference;
- B) that after this date, or between January 20 and 31, one or more Plenary Assemblies be held for the purpose of

considering such plans as may have been submitted referring only to the number of channel-hours assigned to each country: the said plans to be considered in succession, and that which obtains a unanimous or majority vote of the Conference to be the Plan adopted;

- C) that under these conditions and upon acceptance of the Plan as provided in the previous paragraph, the present period of the Conference shall be closed; notwithstanding which, the Conference shall be represented on a Revising Committee or Committee 10, which shall continue its work in Mexico City. The said Committee shall be composed of one or more members of each Delegations, and its task shall be the study of technical characteristics, such as the distribution of the channel-hours assigned to each country in the various bands, making use, as much as possible, of the results of the studies effected by the various Committees of the Conference;
- D) that the second period of the Conference shall be closed once the Plan thus prepared is completed, and the result of the work sent to the various Administrations for their approval. The duration of the work of the Revising Committee of Committee 10 shall not exceed two weeks, beginning with the date of closing of the first part of the Conference, for which provision is made in paragraph C of the present proposal.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/1949

Document No. 434-E

10 January 1949

Original: ENGLISH

Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

Three Working Groups were set up to undertake the uniform scheduling of the requirements of all the countries in a form suitable for use by the Plan Committee. The detailed terms of reference of these three Working Groups were set out in Document 122.

1. Working Group 5A

1.1 Working Group 5A, which was set up to standardize the programme requirements of each country and produce this and other relevant information on standard forms, has completed its task. These requirements were discussed with representatives of the different countries concerned, and the resulting forms are available for the use of any other Committee which may need them. It should be reported that some of the countries have increased their requirements above those originally submitted in Forms 4, and the forms have been annotated in order to bring any such increases to the notice of the Plan Committee. It should also be reported that some countries have requested a revision of their requirements which, since they were received after the 5th November, the Committee is unable to accept without the consent of the Plenary Assembly. A list of these countries is given in Appendix A, with recommendations for acceptance where it is known there are extenuating circumstances.

1.2 It must be reported that a number of countries have been unwilling to supply information which was requested of them as regards the number of transmitters in their countries, and to this extent, Working Group 5A has not been able to complete its work in accordance with its terms of reference.

1.3 Working Group 5A, in filling in Form A, has used for some countries not only Form 4 but also information received in connection with the critique of Appendix A of the Geneva Report and other information as well. The U.S.S.R., Bielorussian and Roumanian Delegations protested against the use of this additional information at a meeting of Committee 5, but by a majority the Committee did not agree and approved the work of Working Group 5A in this respect, since no date prior to November 5 had been fixed as the last date for the receipt of information or requirements.

1.4 I should like to take this opportunity of expressing the thanks

of the Committee to Mr. Aurini, Chairman of Working Group 5A, and the members of that Working Group, and in particular Mr. Axon of the United Kingdom Delegation, for the very efficient way in which they have carried out their work. It is of interest to note that the Group held 16 meetings in eight days and during that time assembled, coordinated and revised the Forms 3 and 4 of 53 countries and overcame the many difficulties which it met with efficiency and despatch.

2. Working Group 5B

2.1 Working Group 5B was set the task of establishing or verifying the order of frequencies requested by the countries to meet their programme requirements and to correct the requirements so that they corresponded fully with the directives of the Atlantic City Conference. The Committee met with some delay owing to the necessity of agreement by Committee 4 on the propagation curves to be used in order to calculate the appropriate frequencies to be used for the different services. The December and Equinox curves were made available on the 11th November and from that date the work has proceeded.

2.2 It was also found necessary to ask the Technical Committee to define the terms "difficult circuit" and "reception area" in order that the directives of the Atlantic City Conference as regards the use of more than one frequency per programme could be uniformly applied. A directive on this question is contained in Document 274, Annex A, and reached Committee 5 on the 1st December. I have to report, however, that the terms of this document led to a considerable amount of discussion in the Committee since their strict application entailed the recommendation, in some cases, of a larger number of frequencies than had been requested by the country.

2.3 At one of the meetings of Committee 5, the Soviet Delegation made a statement that Working Work 5B was not applying a uniform treatment to the requirements of the different countries in regard to the recommendations of the additional frequencies on the basis of the directives of Committee 4. The Soviet Delegation pointed out that additional frequencies had not been recommended for some of the countries although this should have been done on the basis of this directive. A discussion in the meeting brought out the fact that this situation had arisen because the requirements of some countries had been scheduled before the receipt of the directive from Committee 4, and Committee 5 decided to ask Mr. Smirnov, Chairman of Working Group 5C, to furnish a list of these countries in order that Working Group 5B could amend those recommendations accordingly so as to give the necessary additional frequencies to those countries. The Soviet Delegation expressed its disagreement with the **recommendations** for additional frequencies which were given by Working Group 5B on the basis of the directives of Committee 4.

It expressed the opinion that the task of Committee 5 was to decrease the requirements submitted by the countries, which reduction should be made on a technical basis, but should not, under any circumstances, increase them as such an increase would only cause greater difficulty in the further work of the Conference. Committee 5 did not agree with the proposal. Neither did Committee 5 agree with the proposal of the Soviet Delegation to refer back the directives to Committee 4 for reconsideration because of the imperfections from which the U.S.S.R. Delegation considered these directives suffered. This decision was reached on the grounds that the functions of Committee 5 were regarded as fact finding and that it was for Committee 6 to make the final allocation, the particulars of both the demands and the recommended frequencies being passed to that Committee.

2.4 There has also been some criticism of the work of the Committee which has culminated in Document 334 of the U.S.S.R. Delegation. These criticisms have been fully discussed in Committee 5, which, by a majority vote, decided that the work of the Committee should proceed on its original lines. The view of the majority of the Committee is as follows:

The criticisms summarized in Document 334 are made on the grounds that the frequencies recommended by the Committee vary materially from the frequencies requested by the various countries. It should be stated first of all that the frequencies recommended are, in fact, the optimum working frequencies required to carry out the specific services as calculated from the OWF curves produced by the U.S. Delegation and recommended by Committee 4 for use for mass calculations which do not require great accuracy (see Documents 89, 158 and 192). It is understood that these curves were produced subsequent to Circular No. 462 of the N.B.S. and that in their production advantage had been taken of more recent advances in the knowledge of ionospheric conditions. It is well known that propagation data on all frequencies are being gathered together continuously and that the last word in the methods of calculation of propagation conditions has, by no means, been said; but engineers must always be willing to take advantage of new information as it becomes available.

The majority view of Committee 5 is that it would be doing a disservice to Committee 6 if it used discretion and departed from the value given by the curves and thus recommended frequencies other than those given by the curves which have been agreed for its use. Such a procedure would be tantamount to withholding vital information from Committee 6. Committee 5 regards itself as a "fact finding committee" and considers that it is important that all the facts regarding the services required should be uniformly formulated and that the Plan Committee is the proper authority to use discretion, no doubt in consultation with the country concerned, as to whether the "required" or "recommended" or any other frequency should be actually allocated for a particular service.

On the question of the accuracy of the curves, though this is entirely a question for Committee 4, it is pointed out that even if the percentage accuracy is as stated in Document 334, it would not be sound practice to depart from the findings in one direction or the other, since there is no guarantee that such a departure would not be in the opposite direction from the true value, thus increasing the possibility of error to double that suggested in the Document. As regards the accuracy of the curves provided by the U.S. Delegation, it would be more exact if these had been worked out for every day of the year and every unit of the sun spot cycle, but a compromise must be made between accuracy and practicability and the tremendous amount of work involved in producing curves for every possible set of conditions makes such a procedure quite impossible in the short time available.

As regards the criticism that the full theoretical number of curves has not been produced, it should be stated that whenever it was found that a particular service was not catered for by the curves already produced, additional curves were willingly drawn by the U.S. Delegation and nearly every service has now been covered in this way.

In conclusion it should be stated that if any country is dissatisfied with the calculations produced, it is quite open for it to produce its own figures for the information of the Plan Committee, and discuss the matter when the precise allocation of frequencies is being determined.

2.5 Committee 5 has also discussed the question as to the stage at which Forms B2 should be submitted to countries for their approval. Two points of view were expressed, the first to submit these forms to the countries after the work of Working Group 5C in order that no time should be lost in allowing Working Group 5C to carry on with its task. The second point of view expressed by the Working Group 5C was to give these forms to the countries directly after the work of Working Group 5B in accordance with the terms of reference. It was finally decided by the Committee that Working Group 5B should maintain its terms of reference that the forms should be sent direct to the countries immediately on completion of the forms while making every endeavour to avoid any waste of time.

2.6 Working Group 5B did not have at its disposal sufficient technical information to make definite and complete recommendations for frequencies outside the bands with which this Conference is concerned for short distance services. Committee 5 calls the attention of Committee 6 to this situation so that Committee 6 can consider these frequencies more carefully.

2.7 It should be stated that the work of Working Group 5B was rendered more complex by the necessity of applying the directives of Committee 4 as regards difficult circuits and areas of reception and also areas served by a transmission.

2.8 As the work in Working Group 5A neared its completion, it was arranged with the very willing cooperation of the Working Group that they should transfer their activities to Working Group 5B and their valuable assistance has been exceedingly helpful.

2.9. It was early found during the course of the work that the bottleneck in the output of this Committee rested in the fact that only one set of Optimum Working Frequency curves, which the Technical Committee had accepted for use by Committee 5, was available. The United States Delegation undertook to make a second copy by hand of these curves which they did in such a way as to allow of their later reproduction by a photographic process. It should perhaps be mentioned that this was not possible with the first set of curves owing to the very different varieties of ink which had been used in their production. Arrangements were then made during a weekend to have the second set of curves photographically produced in such numbers as to allow each Delegation to be provided with one copy and for other copies to be available for the use of Committee 6, and additional copies for the use of Working Group 5B as required. Since the curves for the June median period were most urgently required, it was decided to reproduce only the curves for this season, with the hope that further information might be available which could be included on the curves of the other seasons before their reproduction.

2.10 At the time of writing this report most of the calculations for the June season have been completed. All that remains is for a few countries to cooperate by picking up their Forms B2 for approval and return to the Group.

2.11 This opportunity is taken of expressing the warm thanks of the Committee to the U.S. Delegation for the valuable part they have played in providing, through Committee 4, the OWF propagation curves which have been invaluable to the Committee in its work, and for the way in which they have made every effort to produce additional curves as soon as these were found to be necessary to complete the work of the Committee.

2.12 During the course of its work, it has been found necessary to keep the Working Group organization under constant review in order that the maximum amount of progress might be made, and I have to express the thanks of the Committee to Mr. Walker, the Chairman of this Working Group, who has been responsible for the efficient organization which has resulted and to Mr. Mather, who suggested the idea on which the organization was based and assisted largely in carrying it out, and to all the members of the Working Group who have regularly assisted in its labours.

Working Group 5C

3.1 Working Group 5C, which was set the task of scheduling the requirements, as amended by the directives of the Atlantic City Conference and the Technical Committee of this Conference, has organized its work by dividing its personnel into three sub-groups, each under a Chairman, the sub-groups being responsible for the June, Equinox and December seasons, each sub-group having members who made themselves responsible for the minimum, median and maximum sunspot periods in each of these seasons. It has been found possible in this way, by this organization, to keep up to date, with only one or two days' delay with the work as received from Working Group 5B on Forms B2.

3.2 I take pleasure in expressing the thanks of the Committee to Mr. Smirnov, the Chairman of this Working Group, for the excellent way in which he has organized this task which entails the presentation of a very large amount of material, and to the other members of the Working Group who have regularly assisted him.

4. As a result of the work of Committee 5, the following information will be passed on to Committee 6 for its use in preparing a plan:

4.1 Form A which summarizes in standardized form the programme requirements in respect of each country and gives additional information as to the power in the antenna and the particulars of the antenna in use.

4.2, Form B2 which summarizes the information of the requirements of each country, giving particulars of the site of the transmitter, area and zone to be served and the distance of the transmission. The most important information on the form, however, is the frequency band requested by the country, with the times of operation and the recommended frequency band with times of operation. The recommended frequency band is the band which is arrived at by reference to the only data officially available, that is, the Optimum Working Frequency curves which were approved by Committee 4 for use for mass calculations. In addition to this information there is a statement as to whether the country agrees or disagrees that the recommended frequency is acceptable.

4.3 Form C is a band loading chart which plots the recommended frequency and the time of transmission for each band so that the total channels necessary to provide service for all countries on the basis of the recommendations can be found. This, therefore, will give information as to what proportion of the total demands of the countries reckoned on a standardized basis can be met.

5. In making the plan it is assumed that all this information will be utilized by Committee 6 in the allocation of the actual frequencies to be used in making the plan. They will therefore be in a position to decide any cases in which the country is not willing to accept the recommended frequency, whether or not the reasons advanced are such that it would be preferable to allot the required frequency rather than the recommended frequency and they will be in a position to discuss these questions with the country concerned in cases where full agreement is not reached as to the use of the recommended frequency. The Requirements Committee thus places at the disposal of the Plan Committee the full facts of each case.

6. If Committee 6 should decide that band loading curves on any other basis will be more helpful to them in making the plan, this Committee will be only too willing to cooperate.

7. In conclusion, I should like to express my thanks to all members of the Committee, and particularly to those who served on the Working Groups, including the Mexican engineering students who, through the good offices of the Mexican Delegation, rendered valuable assistance to Working Group 5B and 5C, for the way in which they have contributed to the work to be carried out in spite of many difficulties arising in small Delegations and the desire to attend the meetings of other Committees. The work has been such as to require continuous effort and while, no doubt, owing to the complicated and detailed nature of the work and the many different Delegates who have been employed on it, some mistakes are inevitable, nevertheless the work has been done with the greatest care possible in the circumstances and will, I hope, prove of service to the work of the Conference.

The Chairman:

H. FAULKNER

APPENDIX A

List of Countries which submitted supplementary Forms 4
after the 5th November and before the 27th December

<u>Country</u>	<u>Recommendation of Committee</u>
Belgian Congo	Recommended (1)
Ecuador	
Egypt	Recommended (2)
El Salvador	
Guatemala	
Luxemburg	Recommended (3)
Netherlands West Indies	
Siam	
Union of South Africa	Recommended (4)

- Notes:
- (1) The representative of the Belgian Congo fell ill on his way to the Conference and this prevented the normal procedure from being followed.
 - (2) The representatives of Egypt were on the high seas on the date when the resolution was passed and were unable therefore to act upon it.
 - (3) The revised Form 4 reduces the frequency requirements.
 - (4) The delegate for the Union of South Africa was unfortunately killed in an aeroplane accident on his way to the Conference and all the papers connected therewith were destroyed.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 435-E

10 January 1949

Original: SPANISH

C H I L E

CONSIDERATIONS ON THE SOVIET PLAN

The Delegation of Chile wishes to present certain considerations concerning Document No. 98 and its annexes, referring to the proposal of the Delegation of the U.S.S.R.

Before analysing said document, it wishes to acknowledge the efforts of the experts of the U.S.S.R. to contribute the solution of the problem before us by the preparation of a complete and detailed plan for the assignment of frequencies.

Unfortunately, the bases of this plan do not seem to satisfy any of the delegations present, and therefore Chile regrets that such effort and dedication should have been fruitless.

Let us analyse the factors proposed by the Soviet Delegation, which are the principal factors which appear in the proposal of the Delegation of India:

A. Area.

Only twelve countries or territories out of a total of 82 (approximately 14%) which appear in Annex A of Appendix B of the Report of the Planning Committee, Geneva Session, have an area of more than 1,000,000 square miles.

These countries are:

Argentina	1,079,000	square miles
Australia	2,974,000	" "
Brazil	3,275,000	" "
Canada	3,462,000	" "
China	3,381,000	" "
French Colonies	3,500,000	" "
India	1,181,000	" "
Mongolia	1,865,000	" "
Saudi-Arabia	1,000,000	" "
U.S.S.R.	8,400,000	" "
U. K. Colonies	2,750,000	" "
U.S.A.	3,673,000	" "

The area of these 12 countries or territories represents 60% of the total area.

(Doc. No. 435-E)

B. Population.

Only 5 countries, out of 82 taken into consideration by the Planning Committee at Geneva, have more than 100,000,000 inhabitants, which amounts to 6.1% of the total number of countries; they are as follows:

China	457,000,000	inhabitants
India	260,000,000	"
Pakistan	130,000,000	"
U.S.A.	132,000,000	"
U.S.S.R.	140,000,000	"

The population of these five countries represents more than 51% of the total population of the world.

C. Number of Languages.

As for languages declared or considered official, there are only two countries which have more than four languages, these being the U.S.S.R. and India, with 16 each; the total number of countries with three or more languages is 8, i.e., 9.75% of the total of the countries. These are:

Afghanistan	3	languages
China	3	"
Ecuador	3	"
India	16	"
Pakistan	4	"
U.S.S.R.	16	"
Switzerland	3	"
U.K. Colonies	4	"

These tables show a peculiar and significant fact: the U.S.S.R., India and China invariably appear with the highest figures in one or more of them.

The Delegation of Chile has analysed with great care and interest the various documents and formulae proposed for the solution of the difficult problem of the assignment of channels for high frequency broadcasting and has found interesting ideas, which the Conference should take into account, in the Soviet Delegation's Document No. 98. However, these ideas and considerations are used by the Soviet Delegation to arrive at the conclusion that the assignment of frequencies should be based upon;

- 1) Area of the territory,
- 2) Number of inhabitants,

(Doc. No. 435-E)

3) Number of official languages of the country, after having stated that "the proposed plan should be based on objective general principles giving an assurance of the most equitable satisfaction of the needs of all countries which are concerned with short wave broadcasting."

Can there exist any "equity" in the plan proposed by the U.S.S.R., if there are to be considered only those factors which benefit exclusively her own points of view, to the exclusion of the vital interests of other countries which, it must be admitted, have less area, population and fewer languages, but have just as much right to use the frequency spectrum?

In the assignment plan proposed in Document No. 98, the Soviet Delegation reserves for itself 816 channel hours (76% of the requirements it had presented), which represents the highest percentage (14.6%) in relation to the total of available channel hours. The following table results:

COUNTRY	CHANNEL HOURS	% OF AVAILABLE TOTAL
U.S.S.R.	816	14.6
India	299	5.37
French Colonies	257	4.62
U.K.	249	4.47
U.S.A.	229	4.12
U.K. Colonies	197	3.56
China	185	3.33
France & Algeria	152	2.73
Canada	130	2.34
Pakistan	121	2.18
Indonesia	113	2.03
Mexico	101	1.83
Poland	100	1.80
Ukranian S.S.R.	99	1.78
Bielorussian S.S.R.	49	0.81
C H I L E	39	0.70

The 13 countries to which 100 or more channel hours have been assigned, and which represent 15.3% of the total of the countries, have been assigned 2,949 channel hours, which figure represents 53% of the available total of channel hours.

Another grouping can be made from the foregoing table. It is well known that the U.S.S.R., Bielorussia and Ukraine, in fact, form a single state; France and the French Colonies another state, and the same occurs with the U. K. and her Colonies. If we add the corresponding channel hours, we obtain the following values:

(Doc. No. 435-E)

COUNTRIES	CHANNEL HOURS	% OF TOTAL
U.S.S.R., Ukraine & Bielo-russia	946	17.19
France, Algeria & French Col.	409	7.35
U.? & U.K. Colonies	446	8.03

After all the foregoing, can there be any talk of equity and justice in the distribution of channel hours? And there is even more. In paragraph 2 on page 2 of Document No. 98-E, the Soviet Delegation states: "The plan for allocating frequencies for short wave broadcasting cannot be prepared on the basis of fortuitous and unilateral considerations....."

All this leads the Delegation of Chile to the following question: Have any fortuitous and unilateral considerations caused the Soviet Delegation to present a formula in which factors have been taken into consideration which favor it with 816 channel hours, or 14.7% of the available total?

The Delegation of Chile understands perfectly the spirit which prompted the Soviet Delegation to submit to the consideration of the Conference a formula such as appears in Annex 3 of the Report of the Planning Committee (Mexico Session) and understands also why, from the viewpoint of the said Delegation, such a formula seems correct and just; but it suffices to analyse Document No. 98 to realize that it is correct and just only for the U.S.S.R.

In the proposal upon which we are commenting, no factors which would imply justice for other countries have been taken into consideration.

In the specific case of our country, factors have been omitted which cannot be overlooked unless one deliberately wishes to harm Chilean broadcasting, both national and international.

The plan proposed by the U.S.S.R. does not even satisfy Chile's national requirements. A detailed analysis would make these considerations too voluminous, so we shall mention only a few cases.

A frequency of 5,965 kc/s between 17 and 21 hours GMT, or 13 to 17 hours Chilean time, has been proposed for Antofagasta.

Now the Antofagasta transmitter is intended primarily to cover the entire Northern area of the country, where a great many inhabitants are concentrated, as it is a highly industrialized zone. This area cannot be covered with transmissions in the 535-1605 kc/s band, for the simply reason that the mean conductivity of the soil is extremely low, of the order of 2×10^{-14} E.M.U., and transmitters of several hundred kW would be required, which would be very expensive.

(Doc. No. 435-E)

Neither could the bands destined for tropical broadcasts be used, since this region is south of the Tropic, and this would mean a violation of the Atlantic City Agreements. Moreover, the receivers at present in use are not constructed for the reception of these bands.

Another purpose of this station, and by no means the least important one, is that of establishing communication with the central area of the country, which communication is absolutely indispensable. It is necessary to keep in mind that Chile has a territory with completely unique characteristics, not only on account of its shape, very long and narrow, but also on account of its orography, which is extremely mountainous.

These brief considerations concerning the transmitter of Antofagasta will suffice to show that the assignment made to our country by the Soviet proposal is totally insufficient.

There still is another factor in this proposal which is opposed to our interests. Not a single hour is assigned for international transmissions; does Chile not form part of the society of Nations which populate the earth? Is there no need for Chile to acquaint other peoples with its culture, its genuinely democratic organization which for over a century has been and still is an example for many other countries of the world?

Taking into account all the aforementioned considerations, the Delegation of Chile rejects the assignment plan proposed by the Delegation of the U.S.S.R.

HECTOR CALCAGNI POZZONI
Chief of the Department
of Communications.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 436-E

10 January 1949

Original: ENGLISH

Committee 5

AGENDA

10th Meeting of the Requirements Committee

to be held at 10:00 a.m., the 13th January, 1949

1. Approval of the minutes of the 5th, 6th, 7th and 8th meetings of Committee 5 (Documents Nos. 421, 422, 423 and 424).
2. Approval of the Report of the Requirements Committee (Document No. 434).
3. Any other business.

The Chairman:

H. Faulkner

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 437-E

10 January 1949

Original: ENGLISH

Committee 1

REPORT OF DRAFTING GROUP OF COMMITTEE 1

The following text is proposed for paragraph 8 (1) of Article 16 of the revised Rules of Procedure (Document No. 354)

No proposal or amendment shall be put for discussion if it is:

- (1) Beyond the competence or powers of the Conference.
- (2) Outside the scope of the particular matter or matters under discussion at the time.
- (3) Inconsistent with any other proposal or amendment previously approved in the same meeting.

Since the provisions of Article 17 are now contained in paragraph 2 of Article 14, Article 17 should be cancelled.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 438-E

10 January 1949

Committee 1

COORDINATING COMMITTEE

Agenda

Meeting of 12 January 1949, 10 a.m.

1. Approval of the definite text of the draft of amendment of the Rules of Procedure (Document No. 437)
2. Proposal of Brazil concerning the closure of the Conference (Document No. 433)
3. Approval of the Agenda of the Plenary Meeting of 14 January 1949.
4. Various subjects.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 439-F

10 January 1949

Original: FRENCH

Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

Ninth Meeting

7 January 1949

The meeting was declared open at 10:15 a.m. by the Chairman, Mr. Faulkner (United Kingdom).

A. The Chairman recalled that at its last meeting the Committee had not finished the Agenda set forth in Document No. 359. He proposed to go on to item 4 of the Agenda, viz., to the consideration of the draft Report of the Committee, Document No. 329. The Committee approved.

He then pointed out to the Committee that since the publication of Document No. 329, the Working Groups had also published their reports. As a consequence, some amendments to Document No. 329 had become inevitable. They were included in Document No. 412, which accordingly would have to be considered jointly with the basic Document No. 329. The Committee approved.

B. He proceeded to invite the general opinion of the Committee on the subject of the draft Report, taken in conjunction with Document No. 334 of the Delegation of the U.S.S.R.

The Delegate of the U.S.S.R., while recognizing certain merits in the draft submitted by the Chair, wished the text to mention the questions of principle which had been discussed at so much length in the Working Groups as well as in the Committee itself.

The Chairman noted the U.S.S.R. Delegate's desire, and requested him to submit his recommendations as consideration of the text proceeded.

Document No. 329 did not give rise to any further criticism, and was approved accordingly. The Committee proceeded to discuss the amendments in Document No. 412.

C. The first two amendments in Document No. 412 were approved by the Committee.

The Delegate of the U.S.S.R., supported by the Delegate of Roumania, wished the following text to be added:

"In the preparation of Form A Group 5 A has made use in the case of certain countries not only of Form 4 but also of the information submitted by the countries in the form of criticism to Appendix A of the Geneva Report, and of any other available data. At the Plenary Meeting of Committee 5, the Bielorussian and Soviet Delegations protested against the use of those additional elements; but the Committee, by a majority vote, expressed its disagreement and approved the action of Group 5A."

The Committee approved the proposed amendment.

It was decided to appoint a small Drafting Group at the end of the meeting to put the text of the draft Report into its final form.

The Committee then began the discussion of the third amendment to be inserted after the first paragraph of Page 2 of Document No. 329. The amendment was approved, with the exception of the last paragraph, which was reworded, after an exchange of views between the Chair and the Delegations of France Overseas, the U.S.S.R. and the U.S.A., to read as follows:

"Working Group 5 B did not have sufficient technical information at its disposal to make definitive and complete frequency recommendations for short distance services."

The above text to replace the text proposed by the U.S.S.R. Delegation at the 8th Meeting of the Committee.

The U.S.S.R. Delegation wished the Final Report to mention the fact that the Delegations of the U.S.S.R. and the S.S.R. of Bielorussia had consistently disapproved of the way in which Group 5 B recommended frequencies for short distance services.

The U.S.S.R. Delegation further wished for references to the following three points:

- a) The discussion on the additional allocations made by Group 5 B on the basis of Committee 4's definition of the term "difficult circuit";
- b) The unequal way in which Group 5 B had dealt with the requirements of the various countries.
- c) The discussion and final decision regarding the time at which Group 5 B's recommendations should be brought to the attention of the countries.

The Chairman thought that in the case of the U.S.S.R. Delegate's point a) a mere reference to the Minutes of the meeting in question would be sufficient.

In the case of point b), and the fact that certain requirements had been discussed before the definition of "difficult circuit" was available to Group 5 B while others had not been discussed until later, the U.S.S.R. Delegation undertook to submit to the Drafting Group a text for inclusion in the Final Report.

Point c) was left to the Drafting Group.

D. The Delegate of the U.K. wished the Report to make some reference to the difficulties which certain definitions and technical standards prepared by Committee 4 had caused Committee 5.

The data in question had complicated the work of the latter.

Several other Delegations shared Mr. Axon's opinion, including the U.S.S.R. Delegation. The latter proposed the following text:

"The directives of Committee 4 were so complex and, in some cases, so inexact, as to complicate the work of Committee 5. For that reason and in order to expedite the task of Committee 6 and of the Conference in general, Committee 5 considers it desirable for Committee 4 to reconsider its recommendations submitted to Committee 5."

The Chairman deprecated criticism of Committee 4. The Delegates of Cuba and the U.S.A. were similarly inclined.

The Delegate of the U.S.S.R. did not insist on the second sentence of his text; but he wished the Report of the Chair to include a reference to the manner in which the point had been dealt with at the present meeting.

The Committee approved. The Drafting Group was instructed to prepare a text taking Mr. Axon's views and the first part of the U.S.S.R. proposal into account.

E. The fourth amendment, to be inserted after paragraph 2 of Page 2 of the Report, was approved.

The fifth amendment, in which the Committee expressed its thanks for the U.S.A. Delegation's remarks, gave rise to a short controversy. The Delegate of the U.S.A., on the one hand, wished a reference to be made to the student-engineers furnished by the Mexican Delegation. The U.S.S.R. Delegation, on the other hand, while sincerely joining in the expression of gratitude proposed by the U.S.A. Delegate, could not agree that the missing curves had been furnished rapidly. On the contrary they had always been behindhand in arriving.

The Delegate of Oversea France pointed out that the expression of gratitude already appeared on Page 2 of Document No. 329. The question was referred to the Drafting Group.

The last amendment proposed in Document No. 412 was approved without discussion. The discussion of Document No. 412 was thus concluded.

F. The Chairman proposed to appoint as members of the Drafting Group the Chairmen of the Working Groups and himself. The Committee approved.

G. An exchange of views took place on the subject of the 3rd Report of Working Group A (Document No. 395). It appeared that Austria, China, Cuba and Morocco and Tunisia had been erroneously included in the enumeration appearing in Section 6 of the Document.

Group 5 A was instructed to revise and correct its Report.

H. The Delegate of Oversea France reminded the Committee that the deadline January 14 had been fixed for the Committee's work. The conclusion of the Committee's work depended on the speed with which Group B's work progressed. But since about December 20 Group B had not had sufficient members to assure efficient working. He urged the Delegations present to participate more actively in Group B's work.

The Chairman supported the appeal.

I. The Delegate of the U.S.S.R., supported by the Delegate of Roumania, proposed that the basic technical principles of the Soviet Plan should be discussed in Committee 5 or by a mixed meeting of Committees 5 and 6. He thought that such a discussion would be of great benefit to the individual Delegations as well as to the work of the Conference as a whole.

The Chairman recalled that the Committee's task consisted solely, in either noting facts or in receiving and classifying the requirements of the countries. The manner in which the requirements were to be met was matter for Committee 6. It could not be made the object of discussion in Committee 5 under the present terms of reference. For the above reasons, he thought it inopportune to open a discussion on the frequency assignment plan submitted by the U.S.S.R. Delegation.

Several Delegations shared the Chairman's opinion.

The U.S.S.R. Delegation did not wish a vote to be taken on the question, in view of the opposition of the Committee, and waived its suggestion.

The meeting rose at 1.30 p.m.

The Secretary:

A. Wolf.

The Chairman:

H. Faulkner.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 440-E

11 January 1949

Original: FRENCH

This document replaces
Doc. No. 354-E

Committee 1

REPORT OF THE COORDINATING COMMITTEE TO THE PLENARY ASSEMBLY
(AMENDMENT TO THE RULES OF PROCEDURE)

At its meeting on January 5th, the Coordinating Committee examined the Report of Working Group 3, whose task was to consider various proposed amendments to the Rules of Procedure (Document No. 354-E). This Report, modified in part by the Committee, is herewith reproduced and the Committee recommends the Plenary Assembly to adopt the amendments which the Report proposes be made to the Rules of Procedure. These texts have been carefully studied in the Coordinating Committee, in which all Delegations are represented, and the Committee hopes that the Plenary Assembly will remember this fact when it takes a decision on the texts.

Under the terms of reference of the Coordinating Committee, as they appear in Documents Nos. 244 and 253, the Working Group was to take Documents Nos. 172 and 288 as a basis. But as by the time the Group first met the Delegation of Mexico had put out an abbreviated and simplified text in Document No. 271, it was decided to adopt the latter as a basis for the work of the Group together with Document No. 275 submitted by the Delegations of the United Kingdom and Pakistan.

The Group did its work in a single meeting lasting four hours, at which approval was given, subject to certain amendments and omissions, to the proposal contained in the documents referred to, and to certain new proposals submitted by the Delegations present.

At the suggestion of the Chairman, it was agreed to form a drafting Sub-Group of the Spanish-speaking Delegations present, viz. the Argentine, Cuba and Mexico, to coordinate proposals approved by the Group.

This Sub-Group carefully examined the proposals that were approved, and found it necessary to make slight changes in form to give them greater clarity of expression, as well as to coordinate and incorporate them in the current provisions of Document No. 21, to which they are to form additions.

In this connection the proposals approved by the Working Group, in their definitive wording as revised at the last meeting, when the draft of this Report was submitted, have been incorporated in the provisions approved by the Plenary Assembly in Document No. 21, so that, when this Report is presented, the Committee or the Plenary Assembly of the Conference, as the case may be, may know how these provisions have been modified, in case the Report should be approved.

Although the Chairman of the Group personally is not completely satisfied with the results obtained from the joint labors of the members present, owing mainly to the fact that an effort was made to obtain the greatest possible brevity and simplification of the proposed rules in compliance with the terms of reference which were given to the Group, he nevertheless believes that these provisions may be useful if adopted as reforms of the Rules of Procedure of the Conference, in order to shorten and systematize the discussions.

In any case the Chairman of this small Working Group believes that the work commenced by the Delegation of Mexico in the matter of additions to the Rules of Procedure of the Conference is worthy of attention.

The manner in which the two Articles with their proposed additions would appear is reproduced below. The text contains the present Regulations, with marginal notes. The additions proposed by the Working Group carry no marginal indications.

ARTICLE 14

Proposals presented to Committees during the Conference

- UNCHANGED 1. Proposals or amendments presented after the opening of Conference must be delivered to the Chairman of the appropriate Committee or, in case of doubt as to the appropriate Committee, to the Chairman of the Conference.
2. Proposals or amendments presented in Committee, or referred to Committee by the Chair of the Conference, shall be subject for purposes of discussion or voting to the provision in Article 16, with the exception of paragraphs 9 and 13, in regard to proposals or amendments presented to the Plenary Assembly.
- UNCHANGED 3. The Chairman of the Committee concerned shall decide whether the proposal or amendment shall be announced to all members of the Committee by distribution of copies or merely by oral statement.

ARTICLE 16

VOTING PROCEDURE AT PLENARY SESSIONS

UNCHANGED

1. At Plenary Sessions each proposal or amendment presented may after discussion be submitted to a vote at the discretion of the Chairman.
2. No proposal or amendment may be considered until it has been supported by at least one delegation other than the delegation presenting it.
3. Any proposal or amendment may be discussed in general in the first instance with the object of considering its general terms, so as to enable the Assembly to decide whether to take it into consideration or not.
4. Any proposal or amendment rejected in general terms on a vote shall be eliminated from the discussion in general and in particular.
5. (1) When a proposal or amendment has been approved in general terms, it shall be put for discussion in particular, in which connection the Chairman shall ask the Assembly which paragraphs, sub-paragraphs or clauses give rise to objection.
(2) Such paragraphs, sub-paragraphs or clauses shall be put for discussion or vote in succession in their logical order, that is to say, the points of a more general character being taken first.
(3) Paragraphs, sub-paragraphs or clauses to which no objection is taken, shall be taken as approved in particular.
6. (1) Amendments to a proposal under discussion shall be read at dictation speed by their authors. They shall then be discussed in succession, in a logical order to be determined by the Chairman, and in accordance with the procedure indicated in paragraph 5 above.
(2) No discussion of an amendment shall be begun until a decision has been taken on a preceding amendment.
(3) The author of a proposal or amendment shall have a right of reply.
7. (1) When amendments have been approved, the Chairman shall read the original text at dictation speed together with the form in which, in his judgment, the text should be finally worded.

(2) If the wording proposed by the Chairman is not approved by the Assembly, it shall be submitted if need arise to a small Drafting Group composed of the author of the approved amendments. The text proposed by the Drafting Group shall be submitted to the Assembly for the latter's decision.

8. No proposal or amendment shall be put for discussion if it is :

(1) Beyond the competence or powers of the Conference.

(2) Outside the scope of the particular matter or matters under discussion at the time.

(3) Inconsistent with any other proposal or amendment previously approved in the same meeting.

UNCHANGED 9. In order that a valid vote may be taken at a session of the Plenary Assembly, at least one half of the delegations accredited to the Conference and having the right to vote must be present or represented at the session at which the vote is taken.

UNCHANGED 10. Voting shall take place by a show of hands. If a majority is not clearly apparent, or if an individual count of the votes is requested, there shall be a roll call in the alphabetical order of the French names of the members.

UNCHANGED 11. No proposal or amendment shall be adopted at Plenary Sessions unless it is supported by a majority of the Delegates present and voting. In determining the number of votes required for a majority, abstentions shall not be taken into account. In case of a tie the measure shall be considered rejected.

UNCHANGED 12. If the number of abstentions exceeds one half of the number of Delegations present and voting, the measure shall be reconsidered at a subsequent meeting, at which time the abstentions shall not be taken into consideration.

UNCHANGED 13. If five or more Delegations present and entitled to vote request, when a vote is about to be taken, that it shall be taken by secret ballot, this shall be done, and the necessary steps shall be taken to guarantee secrecy.

UNCHANGED 14. Any duly accredited Delegations may authorize another duly accredited Delegation to vote for it at one or more meetings which it is unable itself to attend. In no case may a Delegation hold more than one such proxy.

Since the provisions of Article 17 are now contained in paragraph 2 of Article 14, Article 17 should be cancelled.

The Secretary of the
Conference

L. E. DOSTERT

The Chairman

M. PEREYRA .

ANNEX

To facilitate comparison of the new texts and of the texts of Articles 14, 16, and 17 of the present Rules of Procedure, the text of these three articles is reproduced below.

ARTICLE 14

Proposals presented to Committees during the Conference

1. Proposals or amendments presented after the opening of the Conference must be delivered to the Chairman of the appropriate Committee, or, in case of doubt as to the appropriate Committee, to the Chairman of the Conference.

2. The Chairman of the Committee concerned shall decide whether the proposal or amendment shall be announced to all members of the Committee by distribution of copies or merely by oral statement.

ARTICLE 16

Voting Procedure at Plenary Sessions

1. At Plenary Sessions each proposal or amendment presented may after discussion be submitted to a vote at the discretion of the Chairman.

2. In order that the voting may be valid, at least one half of the Delegations duly accredited to the Conference and having the right to vote must be present or be represented.

3. Voting shall take place by a show of hands. If a majority is not clearly apparent, or if an individual count of the votes is requested, there shall be a roll call in the alphabetical order of the French names of the members.

4. No proposal or amendment shall be adopted at Plenary Sessions unless it is supported by a majority of the Delegates present and voting. In determining the number of votes required for a majority, abstentions shall not be taken into account. In case of a tie the measure shall be considered rejected.

5. If the number of abstentions exceeds one half of the number of Delegations present and voting, the measure shall be reconsidered at a subsequent meeting, at which time the abstentions shall not be taken into consideration.

6. If five or more Delegations present and entitled to

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(An. to Doc. 440-E)

vote request, when a vote is about to be taken, that it shall be taken by secret ballot, this shall be done, and the necessary steps shall be taken to guarantee secrecy.

7. Any duly accredited Delegation may authorize another duly accredited Delegation to vote for it at one or more meetings which it is unable itself to attend. In no case may a Delegation hold more than one such proxy.

ARTICLE 17

Right of Vote and Voting Procedure in Committees

The voting procedure in Committees shall be subject to the provisions of Article 16 of the present Regulations.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 441-E

12 January 1949

Committee 1

DRAFT AGENDA

for

Plenary Assembly of 14 January 1949

1. Approval of Minutes of the 12th and 13th Sessions (Documents Nos. 391 and 420).
2. Report on the Bielorussian proposal (Document No. 381).
3. Proposed amendments to the Rules of Procedure (Document No. 440).
4. Proposal with regard to the closure of the Conference (Brazilian proposal, Document No. 433).
5. Decision on the subject of the questions raised in Documents No. 264 (Yugoslavia) and 388 (S.C.A.P.).
6. Consideration and approval of the Report of Committee 5.
7. Miscellaneous.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 442-E

7 January 1949

Original: SPANISH

GUATEMALA

REMARKS REGARDING DOCUMENT NO. 382

The Delegation of Guatemala, which also temporarily represents the Republic of El Salvador, takes the liberty of making some remarks concerning Document No. 382 (Original, Russian).

At meetings of Committees 3 and 6 the undersigned personally has already announced that the frequency assignment Plan submitted by the distinguished Delegation of the U.S.S.R. cannot be accepted by either of the two countries which this Delegation represents at this Conference.

With respect to Document No. 382, entitled: "Fulfillment of the Requirements of Countries in the U.S.S.R. Plan", we wish to make some observations which we consider necessary for the information of the distinguished Delegates of the Soviet Union, setting forth in brief form the motives which impel us to reject the channel-hours which they assign Guatemala and El Salvador in their Plan.

Document No. 382

First Paragraph:

The reasons given by the distinguished Delegates of the U.S.S.R. for drawing up their Plan are acceptable.

Second Paragraph:

The Delegations of Guatemala and El Salvador do not agree to a reduction of their real requirements to 65%, since this reduction "has not been fair to all the countries in general". This is demonstrated by the tables attached to Document No. 382 itself, and in a great many discussions on the Plan which took place at the meetings of Committees 3 and 4. Nevertheless, my Delegation has observed, with understandable surprise, that this lack of fairness is translated into "weightage" and that still other additional factors are pointed out to justify, in some way, the assignment of a larger number of channel-hours to certain European countries as "having been direct victims of the Nazi-Fascist occupation, as having taken a direct part in the last World War, and consequently having contributed their

men, materials, etc." This is all very well; but why, then, as the distinguished Professor Siforov has shown, are the results of mathematical, geographical calculations, etc., based on three factors: "area", "population", and "official languages", applied to countries such as Guatemala and El Salvador? The manifest inequality obtained by the application of its own calculations and factors having already been proven, why should still other additional factors turn up which are solely applicable to countries that suit the signatory Delegation of the said Plan?

In the case of Guatemala and El Salvador, I should like to believe that the Soviet Delegation made an error in assignment, since it did not take into consideration another factor which favored us in the same way that the other additional factors "favor" countries which, according to the Plan, obtained a larger number of frequencies; this factor is the "topography of the territory", which, as has already been stated in previous comments, must be considered in the case of both Republics (Guatemala and El Salvador). I should also like to advise the Soviet Delegation that due to the post-war economic situation these two countries, among others in Latin America, will be unable at this time to acquire long wave broadcasting equipment suitable to cover their own territory; in Professor Siforov's opinion, this situation should therefore be an "important factor" in increasing the assignment of channel-hours to us if the origin of such an economic situation is taken into consideration.

Third Paragraph:

The Delegations of Guatemala and El Salvador regret to have to state that in the preparation of the Soviet Plan the "real needs of these countries" were not taken into consideration. We have shown often enough that only by bearing in mind "Supplement No. 3 of the Planning Committee, Mexico City" can it be made clear that almost all the broadcasting frequencies used at present in the Republic of Guatemala are "out of band", which is necessarily due to the congestion in channel-hours assigned for broadcasting. The Guatemalan Administration pointed out the above facts to this Conference at an opportune time in order that frequencies in suitable bands would be granted us to enable us to operate our broadcasting properly. I assume that if the U.S.S.R. Delegation did make an error in attaching "little importance" to our needs, it will be kind enough to reconsider our requirements and study our situation in order to convince itself of the injustice it committed in the case of these two countries, which, though small, appear on the map and are sovereign.

Seventh Paragraph:

If we had only one broadcasting station in each one of these two Republics to serve the territory, we could avail ourselves of the "alms" in channel-hours accorded us by the Russian Plan;

when the Soviet Delegates drew up the Plan they did not have at hand Forms 4 of Guatemala and El Salvador because if they had examined them previously, they would have observed that there is not only one station in these Republics but several operating in the various provinces of these countries in order to use a relatively low power to serve the different areas into which we are geographically divided, thus overcoming the propagation difficulties presented by our mountainous country.

At Atlantic City we showed only the relative needs, having submitted the real needs on Forms 4 at this Conference, as already indicated at the proper time. Since El Salvador submitted its Requirements on November 16, at which time the Russian Plan undoubtedly had already been drawn up, the "real needs" were certainly not taken into consideration.

As for Guatemala and El Salvador serving their territory in tropical bands, perhaps the Soviet Delegation is right; but we understand that it is not a question here of tropical bands but of high frequencies. Although we are assigned channel-hours in the said tropical bands, we expect fairness and justice at this Conference the same as we would expect at any conference dealing with the assignment of frequencies in tropical bands. We hope no other Plan based on such principles as the "last World War" will result, where we shall find ourselves forced to repeat the same considerations and comments, and thereby forced to burden the Secretariat with such tedious paper work.

FIRST TABLE:

El Salvador requests 146 channel-hours, and according to Professor Siforov's calculations it receives only eight channel-hours. But he "magnanimously" assigns El Salvador twelve more, or a total of 20 channel-hours. The only way we can understand this injustice is to consider it an error made by the persons charged with drawing up the Plan.

GUATEMALA requests 104 channel-hours; the "irrefutable" calculations for assignment show nineteen (19) channel-hours for my country. But the distinguished Delegation charged with drawing up the said Plan is disposed to "make us a gracious present" of 20 hours more, assigning us 39. So much the better that they treated us more generously than they did other countries which were unjustly treated. I have already said in the beginning that the Republic of Guatemala and the Republic of El Salvador have several stations operating in different towns in their respective countries. How, then, Honorable Delegates of the U.S.S.R., must we distribute these "alms" that would be assigned us? Forms 4 for each one of our countries clearly show that almost all the stations broadcasting in Guatemala and El Salvador work an average of 17 hours daily. What stations shall we permit to "continue working", using the channel-hours assigned

by the Plan referred to? Who can restrict the sovereign right of our Governments?

TABLE TWO:

The frequently-repeated lack of justice and fairness is self-evident in Tables Nos. 1 and 2 because El Salvador, which requests 146 channel-hours, is assigned twenty; on the other hand, in Table No. 2 a great many countries have requested fewer, much fewer frequencies; yet they are given satisfaction and some of them are given even more than they request. Guatemala requests 104 channel-hours and is assigned 39. On the other hand, in Table No. 2 (number 6) may be seen a country which requested seven channel-hours and was assigned fourteen. What does this mean, Honorable Delegates? Sound judgment would take it to mean that if that country has requested only seven channel-hours, it is because that is all it needs. If I enumerated all the concrete cases of this kind arising in Document No. 382, my commentary would become long-winded.

I therefore conclude by appealing to the U.S.S.R. Delegation, while there is still time to rectify the Plan in accordance with principles more commensurate with the real needs, to dispense with personal convenience and, adhering more strictly to principles of justice, bear in mind the countries that were doubtlessly the victims of involuntary errors, and correct these errors in the interests of this Conference and of all the nations here represented.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 443-E

11 January 1949

Original: RUSSIAN

BIELORUSSIAN S.S.R.

The Delegation of the Ukrainian S.S.R. is authorized to represent the Delegation of the Bielorussian S.S.R. at the meetings of all Committees in the work of which the latter participates (particularly in Committees 1, 3, 4, 5, 6 and 7) on each occasion when the Delegation of the Bielorussian S.S.R. is unable to be present.

This authorization empowers the Delegation of the Ukrainian S.S.R. to represent the interests of the Bielorussian S.S.R. and vote in behalf of it.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 444-E

11 January 1949

Original: RUSSIAN

UKRAINIAN S.S.R.

The Delegation of the Bielorussian S.S.R. is authorized to represent the Delegation of the Ukrainian S.S.R. at the meetings of all Committees, in the work of which the latter participates (particularly in Committees 1, 3, 4, 5, 6 and 7), on each occasion when the Delegation of the Ukrainian S.S.R. is unable to be present.

This authorization empowers the Delegation of the Bielorussian S.S.R. to represent the interests of the Ukrainian S.S.R. and vote in behalf of it.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City 1948/49

Document No. 445-E

Original: ENGLISH

11 January 1949

Committees 4 and 6

Report of the Joint Meeting of the
Technical and Plan Committees

Second Meeting

8 December 1948

1. The second joint meeting of Committees 4 and 6 was opened at 10.35 hours by the Chairman of Committee 4, Mr. Sastry, assisted by the Chairman of Committee 6, Mr. Pedersen.
2. Mr. Sastry said that the Agenda for this meeting was contained in Document 276, which informed the assembly that this meeting was a continuation of the first meeting held on the 3rd December last. Mr. Sastry suggested that today's meeting should confine itself to discussion of questions on points 1 and 6-15 of the list of points enumerated by Prof. Siforov. The detailed discussions regarding the other aspects of the U.S.S.R. proposed plan should be reserved for the respective committees.
 - 2.1 The delegate for the U.S.S.R. proposed that the meeting should be divided into two parts; first, questions dealing with points 1-15 should be answered and second, an exchange of opinions should be made so that the various Committees would be able to formulate their ideas on how to carry out their work connected with the U.S.S.R. plan.
 - 2.2 A prolonged discussion then took place on the U.S.S.R. proposal. During this discussion various points of view were put forward in favour of the expression of opinion on the 15 points listed by Prof. Siforov. It was also felt by some delegates that certain concrete decisions must be taken at this joint meeting. The delegates who supported these arguments were Albania, Rumania, Ukraine, U.S.S.R. and Yugoslavia. However, the Delegations of U.S.A., U.K., Switzerland and the Chairman thought that the meeting should restrict itself to the original terms of reference as laid down in Document 243. This would confine the meeting to questions relating to the Technical Principles only. In addition to points 1 and 6-15 the delegate for U.S.A. proposed that the discussions should also include point 5A.

The delegate for Mexico thought that the discussion should deal firstly with the technical questions and then, if time permitted, there should be a discussion on any other aspects of the U.S.S.R. proposed plan.

Mr. Pederson, Chairman of Committee 6, further explained the reasons for holding these joint meetings and thought that the meeting had no right to infringe on the work of Committee 3 by discussing points relevant to that Committee. He also considered that no technical decisions should be taken at this joint meeting, as they might pre-judge the findings of the Working Groups of Committee 6, who were already examining the comments submitted by countries on the various aspects of this plan.

- 2.3 The Chairman proposed that a vote should be taken on his proposal to discuss points 1, 5A and 6-15 (which included the amendment of the U.S.A. delegate). This proposal was approved by a vote of 26 votes in favour with nil against.

The delegate of Yugoslavia wished to state that he had abstained from voting because the proposal had not been clear to him.

- 2.4 A second vote was then taken on the proposal that the proceedings should be restricted to seeking clarification on the Technical Principles underlying the Soviet plan and should not include any expressions of opinion or discussion on these principles.

This proposal was accepted with 20 votes in favour and 9 against with no abstentions.

3. The Chairman then suggested that the questions on the points to be discussed should be taken in numerical order beginning with point 1.

- 3.1 The delegate for Yugoslavia thought that delegations who objected to any of the points should also be allowed to raise these objections as well as any questions asking for further clarification
- 3.2 The Chairman then turned to the first question and informed the Committee that a series of questions had been submitted by the delegate for South Africa. He proposed to read the first question on this paper which was relevant to point 1 of Prof. Siferov's exposé. The first question from the delegate of South Africa was as follows:-

"Broadcasting Bands

"In the Russian Plan seven international bands are considered. Did the authors have good reasons for leaving out the international band for Regions 1 and 3 from 3,950.

to 4,000 kilocycles? Stations on this band should give excellent regional coverage for the June 70 sunspot period. There is a good possibility of sharing channels on this band, and there may be as much as 300 channel-hours to be obtained here.

"It is presumed that there were also good reasons for omitting the 26 megacycle band, though this has given excellent results on certain circuits over the past few years. It will, however, probably be unsuitable during the sunspot minimum."

- 3.3 In reply Prof. Siforov stated that since the lower bands were not within the jurisdiction of this Conference, the Soviet Delegation, in constructing their plan, had dealt with the bands from 6 Mc/s upwards only. Regarding the question of the 26 Mc/s band he explained that as the demand for allocations in this band was extremely small it could be quite easily planned without difficulty, therefore, he had not dealt with this particular point in his previous explanation. Regarding the first point of the lower frequency bands he agreed that full use should be made of these bands as they permitted a greater amount of sharing than that permitted in the higher bands.
- 3.4 The next question on point 1 was posed by the delegate for U.S.A. He asked for an explanation of the use of the 7 Mc/s band for channels from Europe to the American region. The reason for this question was that in the American region this band is used exclusively for services other than broadcasting, and therefore broadcast reception within this band would not be a practicable proposition.

In reply Prof. Siforov said that this had been taken into account in the plan, and appropriate calculations had been made in order to ensure the maintenance of the accepted protection ratio. However, he thought this question could be best considered after closer examination of the plan.

- 3.5 The Chairman then asked for any questions to be put, relevant to point 5A of Prof. Siforov's expose. The delegate for the U.S.A. said that to his understanding the Atlantic City standards had been used as the basis for the Technical Principles used in the U.S.S.R. plan and he requested a further clarification of this point. Prof. Siforov said that throughout the plan the protection ratio as accepted by the Atlantic City Conference had been used. This protection ratio of 40 db had also been applied to simultaneously shared channels, as it was his experience that this was the necessary protection ratio in order to take into account all types of fading. He mentioned that a detailed discussion within Working Group 4A had also adopted this same standard.

This protection ratio of signal to atmospheric and suppressed industrial noise, had been taken as 40 db throughout the plan. He informed the Committee that a graph had been submitted by the U.S.A. delegation showing the relationship between population and the value of the peak industrial interference. Taking an example from this graph; for a population centre of one million inhabitants, it could be seen that the industrial interference could be as high as 54 db above 1 μ v/m. This further stressed the desirability of suppressing, as far as possible, industrial interference and it was apparent that a protection ratio of 40 db signal to industrial noise could only be possible in suppressed areas.

The delegate for the U.S.A. stated that apparently there was some difficulty in interpretation as his question had not been answered, and to prevent further delay he would withdraw his question.

- 3.6 The delegate for the Argentine asked Prof. Siforov whether or not it would be possible for the U.S.S.R. delegation to prepare a Document on sharing possibilities. His delegation used the method proposed by the P.F.B. but they would be interested to have a full explanation of the method used in preparing the U.S.S.R. plan. In reply Prof. Siforov said that a great deal of attention had been given to the question of simultaneous sharing in preparing the plan. The full text of the report he had given at the last meeting was now in the hands of the Secretariat, and in this report the question of simultaneous sharing was dealt with at some length. However, if it was desired, his delegation would provide a separate Document on this subject.
- 3.7 The Chairman said that the question of the delegate for Argentine referred to a point which would be dealt with later, and he asked all delegates to restrict their questions to the particular point under discussion.
- 3.8 There were no questions on points Nos. 6 and 7.
- 3.9 Regarding point No. 8, which concerned areas of reception, the delegate for India requested Prof. Siforov to clarify the technical criteria which had been used to establish the four categories of reception area mentioned during the exposé.

Prof. Siforov in reply stated that the criteria used to establish the reception areas was basically that of prevailing propagation conditions.

- 3.10 Regarding point 9 the Chairman read the second observation submitted by the delegate for South Africa. However, he felt that this was not a specific question; and following confirmation from the delegate for South Africa, no further action was taken.

3.11 The delegate for Pakistan requested Prof. Siforov to reply to two separate questions regarding point 9:

- a) what was the actual figure taken, in db, for industrial suppression? and
- b) after suppression what was the signal to noise ratio taken to be, in drafting the plan?

In reply Prof. Siforov said that the plan was based on the protection ratio of 40 db for various types of interference, and that this 40 db was the ratio of the median field intensity, subject to fading, to the mean value of industrial noise. However, he said that each individual case was different, and in many cases a protection ratio higher than 40 db was obtained.

The Chairman pointed out that apparently Prof. Siforov had misunderstood the first question submitted by the delegate for Pakistan and he put this question in a more simple way by asking what was the ratio taken in the plan for unsuppressed industrial interference to suppressed industrial interference.

Prof. Siforov said that in order to ensure that large cities could be served, the suppression of industrial interference was essential; this point was further stressed by the U.S.A. graph. From experience, using elementary methods for suppression, a field intensity in the order of 100 μ V per metre would be sufficient to give adequate reception.

The Chairman summarized the position by saying that no rigid figure could be assumed and that a field strength in the order of 100 μ V per metre could be assumed for a satisfactory service of 40 db signal to atmospheric and industrial noise. He concluded from this that it was the opinion of Prof. Siforov that a maximum level of industrial interference could be taken as 1 μ V per metre.

These conclusions were confirmed by Prof Siforov, who stated that industrial interference had already been reduced to a few μ V per metre in several countries.

4. The Chairman said that owing to the lateness of the hour, it would be necessary to decide whether this assembly should request the Co-ordinating Committee to arrange for a further joint meeting, or whether further questions on the Technical Principles of the U.S.S.R. proposed plan should be submitted in writing to Prof. Siforov. He requested the views of the assembly on this point.

The delegate for U.S.A. thought that in view of the fact that a document was being prepared by the U.S.S.R. Delegation describing these Technical principles underlying their plan, it would be preferable to wait until this document was available and then submit any necessary questions in writing.

As there were no opinions to the contrary this procedure was adopted.

5. The Delegate for Argentine then asked:

"Will this document to be submitted by the U.S.S.R. also have a supplementary document replying to the following questions:

- a) To state clearly in detail, giving real examples of the method of calculations that have been used for determining simultaneous sharing.
- b) How did the U.S.S.R. delegation take into account, in the calculations of simultaneous sharing, the frequency instability of transmitters."

In reply Prof. Siforov said these questions had been noted and a separate reply would be given.

6. The Delegate for Albania wished to make the following statement before the meeting adjourned:

I have listened attentively to the detailed and very clear Report which we had on Friday last from the U.S.S.R. Delegate Professor Siforov, Vice-Chairman of Committee 4, on the basic principles, on which the Plan submitted by the U.S.S.R. Delegation for the allocation of high frequencies amongst the different countries of the world is founded.

First of all, I wish to express my appreciation of the wonderful work done by the Delegation of the U.S.S.R. in drafting such a plan. And I wish to thank sincerely Professor Siforov for his excellent report on the principal and most important points of that plan.

I believe that I am voicing the opinion of all the delegates present when I say that the draft plan submitted by the Delegation of the U.S.S.R. for the allotment of high frequencies

represents, at the present moment a unique solution of the problem of the assignment of high frequencies which we have had to face. The patience with which Professor Siforov's report has been heard, the applause which it has received, and the words of the Chairman of our Joint Meeting, demonstrate the importance which all delegates present attach to the Soviet draft plan which, in the opinion of the Delegation of Albania, will allow a rational and objective assignment of channel hours within the limits of the available spectrum.

The Delegation of the People's Republic of Albania believes that in order to arrive at the establishment of a plan for the assignment of frequencies, it is indispensable to proceed, in a spirit of sacrifice common to all countries, towards a just and objective reduction of the requirements which amount in the aggregate to three times the channel-hours available.

Everybody understands that the channel hours available for high frequency broadcasting not only cannot satisfy the requirements presented by the various countries, but cannot even give complete satisfaction to the real needs of each country. The Delegation of Albania believes, however, that with a rational and equitable assignment, our Conference can at least satisfy the minimum indispensable requirements of each country. We think it would be preferable, and I might even say indispensable, to establish as soon as possible a plan for the assignment of high frequencies, even if that plan should not satisfy entirely the requirements of some countries, rather than to prolong the chaos which reigns at present in the transmission of high frequency broadcasts, and which affects all countries, especially those which, for economic or technical reasons, or on account of the ravages suffered from the last war, have no highly developed broadcasting system.

The Delegation of the People's Republic of Albania believes that the Soviet draft plan, in the establishment of which

the Soviet Delegation has taken advantage both of the experience of the Planning Committee and of the defects of the draft prepared at Geneva (which last has been criticised and considered unacceptable by almost all countries), is a concrete and objective draft plan, because it is based upon permanent principles, all equally important and because it takes into account, as far as possible, the vital interests of all countries.

Guided by the desire to see our Conference arrive with the **least** possible delay, at the elaboration of a plan which would be acceptable and practicable for all, my Delegation thinks it necessary to present, in the name of the People's Republic of Albania, the following proposal:

- a) To adopt the Soviet plan as the principal document for the elaboration of a plan for the assignment of high frequencies for broadcasting.
- b) To speed up the study of the said plan within the Committees, and not to lose sight of the time-limit set for the work of the Conference.

I assume that the delegates present will support unanimously this proposal, which offers a possibility of achieving the desired results concerning the assignment of high frequencies, results which all the peoples of the entire world who have sent us here await impatiently.

As however our agenda will not allow the discussion of this proposal, I wish to submit it to the consideration of the next Plenary Assembly. I gather that other delegations present share the desire of my Delegation in this connection.

- 6.1 During this statement the Chairman found it **necessary** to interrupt the delegate for Albania to point out to him that this Joint Meeting had been called to discuss Technical Principles only, and he would, unfortunately, have to rule that those parts of the statement not referring to Technical Principles were out of order.
- 6.2 The delegate for Argentine asked for the reference to his delegation to be deleted from the Albanian statement, because the Argentine Delegation had not authorised anybody to speak on their behalf.

7. The Chairman then thanked Prof. Siforov on behalf of the Assembly for his exposé, and for the way in which he had endeavoured to clarify the points discussed during this present meeting. He suggested that the Assembly should show its appreciation in the usual manner. (Applause).

- 7.1 The delegate for U.S.S.R. thanked the Chairman, on behalf of his delegation, for the kind words and friendly expression of co-operation. However, he wished to observe that it was the normal procedure that all delegates should have the right to express their opinions and he strongly protested against the Chairman's interruption during the statement by the delegate for Albania.
- 7.2 The Chairman said that this protest would be entered in the report of the meeting, as well as his own statement relevant to this particular point.

The Chairman stated that it was the fundamental duty and responsibility of a Chairman to guide the proceedings of his Committee strictly in accordance with the terms of reference of the Committee and in accordance with the agenda of the particular session. If, in spite of repeated requests from the Chair, delegates made statements and comments which were completely outside the terms of reference of the Committee and the agenda of the session, then the Chair would be failing in its fundamental duty and in its responsibility to the assembly, if such statements and comments were not ruled out of order.

- 7.3. Prof. Siforov thanked all the delegates present for their attention throughout his report, and during the replies which he had given to the questions put to him during today's meeting. However, he realised that these questions had not exhausted the possibilities, and suggested that the method used by the delegate for South Africa i.e. submission of questions in a written form, was the most satisfactory way. He also requested that further questions should be formulated in as clear a manner as possible.
- 7.4 The Chairman wished to express the Assembly's thanks to the interpreters, who had accomplished a most difficult task during these meetings.
- 7.5 The delegate for Albania observed that, in accordance with the Rules of Procedure and with the democratic methods prevailing at international conferences, each delegation had the right to make statements and to demand their insertion in the Minutes. He believed that his statement was not irrelevant to the agenda of the Joint Meeting for the study of the Soviet draft plan, and was moreover consonant with the decision taken at the beginning of the meeting, inasmuch as he had not asked for a discussion or a decision on his proposal, but had merely expressed his desire that the proposal should be submitted to the consideration of the Plenary Assembly. He protested categorically against the attempt of the Chair to interrupt

his statement before having heard it to the end, an attempt which he considered contrary to the democratic methods which should guide the work of the Conference, and contrary also to the Rules of Procedure of the Conference.

8. The meeting was then closed at 13:50 hours.

The Reporter:

R. A. Craig.

The Chairman:

M. L. Sastry.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 446-E

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11 January 1949

Committees 4 & 6

REPORT OF THE JOINT MEETING OF THE TECHNICAL
AND PLAN COMMITTEES

Third Meeting

15 December 1948

1. The 3rd Joint Meeting of Committees 4 and 6 was opened at 10:35 hours by the Chairman of Committee 4, Mr. Sastry, assisted by the Chairman of Committee 6, Mr. Gunnar Pedersen.
2. The Chairman first requested all delegates holding proxy votes to indicate same. The following list gives these delegations:-

Canada for Southern Rhodesia
Denmark for Iceland
Roumania for Bulgaria
Syria for Indonesia
United Kingdom for U.K. Colonies
United States for U.S. Territories

3. The Chairman then drew attention of the Assembly to Documents Nos. 304 and 308 which explained the reasons for the meeting and gave a proposed agenda. He suggested that the Assembly should first give approval to the Agenda given in Document 308.

- 3.1 The delegate for the U.K. said that he was somewhat surprised to find, as item 2 of this proposed Agenda "opinions and discussions on the technical principles underlying the Soviet plan". He wished to remind the meeting that at the last Joint Meeting of the two Committees it had been decided by a vote that the discussion would be limited to asking questions relative to the technical principles of the Soviet plan and that no opinions would be expressed. There was, of course, no reason why the Assembly should not reverse this decision but the U.K. delegation still felt strongly that whilst it was useful to be able to ask any questions relative to these technical principles, expressions of opinions, and detailed discussions would not serve any useful purpose. These discussions should take place in the various Committees and Working Groups concerned. He proposed that the Agenda be limited to Point 1 only.

- 3.2 The Chairman explained that the question regarding Point 2 had been voted upon at the last Joint Meeting, but subsequently, at a meeting of the Coordinating Committee, it had been decided to include this point. However, this was not a directive from the Coordinating Committee but only a recommendation. He said that it was for the Assembly to decide this point and he suggested that further discussion was necessary.
- 3.3 The delegate for Albania thought that the Chairman's remarks were not entirely correct, as his understanding was that the Coordinating Committee proposed Point 2 for discussion at this Joint Meeting.
- 3.4 The delegate for Yugoslavia stated that he was extremely surprised at the statement made by the delegate for the U.K. He considered that opinions should be expressed on the technical principles of the Soviet plan and that it was very desirable to have this point in the Agenda, as it would be extremely beneficial to have joint discussion on this subject. He also felt that as this was a decision of the Coordinating Committee it could not be treated as a recommendation only.
- 3.5 The Chairman requested delegates to bear the following three points in mind:-
- (a) That there should be no discussion on statements made by individual members at the Coordinating Committee.
 - (b) That this point on the Agenda could only be treated as a recommendation as the Coordinating Committee was not empowered in any way to issue directives to other Committees.
 - (c) That it was the recognised procedure for all Committees to adopt the Agenda before proceeding with the meeting.
- He suggested that the matter should be put to a vote.
- 3.6 The delegate for Roumania considered that the Assembly should discuss any points referring to Professor Siforov's exposé and should, therefore, adopt the Agenda as proposed.

- 3.7 The delegate for the Ukraine thought that a discussion on the technical principles should be the logical result following answers given to the questionnaire by various delegations. He could not understand why the discussion should not take place as this would be extremely valuable for the future work of the Conference.
- 3.8 The delegate for the U.S.S.R. stated that "He most anxiously expected that today's meeting of Committee 4 and 6 would give positive results in the work of the Conference. Today, the 3rd joint meeting of Committees 4 and 6 had assembled in accordance with the recommendation of the Coordinating Committee and with the consent of the Chairmen of Committees 4 and 6. The agenda of the 3rd joint meeting was also recommended by the Coordinating Committee, which took into consideration the necessity for discussing the technical principles on which the plan of the Soviet Delegation was based. Certainly, the Joint Plenum itself could decide about the composition of its Agenda, but we should not disregard the recommendations of the Coordinating Committee to discuss the technical principles of the Soviet Plan today. Moreover, at the time when the question of calling the 3rd joint Plenum of Committees 4 and 6 was being decided neither the Chairman of Committee 4, Mr. Sastry, nor the Chairman of Committee 6, Mr. Pederson, nor the other delegations who participated in the work of the Coordinating Committee expressed any opposition to the Agenda of the 3rd joint plenary meeting of the two committees. In addition, the Agenda was proposed by the Chairman of the Joint Plenum - Mr. Sastry, with a slight amendment of the U.S.S.R. delegate. The Soviet Delegation considered that the delegations came to the 3rd joint meeting of the Plenum of the two Committees not only to hear the replies to the questions, but also to discuss the technical principles of the Soviet Plan and to take an appropriate action. Why cannot we take here a decision concerning the technical principles of the Soviet Plan? Why cannot we exchange opinions with the delegations of the other countries? We not only can do it, we should do it, we assembled here for this purpose. The Soviet Delegation does not see any reasons which could prevent us from doing it, as a deeper study and a close discussion of the technical principles on which the Soviet Plan is based, which is the only concrete plan presented to our Conference, will give to all of us the possibility of successfully resolving the difficult problem of distributing the channel-hours for broadcasting among the countries of the world.

We all assembled here with one aim of creating a plan for frequency assignment. He, who at present does not wish to actively discuss and examine the principles on which the Soviet Plan is based, directly or indirectly does not desire the speedy and successful completion of the work of our Conference.

"We understand the speech of the United Kingdom delegate who always directly or indirectly aims at opposing any degree of objective approach in the discussion of the Soviet proposals, connected with the Soviet Delegation plan. This is the not very enviable role of the United Kingdom Delegation. The Soviet Delegation considers that the countries which submit proposals for not discussing the reasonable and just principles of the Soviet plan - these countries, in our opinion, do not desire to seek positive results from the work of this Conference. This is what some delegations should say in a more direct and honest way, instead of referring to the Rules of Procedure or the voting machinery.

"The Soviet Delegation wants to bring to the attention of the Chairman of the joint Plenary Meeting, **his** unobjective approach to the question under discussion. The role of the Chairman of any Committee of the Conference should be distinguished by an objective and unprejudiced approach to any question being discussed. But to the Chairman of our joint Plenum, Mr. Sastry, as representative of the Delegation of India, this role is foreign; when questions relating to the Soviet Plan are being discussed Mr. Sastry always aims to deviate from the correct approach in discussing a question on the Soviet Plan, often having recourse to violations of procedure in order to delay, in some measure at least, the discussion of the Soviet Plan. If Mr. Chairman had followed the dictates of justice then as a result of his reasonable and equitable approach to the matter in question, we would have been able to carry out our work and with greater success. But also, it seems, Mr. Sastry does not desire the success of the work of the Conference.

"In conclusion the Soviet Delegation proposes that item 2 of the Agenda of today's joint meeting of Committees 4 and 6 be brought up for discussion in the form recommended by the Coordinating Committee."

3.9 The Chairman again clarified the position as follows:

- (a) That the Coordinating Committee could not issue directives to any other Committee.

- (b) That if the Assembly was unanimous on the Agenda, then it would not be necessary to have a vote.
- (c) That it was the Chairman's duty on any Committee to conform to the wishes of the majority.
- (d) That in order to avoid the painful necessity of ruling any delegates as out of order, the discussion should be confined to the point under consideration.
- (e) He requested delegates, when speaking, to refrain from making any personal accusations.

3.10 The delegate for the U.S.A. pointed out that the problems concerning technical principles were before Committees 4 and 6, with their respective Working Groups, and that the Assembly should not attempt to discuss these matters here. He drew the attention of the assembly to the following wording in Document 308:

"The following points will come up for approval as Agenda, in accordance with the recommendation of Committee 1".

He considered that the Chairman was, therefore, quite correct in putting this matter to a vote.

3.11 The delegate for Albania asked why those delegates now objecting to Point 2 did not express their objection in the Coordinating Committee when this point was proposed.

3.12 At this point the Chairman suggested that a vote should be taken, firstly on Point 1, and secondly on Point 2. There were no objections to Point 1 and before Point 2 was voted upon, the delegate for the U.S.S.R. called a point of order. He asked the Chairman if he considered it sufficient to proceed straight to a vote on this point before having decided whether or not the feelings of the assembly were that a vote should be taken. In reply to the delegate for the U.S.A. he wished to make it clear that it was not the intention that any decisions should be taken at this Joint Meeting, but he could not understand why recommendations could not be given to the various Working Groups on a majority basis.

3.13 The Chairman considered that the statement by the delegate for the U.S.S.R. implied that his procedure was incorrect although to his understanding it was the accepted parliamentary procedure. He, therefore, put the following proposition to the vote:

"Whether it is the correct procedure that the Agenda has to be approved and whether, in the event of disagreement on this Agenda, it is necessary to proceed to a vote".

The result of this vote upheld the Chairman's interpretation of the rules of procedure by 26 votes in favour to 10 against, with no abstentions.

The Chairman then said that his interpretation had been upheld by the assembly and that a vote should now be taken regarding Point 2 of Document 308 .

The delegate for Albania requested that this vote should be taken by roll call.

Item 2 of the Agenda was rejected by 24 votes against, 9 in favour with 6 abstentions.

4. Regarding Point 1 of the Agenda, there were no questions forthcoming on the remaining 6 points of Professor Siforov's exposé.
5. The delegate for Yugoslavia wished to state that: "The delegation of Yugoslavia believes that the rules in use at international conferences, even those which have not been compiled in a written text, ought to be observed. The use of appropriate terms in the discussions of these conferences is one aspect of the mutual respect which is indispensable for the success of the latter. The Delegation of Yugoslavia wishes to state its deep regret and its concern in view of the procedure adopted of not taking into consideration, after 40 days, the most important and most constructive of all proposals made since this Conference began; to wit, the proposal of the Delegation of the Soviet Union. This proves clearly that certain countries, through every means, are trying to prevent this Conference from making a decision on the proposal of the Soviet Union. The delegation of Yugoslavia emphasizes especially the peculiar absence of more than a third of the delegations which participate in this Conference, during the second and third Joint Meetings of Committees 4 and 6. It also emphasizes the limited and arbitrary character of the agenda for these sessions. It also wishes to stress the manifest opposition of certain delegations, especially those of the United Kingdom and of the United States, to adopt the agenda recommended by the Committee of Coordination for the third Joint Meeting. It also wishes to call attention to the total absence of requests for explanations on points 10, 11, 12, 13, 14 and 15 of the exposé

of Prof. Siforov, of the Soviet Delegation, and to the refusal, imposed without any reason by the vote taken to grant all delegations the opportunity to form their opinion on the technical principles contained in the Soviet Plan.

"The delegation of Yugoslavia, taking into account the above mentioned facts, feels compelled to qualify this procedure as a well planned joke, absolutely inadmissible in an international conference, although admitting that this procedure apparently is strictly in accordance with parliamentary regulations and that its juridical bases cannot be challenged.

"The delegation of Yugoslavia wishes to call the attention of the delegations participating in the Mexico Conference to the fact that the method of adopting decisions by means of a vote, without giving the delegations of the different countries the opportunity to exercise their sovereign and justified right to expound their points of view, cannot but lead to the total failure of the International High Frequency Broadcasting Conference of Mexico.

"The delegation of Yugoslavia wishes to emphasize that the responsibility for this failure will fall upon the delegations which continue to approve this arbitrary method of imposing their will by simple votes".

5.1 The delegate for the U.S.S.R. wished to state that: - "The delegation of the U.S.S.R. considers it necessary to declare that at the meeting that day the Chairman of the Joint Committee, Mr. Sastry, had made every effort to prevent the minority from being heard. Mr. Sastry not only did not endeavour to hear the opinions of the minority delegations, who desired to discuss technical principles of the Soviet Plan, but did everything he could by violations of the Rules of Procedure and by use of the voting machine to evade the Agenda of the Plenary Meeting, recommended by the Coordinating Committee, with as a result the break up of the Joint Meeting of Committees 4 and 6. The Soviet Delegation considers that, if in future questions of principle concerning the work of the Conference are handled as they were by the Chairman of the Joint Meeting, then this Conference cannot arrive at any positive result which, it would seem, was exactly what was desired by certain delegations".

5.2 In reply to the delegate for the U.S.S.R. the Chairman pointed out that during the discussion on Document 308, full

opportunity had been given to all delegates to express their points of view; in fact, only two delegates had spoken against Point 2 while 6 had spoken in favour.

- 5.3. The delegate for Roumania stated that it appeared that this meeting would terminate without any recommendations being made and that this appeared contrary to the proposal of the Chairman.
- 5.4. The Chairman said that it appeared that some error in interpretation had occurred as he had made no proposal on this subject, and as this Joint Meeting was convened with a limited Agenda, he felt that any further points should be taken up in the Plenary Assembly.
- 5.5 The delegate for Albania then stated that:

"The Delegation of the People's Republic of Albania presumes that the Joint Meeting has been called by Committee 1 because of the need to elucidate the technical principles of the Soviet Plan, and at the same time to provide the delegates with an opportunity of registering their objections, and expressing their point of view concerning the Plan with a view to a useful decision.

The Delegation of Albania notes with regret that for the second time the Joint Meeting is sitting at the same time as Committee 5, which is in conflict with the program of work established by Committee 1 in spite of the fact that the question under discussion was raised by the Albanian Delegation at the meeting of Committee 1.

Furthermore, the absence of 25 delegations owing to the fact that Committee 5 is in session at the same time, means that the objections to the agenda raised by the delegations, which at the meeting of Committee 1 registered no objection to the decision taken to recommend the proposed agenda to the Joint Committee, have had the effect that the incorrect procedure followed by the Chair on changing the Agenda, and the fact that the delegations which at the preceeding Joint Meeting declared that they had several questions to put to Professor Siforov, have posed no question to-day. All this clearly shows that we are faced with a situation created by certain delegations which have in mind the discredit of the Soviet Plan, which is in fact the most serious and most substantial document before the Conference and with it the suppression of the Joint Committee. Consequently the Albanian Delegation wishes to protest against this procedure, and declares that such methods of work are leading our Conference to a stalemate."

- 5.6 The Chairman ruled the above accusations out of order as they did not pertain to the Agenda.
6. The meeting closed at 11:25 hours.

The Reporters:

P. N. Parker

R. Craig

The Chairmen:

M. L. Sastry

Gunnar Pederson

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 447-E

12 January 1949

Mexico City, 1948/49

Committee 3

CLASSIFICATION OF REPLIES
TO THE QUESTIONS CONTAINED
IN DOCUMENT NO. 265

(This Document is to be considered in conjunction with Document No. 384)

Question 1.

Would it be advisable to take any of the following into consideration and, if so, to what extent?

- (a) The number of transmitters in operation and the volume of broadcasting being carried out at the present time.
- (b) Extraordinary circumstances, if any, which have had a significant bearing on the position of H.F.B. in a country.
- (c) The number of transmitters in operation and the volume of broadcasting being carried out at an agreed past date, in the case of certain countries which suffered damage during the last war.
- (d) The number of transmitters to be operated and the volume of broadcasting that is expected to be carried out at a future date to be agreed by the Conference, taking into account the fact that certain countries have not been able to erect new, or extend existing, installations at the same place as other countries.

Replies

1 (a)

Total number of answers: 50
No answers: 2

Yes: 37, viz: Indonesia, SCAP, Italy, Canada, Netherlands, Belgium, Belgian Congo, Australia, Switzerland, Vatican City, UNO, Monaco, South Africa Union, New Zealand, Mexico, China, United Kingdom, Iceland, Cuba, Sweden, Norway, Brazil, Columbia, Argentine, Pakistan, Nicaragua, Denmark, Uruguay, France, Chile, Finland, French Oversea Territories, United States, Morocco and Tunisia, Portugal, U.K. Territories, Southern Rhodesia,

No: 13, viz: Egypt, Syria, India, Czechoslovakia, Roumania P.R.,
Austria, Albania, Poland, U.S.S.R., Mongolia,
Ukraine S.S.R., Bolivia, Bielorussia S.S.R..

1 (b)

Total number of answers: 48
No answers: 4

Yes: 38, viz: SCAP, Iceland, Sweden, Norway, Pakistan, Denmark,
Austria, Belgium, Belgian Congo, France, Finland,
Vatican City, South African Union, Bolivia, Mexico,
United Kingdom, Cuba, Brazil, New Zealand, Syria,
Indonesia, Colombia, Argentine, Italy, Canada,
Nicaragua, Netherlands, Uruguay, Switzerland,
Chile, U.N.O., Monaco, French Territories, U.S.A.,
Morocco and Tunisia, Portugal, U.K. Territories,
Southern Rhodesia,

No: 10, viz: India, Czechoslovakia, Roumania P.R., Australia,
Albania, Poland, U.S.S.R., Mongolia, Ukraine S.S.R.,
Bielorussia S.S.R.

1 (c)

Total number of answers: 48
No answers: 4

Yes: 41, viz: S.C.A.P., Iceland, Sweden, Norway, Italy, Nether-
lands, Belgium, Belgian Congo, Australia, Switzer-
land, France, Vatican City, U.N.O., Monaco, U.S.A.,
Mongolia, South African Union, New Zealand, Indonesia,
Mexico, U.K., Cuba, Brazil, Colombia, Argentine,
Pakistan, Canada, Roumania, Nicaragua, Denmark,
Uruguay, Austria, Chile, Finland, Albania, Poland,
French Territories, Morocco, Portugal, U.K. Terri-
tories, Southern Rhodesia.

No: 7, viz: Egypt, Syria, India, Czechoslovakia, U.S.S.R.,
Ukraine S.S.R., Bielorussia S.S.R.

1 (d)

Total number of answers: 46
No answers: 6

Yes: 35, viz: Egypt, New Zealand, Syria, Indonesia, S.C.A.P., Iceland, Sweden, Norway, Brazil, Colombia, Argentine, Italy, Pakistan, Nicaragua, Denmark, Uruguay, Belgium, Belgian Congo, Australia, Chile, Vatican City, U.N.O., U.S.A., South African Union, Bolivia, Portugal, Mexico, Cuba, Canada, Austria, Switzerland, France, Monaco, French Territories, Morocco and Tunisia,

No: 11, viz: India, U.K., Czechoslovakia, Roumania P.R., Albania P.R., U.S.S.R., Mongolia, Ukraine S.S.R., Bielorussia S.S.R., U.K. Territories, Southern Rhodesia.

Question 2.

- (a) Would it be advisable and practicable to make a first assignment of a minimum and equal number of channel-hours to each country requesting the same?
- (b) If so, to what extent?
(The Chairman of the Committee to refer this question to the appropriate technical committee (s) for technical data.)
- (c) What should be the number of channel-hours or the percentage of the total channel-hours put aside for this purpose?

Replies

2 a)

Total number of answers: 43
No answers: 9

Yes: 24, viz: Syria, Mexico, S.C.A.P., China, India, Cuba, Brazil, Colombia, Argentine, Italy, Nicaragua, Uruguay, Austria, Switzerland, Chile, Vatican City, Monaco, Morocco and Tunisia, Bolivia, Egypt, France, U.N.O., French Oversea territories, Portugal.

No: 19, viz: New Zealand, Indonesia, U.K., Norway, Czechoslovakia, Pakistan, Canada, Roumania P.R., Australia, Albania, Poland, U.S.S.R., U.S.A., Ukraine S.S.R., Mongolia, South African Union, Bielorussia S.S.R., U.K. Territories, Southern Rhodesia.

2 b)

Total number of answers: 33
No answers: 19

Yes: 23, viz: Chile, Egypt, Syria, S.C.A.P., China, India, Cuba, Brazil, Colombia, Argentine, Italy, Nicaragua, Netherlands, Uruguay, Austria, Switzerland, France, Vatican City, Monaco, French Oversea territories, Morocco and Tunisia, Bolivia, Portugal.

No: 10, viz: Czechoslovakia, Canada, Roumania P.R., Australia, Poland, U.S.S.R., U.S.A., Mongolia, Ukraine S.S.R., Bielorussia S.S.R.

2 c)

Total number of answers: 37
No answers: 15

Yes: 23, viz: Egypt, Syria, Mexico, S.C.A.P., China, India, Cuba, Brazil, Colombia, Argentine, Italy, Nicaragua, Netherlands, Uruguay, Austria, Switzerland, France, Albania, Monaco, French Oversea territories, Morocco and Tunisia, Bolivia, Portugal.

No: 14, viz: U.K., Czechoslovakia, Canada, Roumania P.R., Australia, Albania, Poland, U.S.S.R., U.S.A., Mongolia, Ukraine S.S.R., Bielorussia S.S.R., U.K. territories, Southern Rhodesia.

Question 3

Would it be advisable to take into account and/or to recommend taking measures for economizing in the use of high frequencies, such as: bilateral exchange of programmes, relays, recordings, point-to-point services, improvement of national coverage by other means, etc. etc.?

Replies

Total number of answers: 52
No answers: 0

Yes: 50, viz: Egypt, New Zealand, Syria, Indonesia, S.C.A.P., China, U.K., Iceland, Cuba, Sweden, Norway, Brazil, Yugoslavia F.P.R., Colombia, Argentine, Italy, Pakistan, Canada, Roumania P.R., Nicaragua,

Denmark, Netherlands, Uruguay, Austria, Belgium,
Belgian Congo, Hungary, Switzerland, France, Chile,
Finland, Albania, Vatican City, Poland, U.S.S.R.,
U.N.O., French Oversea territories, U.S.A., Mongolia,
Morocco and Tunisia, Ukraine S.S.R., South African
Union, Bielorussia S.S.R., Portugal, U.K. terri-
tories, Southern Rhodesia, Mexico, Czechoslovakia,
Monaco, Bolivia.

No: 2, viz: India, Australia,

Question 4.

In establishing the final assignment plan, among other factors,
should either of the following be taken into account?

- (a) The requirements as presented or
- (b) only the technically justified requirements for the duration
of the operation of the said plan.

Replies

4 a)

Total number of answers: 49
No answers: 3

Yes: 10, viz: Brazil, Colombia, Argentine, Nicaragua, Uruguay,
Australia, France, Bolivia, Cuba, Chile.

No: 38, viz: New Zealand, Syria, Indonesia, Mexico, S.C.A.P.,
China, India, U.K., Iceland, Sweden, Norway,
Czechoslovakia, Italy, Pakistan, Canada, Roumania
P.R., Denmark, Netherlands, Austria, Belgium,
Belgian Congo, Hungary, Switzerland, Finland,
Albania P.R., Poland, U.S.S.R., U.N.O., French
Oversea territories, U.S.A., Mongolia, Morocco and
Tunisia, Ukraine S.S.R., South African Union,
Bielorussia S.S.R., Portugal, U.K. territories,
Southern Rhodesia.

Other Replies: 1, viz: Monaco.

4 b)

Total number of answers: 51
No answers: 1

Yes: 41, viz: Egypt, New Zealand, Syria, Indonesia, S.C.A.P., China, U.K., Iceland, Sweden, Norway, Yugoslavia, F.P.R., Czechoslovakia, Italy, Pakistan, Canada, Roumania P.R., Denmark, Netherlands, Austria, Belgium, Belgian Congo, Australia, Hungary, Finland, Albania, Vatican City, Poland, U.S.S.R., U.N.O., French Oversea territories, U.S.A., Mongolia, Morocco and Tunisia, Ukraine S.S.R., South African Union, Bielorussia S.S.R., U.K. territories, Southern Rhodesia, Switzerland, France, Chile.

No: 8, viz: Mexico, India, Cuba, Brazil, Nicaragua, Bolivia, Portugal, Argentine.

Other Replies: 2, viz: Colombia, Monaco.

Question 6

- (a) Would it be advisable to determine the assignments or shares of frequencies of various countries in the available frequency spectrum space on the basis of an equitable and uniformly applicable method?
- (b) If so, what principal factors should be established which could serve as a basis for the calculation of frequency hours in formulating a plan for the distribution of high frequencies for broadcasting?

Replies

6 (a)

Total number of answers: 51
No answers: 1

Yes: 26, viz. Egypt, Syria, Indonesia, SCAP, Cuba, Brazil, Yugoslavia, Austria, Australia, Hungary, Albania, Poland, USSR, Mongolia, Ukraine, Bolivia, Bielorussia S.S.R., Mexico, China, India, Nicaragua, Vatican City, Morocco and Tunisia, Portugal, Roumania P.R.

No: 12, viz. Iceland, Sweden, Italy, Denmark, Netherlands, Belgium, Belgian Congo, Switzerland, Chile, Finland, Monaco, New Zealand.

Others: 13,
viz. U.K., Colombia, Argentine, Pakistan, Canada, Uruguay, France, U.N.O., French Oversea territories, USA, South African Union, U.K. territories, Southern Rhodesia.

6 (b)

Total number of answers: 35
No answers: 17

Yes: 28, viz. Egypt, Syria, Indonesia, Mexico, SCAP, China, India, Cuba, Yugoslavia, Czechoslovakia, Colombia, Argentine, Pakistan, Roumania, Nicaragua, Netherlands, Australia, Hungary, Switzerland, Chile, Albania, Vatican City, Poland, USSR, Mongolia, Ukraine, Bielorussia S.S.R., Portugal.

No: 6, viz. Italy, Canada, Uruguay, Austria, Monaco, Morocco and Tunisia.

Abstention: 1,
viz. Brazil.

Question 7

- (a) Should the factors, population, area and number of languages be the basic factors for frequency assignment?
- (b) Are there other factors which should be considered?
- (c) If the answer is in the affirmative to either (a) or (b) or both, what relative weightages should be given to these factors?

7 a)

Replies:

Total number of answers: 52
No answers: 0

Yes: 11,
viz. Yugoslavia, Czechoslovakia, Roumania, Hungary, Albania, Poland, USSR, Mongolia, Ukraine, Bielorussia S.S.R., Indonesia.

No: 41, viz. Egypt, New Zealand, SCAP, India, Iceland, Cuba, Sweden, Norway, Brazil, Colombia, Argentine, Italy, Pakistan, Canada, Nicaragua, Denmark, Netherlands, Uruguay, Austria, Belgium, Belgian Congo, Australia,

Switzerland, Chile, Finland, Vatican City, U.N.O., Monaco, French Territory, USA, Morocco and Tunisia, South African Union, Bolivia, Portugal, Syria, Mexico, China, U.K., France, U.K. territories, South Rhodesia.

2 b)

Total number of answers: 48
No answers: 4

Yes: 42,

viz: New Zealand, SCAP, Iceland, Sweden, Norway, Yugoslavia, Argentine, Canada, Denmark, Austria, Belgium, Belgian Congo, Australia, Finland, U.N.O., Monaco, USA, Mongolia, Portugal, Egypt, Syria, Mexico, China, India, U.K., Cuba, Czechoslovakia, Colombia, Italy, Pakistan, Roumania, Netherlands, Hungary, Switzerland, Chile, Albania, Vatican City, Poland, Morocco and Tunisia, Bielorussia S.S.R., U.K. territories, Southern Rhodesia.

No: 6,

viz: Indonesia, Brazil, Uruguay, USSR, Ukraine, Bolivia

2 c)

Total number of answers: 40
No answers: 12

Yes: 18,

viz: Egypt, Yugoslavia, Vatican City, Indonesia, Mexico, China, India, Czechoslovakia, Roumania, Austria, Hungary, Albania, Poland, USSR, Mongolia, Ukraine, Bielorussia S.S.R., Portugal.

No: 17,

viz: New Zealand, Argentine, Italy, Uruguay, Australia, France, Chile, Monaco, French territories, USA, South African Union, Southern Rhodesia.

Abstentions: 4,

viz: Norway, Colombia, SCAP, Cuba.

Others: 1,

viz: Syria

Question 8

Would it be advisable and/or practicable to reserve frequency hours for any, or all, of the following special international transmissions?

- (a) Events of special world importance or interest.
- (b) United Nations' world news services.
- (c) For the purpose of locating displaced persons.

Replies

8 a)

Total number of answers: 46.

No answers: 6.

Yes: 9, viz: SCAP, China, Italy, Bolivia, Morocco and Tunisia, Syria, Mexico, Vatican City, Portugal.

No: 23, viz: Mongolia, Pakistan, Cuba, South African Union, Denmark, Australia, Nicaragua, Finland, Czechoslovakia, Ukraine, USSR, Bielorussia S.S.R., Netherlands, Roumania, Indonesia, India, Albania, Sweden, Uruguay, Canada, Iceland, Poland, USA.

Abstentions: 2,
viz: Yugoslavia, Hungary.

Other replies:
9, viz: Brazil, France, Monaco, Belgium, Belgian Congo, Switzerland, Norway, Austria, Chile.

8 b)

Total number of answers: 45.

No answers: 7.

Yes: 25, viz: SCAP, Cuba, Brazil, China, South African Union, Australia, New Zealand, France, Netherlands, Italy, Indonesia, Austria, Vatican City, Denmark, Finland, Sweden, Iceland, Norway, Nicaragua, Czechoslovakia, Morocco and Tunisia, Monaco, Mexico, Bolivia, Portugal.

No: 12, viz: Mongolia, Canada, Pakistan, Belgium, Belgian Congo, Uruguay, USA, Colombia, Roumania, Poland, India, Argentine.

Abstentions: 2, viz: Yugoslavia, Hungary.

Other replies: 2, viz: Switzerland, Chile.

8 c)

Total number of answers: 41

No answers: 11

Yes: 15, viz: China, Italy, Poland, Vatican City, Bolivia, Belgium, Belgian Congo, Sweden, France, Austria, Monaco, Netherlands, SCAP, Morocco and Tunisia, Mexico.

No: 21, viz: Mongolia, USSR, Bielorussia S.S.R., Ukraine, Pakistan, Cuba, South African Union, Australia, Nicaragua, Czechoslovakia, Roumania, Indonesia, India, Albania, Uruguay, Canada, USA, Portugal, Colombia, New Zealand, Argentine.

Abstentions: 2,
viz: Hungary, Yugoslavia.

Other replies: 3,
viz: Switzerland, Norway, Chile.

Question 9

- (a) Should it be recognized that any country has the right to refuse broadcasts directed to it by another country and/or?
- (b) Should it be recognized that any country may exercise the right of reciprocity with another country with regard to any broadcasts directed towards it by that country?
- (c) If the answer to (b) is in the affirmative should the practical means for assuring this right be the assignment of frequencies for this purpose?

Replies

9 a)

Total number of answers: 42

No answers: 10

Yes: 8, viz: Cuba, Colombia, South African Union,
Indonesia, Argentine, Bolivia, Mexico,
Austria.

No: 9, viz: SCAP, Australia, Bielorussia S.S.R.,
USSR, Ukraine, New Zealand, Portugal,
Italy, Switzerland.

Abstentions: 5,
viz: Yugoslavia, Hungary, Norway, Belgium,
Belgian Congo.

Other replies: 20, viz: Pakistan, Nicaragua, U.K., Southern
Rhodesia, U.K. territories, Monaco,
India, Uruguay, Canada, Mongolia,
Poland, Roumania, Vatican City, Alba-
nia, France, Morocco and Tunisia, Ne-
therlands, Chile, USA, Czechoslovakia.

2 b)

Total number of answers: 42
No answers: 10

Yes: 13, viz: Cuba, Colombia, Indonesia, Mexico, Argen-
tine, Portugal, France, Morocco and Tuni-
sia, ~~Canada~~, Portugal.

No: 10, viz: SCAP, Mongolia, Australia, Bielorussia S.
S.R., Italy, Czechoslovakia, New Zealand,
Switzerland, Ukraine, USSR

Abstentions: 5, viz: Yugoslavia, Hungary, Norway, Belgium,
Belgian Congo.

Other replies: 14,
viz: Chile, USA, Roumania, Vatican City, Pakis-
tan, Nicaragua, U.K., Southern Rhodesia,
U.K. territories, Monaco, India, Uruguay,
Poland, Albania.

2 c)

Total number of answers: 36
No answers: 16

Yes: 9, viz: Cuba, Colombia, Indonesia, Mexico,
Argentina, Portugal, France, Morocco
and Tunisia, Austria.

No: 9, viz: Mongolia, Switzerland, Bielorussia S.S.R.,
Ukraine, USSR, Italy, Netherlands, New
Zealand, Canada.

Abstentions: 3,
viz: Yugoslavia, Hungary, Norway.

Other replies: 15,
viz: Pakistan, Nicaragua, U.K., Southern
Rhodesia, U.K. territories, Monaco,
India, Uruguay, Poland, Roumania,
Vatican City, Albania, South African
Union, Chile, Bolivia.

Question 10

Is it the principal function of high frequency broadcast-
ing to serve national requirements covering large areas
within national borders, or to cross political frontiers
to develop a spirit of good understanding and cooperation
among peoples?

Replies

Total number of answers: 50
No answers: 2

International Preferences: 8

Austria, Monaco, Italy, Switzerland, Syria, Uruguay,
China, U.S.A.

National Preferences: 14

Mongolia, Cuba, Brazil, Nicaragua, Czechoslovakia,
Oversea France, Roumania, Albania, Mexico, City,
Poland, Bielorussia S.S.R., Portugal, Ukraine S.S.R.,
U.S.S.R.

2 Alternatives on equal basis: 15

Colombia, Australia, U.K., Southern Rhodesia,
British Territories, Morocco and Tunisia, Indonesia,
Chile, Argentina, Bolivia, Netherlands, India,
Belgium, Belgian Congo, Vatican City.

Abstentions:

3 Viz:
Yugoslavia, Hungary, Norway

Other replies:

10 viz:

South African Union, New Zealand, France,
Pakistan, Denmark, Sweden, Iceland,
Finland, Canada, S.C.A.P.

Question 11.

When reducing requirements would it be advisable to take into account the fact that some countries.

- (a) reduced their requirements before they were submitted;
- (b) submitted requirements without taking into consideration the principle of economy of frequencies?

Replies

11 (a)

Total number of answers: 46
No answers: 6

Yes: 16, viz: S.C.A.P., Cuba, China, Australia, Indonesia, Uruguay, Portugal, New Zealand, U.K. Southern Rhodesia, British Territories, France, Morocco and Tunisia, Switzerland, Vatican City, Austria.

No: 15, viz: U.S.S.R., Ukraine S.S.R., Bielorussia S.S.R., Colombia, South African Union, Nicaragua, Italy, India, Argentine, Roumania, Albania, Czechoslovakia, Poland, Mongolia, Mexico.

Abstentions: 5: viz:
Yugoslavia F.P.R., Hungary, Norway, Belgium, Belgian Congo.

Other replies: 10:

Denmark, Finland, Sweden, Iceland, Brazil, Chile, Monaco, Syria, U.S.A., Bolivia.

11 b)

Total number of answers: 42
No answers: 10

Yes: 23, viz:

S.C.A.P., Cuba, China, Australia,
Nicaragua, Roumania, Italy, Switzerland,
Indonesia, Belgium, Belgian Congo,
Uruguay, Portugal, U.K., Southern
Rhodesia, British Territories, New
Zealand, Argentine, Colombia, Albania,
Vatican, France, Austria.

No: 6, viz:

India, Mongolia, South African Union,
Ukraine S.S.R., Bielorussia S.S.R.,
U.S.S.R.

Abstentions: 3, viz:

Yugoslavia F.P.R., Hungary, Norway.

Other replies: 10, viz:

Denmark, Sweden, Iceland, Finland, Chile,
U.S.A., Bolivia, Syria, Brazil, Monaco.

Question 12

- (a) Should the Assignment Plan for High Frequencies be based only on already established criteria?
- (b) Would it be advisable to try to draft a preliminary plan based solely on technical principles?

Replies

12 a)

Total number of answers: 44
No answers: 8

Yes: 11, viz:

Mongolia, U.S.S.R., Bielorussia S.S.R.,
Ukraine S.S.R., Colombia, Brazil,
Indonesia, Uruguay, Mexico, Argentine,
Syria.

No: 16, viz: S.C.A.P., Cuba, Nicaragua, France,
Monaco, Italy, Switzerland, Austria,
Chile, India, Morocco and Tunisia,
New Zealand, Pakistan, Portugal,
Egypt, French Oversea territories.

Abstentions: 4,
viz: Yugoslavia F.P.R., Norway, Belgium,
Belgian Congo.

Other replies: 13,
viz: Albania P.R., South African Union,
Poland, Czechoslovakia, Hungary,
Boliyia, U.S.A., Vatican City,
Roumania P.R., Australia, U.K.,
Southern Rhodesia, U.K. terri-
tories

12 b)

Total number of answers: 44
No answers: 8

Yes: 8, viz: S.C.A .P., Nicaragua, Austria, Chile,
South African Union, French Oversea
territories, Portugal, Switzerland,

No: 28, viz: Pakistan, Cuba, Brazil, Hungary, Co-
lombia, Czechoslovakia, France, Monaco,
Italy, Indonesia, Syria, India, ..
.., Albania P.R., Uruguay, Mexico,
Ukraine S.S.R., Mongolia, Poland,
Argentina, U.S.A., U.S.S.R., Bielo-
russia S.S.R., Australia, Morocco
and Tunisia, Roumania P.R., Bolivia,
Egypt, New Zealand.

Abstentions: 4,
viz: Yugoslavia F.P.R., Norway, Belgium,
Belgian Congo.

Other replies: 4,
viz: Vatican City, U.K., Southern Rhodesia,
U.K. territories.

Question 13:

- (a) Should assignments be made to all countries, irrespective of their ability to use them immediately on account of the non-availability of equipment, lack of other resources or for any other special reason?
- (b) If the answer to (a) is in the affirmative, should the non-usable assignments be transferred for the time being to other countries by means of bilateral agreements incorporated in the Plan itself?

Replies:

13 a)

Total number of answers: 50
No answers: 2

Yes: 35, viz: Yugoslavia F.P.R., Hungary, Colombia, Egypt, New Zealand, Czechoslovakia, Roumania P.R., Indonesia, Syria, Albania P.R., Uruguay, Mexico, Ukraine S.S.R., Mongolia, Austria, Poland, Argentine, U.S.A., U.S.S.R., Bolivia, Bielorussia S.S.R., Cuba, Brazil, Netherlands, Canada, Portugal, Chile, Italy, Switzerland, Iceland, Denmark, Sweden, Finland, Pakistan, Morocco and Tunisia.

No: 12, viz: Australia, U.K., Southern Rhodesia, U.K. territories, S.C.A.P., Belgium, Belgian Congo, India, Monaco, South African Union, France, French Oversea territories.

Abstention: 1, viz: Norway.

Other replies: 2,
viz: China, Vatican City.

13 b)

Total number of answers: 34
No answers: 18

Yes: 14, viz: Brazil, Colombia, Italy, Indonesia, Bolivia, Cuba, Chile, Egypt, Syria, U.S.A., Switzerland, Uruguay, Mexico, Argentina.

No: 15, viz: U.S.S.R., Mongolia, China, Hungary, New Zealand, Czechoslovakia, French Oversea territories, Roumania P.R., Albania P.R., Ukraine S.S.R., Austria, Poland, Bielorussia S.S.R., Pakistan, Canada.

Abstentions: 2, viz: Yugoslavia F.P.R., Norway.

Other replies: 3, viz: Vatican City, Morocco & Tunisia.

Question 14

If the answer to question 1(c) Document 198 is in the affirmative,

- (a) Would it be advisable to specify the total number of channel-hours to be set aside for exclusive assignment to "certain countries which suffered damage during the last war"?
- (b) If the answer to question (a) above is in the affirmative:
 - i. Would it be advisable to specify the countries which are to be included as "certain countries which suffered damage during the last war"?
 - ii. Would it be advisable to have the countries thus designated allocate among themselves the channel-hours specified for this purpose?

Answers;

14 (a)

Total number of answers: 46
No answers: 6

Yes: 8, viz:

S.C.A.P., Australia, Albania P.R.,
Bielorussia S.S.R., U.S.S.R., Ukraine
S.S.R., Mongolia, South African Union.

No: 30, viz:

Pakistan, Cuba, Brazil, Colombia, Egypt,
Denmark, Nicaragua, Finland, Monaco,
Sweden, Norway, Syria, India, Switzerland,
Uruguay, Mexico, Canada, Argentine, U.S.A.,
Bolivia, Iceland, Austria, New Zealand,
U.K., Southern Rhodesia, British Territories,
Indonesia, Belgium, Belgian Congo, France.

Abstentions: 3,
viz:

Yugoslavia F.P.R., Hungary, Czechoslovakia.

Other replies: 5,
viz:

Netherlands, Chile, Poland, Morocco and
Tunisia, Roumania.

14 (b 1)

Total number of answers: 21
No answers: 31

Yes: 4, viz:

S.C.A.P., South African Union, Australia,
Albania P.R.

No: 10, viz:

Uruguay, Argentine, U.S.A., Bolivia,
Bielorussia S.S.R., New Zealand, Nicaragua,
Brazil, Colombia, Egypt.

Abstentions: 4,
viz:

Yugoslavia F.P.R., Hungary, U.S.S.R.,
Czechoslovakia,

Other replies: 4,
viz:

Switzerland, Roumania P.R., Poland, Chile.

14 (b 2)

Total number of answers: 22
No answers: 31

Yes: 0

No: 15, viz; Brazil, Colombia, Egypt, South African
Union, Australia, New Zealand, Nicaragua,
France, S.C.A.P., Uruguay, Argentine,
Bolivia, Bielorussia S.S.R., Switzerland,
Chile.

Abstentions: 4, viz:

Yugoslavia F.P.R., Hungary, U.S.S.R.,
Czechoslovakia,

Others replies: 3,
viz:

Poland, Albania P.R., Roumania P.R.

Question 15:

Taking into consideration the rights common to all countries, and considering the total number of channel-hours to be distributed, would it be advisable to establish maximum and minimum limits for assignment of these channel-hours in order to avoid great inequality between the contemplated limits?

Total number of answers: 45
No answers: 7

Yes: 19, viz: Argentina, Bolivia, Brazil, Chile, Colombia, Cuba, Egypt, France, Indonesia, Mexico, Nicaragua, Morocco and Tunisia, Syria, Uruguay, S.C.A.P., Austria, Vatican City, Portugal, U.N.O.

No: 23, viz: Albania, Australia, Bielorussia S.S.R., U.K. territories, Denmark, U.S.A., Finland, Iceland, Italy, Monaco, Norway, New Zealand, Indonesia, Poland, Ukrainian S.S.R., So. Rhodesia, Roumania P.R., U.K., Switzerland, Czechoslovakia, So. African Union, U.S.S.R., Mongolia.

Abstentions: 3, viz: Belgium, Belgian Congo, India.

Question 16:

Once the various categories of priorities are adopted, would it be advisable to divide up the total available channel-hours between these categories and then distribute them among the countries?

Replies:

Total number of answers: 47
No answers: 5

Yes: 7, viz: Argentina, Brazil, Colombia, Mexico, Nicaragua, Indonesia, Cuba.

No: 34, viz: Albania, Australia, Austria, Belgium, Bielorussia S.S.R., Canada, Vatican City, U.K. territories, Belgian Congo, Denmark, U.S.A., Finland, Iceland, Norway, New Zealand, Pakistan, Poland, Portugal, Ukraine S.S.R., Southern Rhodesia, Roumania P.R., U.K., Sweden, Czechoslovakia, South African Union, U.S.S.R., Uruguay, Mongolia, Switzerland.

Replies: (16) cont'd

No: (cont'd) France, India, Italy, Monaco, Syria,

Abstentions: 5, viz: Bolivia, Chile, Morocco, U.N.O., S.C.A.P.,

Question: 17

Would it be advisable to set a limit to the duration of programmes for the use of each frequency assigned to a specified country in order to satisfy a greater number of requirements than might otherwise be possible?

Replies:

Total number of answers: 49

No answers: 3

Yes: 14, viz: Argentina, Bolivia, Colombia, Indonesia, Monaco, Portugal, S.C.A.P., Austria, Brazil, Vatican City, France, Mexico, Morocco and Tunisia, Switzerland.

No: 34, viz: Albania, Australia, Bielorussia S.S.R., Canada, Chile, U.K. territories, Cuba, Denmark, Egypt, U.S.A., Finland, India, Iceland, Italy, Nicaragua, Norway, New Zealand, Pakistan, Indonesia, Poland, Ukraine S.S.R., Belgium, Belgian Congo, French Territories, Southern Rhodesia, Roumania P.R., U.K., Sweden, Syria, Czechoslovakia, South African Union, U.S.S.R., Uruguay, Mongolia.

Abstentions: 1, viz: U.N.O.

Question 18:

Would it be desirable, in the assignment of high frequencies for broadcasting, to take into account evidence existing at present of the interest of listeners in programmes which are now being transmitted?

Replies: (18)

Total number of answers: 44

No answers: 8

Yes: 17, viz: Belgium, Canada, Belgian Congo, Italy, New Zealand, South African Union, U.N.O., Bolivia, Chile, Vatican City, U.K. territories, Indonesia, Portugal, Southern Rhodesia, U.K., Switzerland, French Territories.

Replies: (18) (Cont')

No: 27, viz: Albania P.R., Argentine, Australia, Austria,
U.S.S.R. Brazil, Colombia, Egypt, U.S.A., In-
dia, Mexico, Monaco, Nicaragua, Norway,
Indonesia, Poland, Morocco and Tunisia,
Ukrainian S.S.R., Roumania P.R, Syria,
Czechoslovakia, Uruguay, Mongolia, S.C.A.P.
Cuba, France

Question 19

- (i) In order to determine the importance of broadcasting in a country, would it be useful to consider the following:
- (a) The number of receivers
 - (b) The consumption of electrical energy.
- (ii) If so in what form and to what extent?

19 (Ia)

Replies

Total number of answers: 47
No answers: 5

Yes: 24, viz: Argentine, Australia, Chile, Colombia, Cuba,
Denmark, Finland, France, Iceland, Nicaragua,
Sweden, U.N.O., S.C.A.P., U.K. Territories,
Italy, Mexico, Norway, Indonesia, Morocco
and Tunisia, Southern Rhodesia, U.K.,
Switzerland, South African Union, Uruguay.

No: 23, viz: Albania, Austria, Belgium, Brazil, Canada,
Belgian Congo, Egypt, India, Indonesia,
Monaco, New Zealand, Pakistan, Poland,
Ukrainian S.S.R., Roumania P.R., Syria,
Czechoslovakia, French Territories, U.S.S.R.,
Mongolia, Bielorussia S.S.R., U.S.A., Portugal.

Question 19 (I b)

Total number of questions: 47
No answers: 5

Yes: 12, viz: Argentine, Chile, Colombia, France, Nicaragua,
S.C.A.P., Italy, Mexico, Indonesia, Morocco
and Tunisia, Switzerland, Uruguay.

No: 35, viz; Albania, Austria, Australia, Belgium, B.S.S.R.,
Brazil, Canada, U.K. Territories, Belgian
Congo, Cuba, Denmark, Egypt, Finland, India,

Question 19 (I b) (Cont')

Indonesia, Iceland, Monaco, Norway, New Zealand, Pakistan, Poland, Portugal, Ukrainian S.S.R., Southern Rhodesia, Roumania P.R., U.K., Sweden, Syria, Czechoslovakia, French Territories, South African Union, U.S.S.R., Mongolia, U.N.O., U.S.A.

Question 20:

Is it desirable to formulate a recommendation of a maximum power limit to prevent rivalries in the competition for power?

Replies

Total number of answers: 50
No answers: 2

Yes: 42, viz: Albania P.R., Australia, Austria, Belgium, Bielorussia S.S.R., Bolivia, Vatican City, U.K. Territories, Belgian Congo, Denmark, Finland, France, Hungary, Indonesia, Iceland, Italy, Monaco, Norway, Indonesia, Poland, Morocco and Tunisia, Yugoslavia F.P.R., Ukrainian S.S.R., Southern Rhodesia, Roumania P.R., U.K., Sweden, Switzerland, Czechoslovakia, French Territories, U.S.S.R., Mongolia, U.N.O., S.C.A.P., Brazil, Cuba, Egypt, India, Mexico, Portugal, Syria, South African Union.

No: 7, viz: Argentina, Chile, Colombia, Nicaragua, Uruguay, U.S.A., New Zealand.

Abstentions: 1, viz: Canada.

Question 21

- (a) Do you think the sovereignty of peoples should be wholly respected with reference to the organization of their telecommunications by high frequency radio-broadcasting?
- (b) If not, do you believe it possible and desirable to impose on them a Plan to which they have not freely consented and, if so how?

Replies

21 (a)

Total number of answers: 49
No answers: 3

Replies (Question 21 a' - Cont')

Yes: 28, viz: Albania P.R., Argentine, Austria, Bolivia, Brazil, Canada, Chile, Colombia, Cuba, Egypt, U.S.A., France, Hungary, Indonesia, Italy, Mexico, Nicaragua, New Zealand, Poland, Portugal, Morocco and Tunisia, Yugoslavia F.P.R., Roumania P.R., Syria, Czechoslovakia, O.N.U., Uruguay, Switzerland.

No: 7, viz: Australia, Denmark, Finland, India, Iceland, Sweden, S.C.A.P.

Abstentions: 14, viz: Belgium, Bielorussia S.S.R., Vatican City, U.K., Belgian Congo, Monaco, Norway, Indonesia, Ukrainian S.S.R., Southern Rhodesia, U.K., South African Union, U.S.S.R., Mongolia.

21 (b)

Total number of answers: 44
No answer: 8

Yes: 0

No: 34, viz: Albania P.R., Argentine, Austria, Australia, Bolivia, Brazil, Canada, Chile, Colombia, U.K. Territories, Cuba, Egypt, U.S.A., France, Hungary, Indonesia, Italy, Mexico, Nicaragua, New Zealand, Netherlands, Poland, Portugal, Yugoslavia F.P.R., Southern Rhodesia, Roumania P.R., U.K., Syria, Czechoslovakia, Uruguay, U.N.O., S.C.A.P., Morocco and Tunisia, Switzerland.

Abstentions: 10, viz: Belgium, Bielorussia S.S.R., Vatican City, Belgian Congo, Monaco, Norway, Ukrainian S.S.R., South African Union, U.S.S.R., Mongolia.

Question 22

Would it be admissible to allocate frequencies for International Broadcasting to Colonies, oversea territories and dependencies if the same are covered by broadcasts from their respective mother countries?

Replies

Total number of replies: 43
No answers: 9

Replies: (Question 22: cont'd)

Yes: 14, viz: Canada, U.K., U.K. territories, So. Rhodesia, Morocco and Tunisia, Australia, Norway, Indonesia, Netherlands, French Territories, Belgium, Belgian Congo, Portugal, France.

No: 23, viz: Brazil, Colombia, Egypt, Mexico, Czechoslovakia, Cuba, U.N.O., Austria, Roumania P.R., Nicaragua, Bielorussia S.S.R., Uruguay, U.S.S.R., India, Syria, Mongolia, Ukraine S.S.R., Poland, Argentine, Albania P.R., Bolivia, Switzerland, South African Union.

Abstention: 1, viz: Yugoslavia F.P.R.

Other Replies: 5, viz: U.S.A., S.C.A.P., Monaco, New Zealand, Chile.

Question 23:

Would it be advisable to study the possibility of dividing up the countries of the world into Zones or Groups in order to distribute among these Zones or Groups, blocks or bands of frequencies in all the high frequency broadcasting bands with the purpose of leaving to the Zones or Groups the task of subdividing these blocks or bands between the countries contained in the Zones or Groups?

Replies:

Total number of answers: 47
No answers: 5

Yes: 11, viz: Brazil, Colombia, Chile, Mexico, Bolivia, U.N.O., S.C.A.P., Nicaragua, Uruguay, Cuba, Argentine.

No: 36, viz: Czechoslovakia, U.S.A., Albania P.R., Portugal, Belgium, Belgian Congo, Switzerland, France, South African Union, Austria, Canada, Roumania P.R., Iceland, Sweden, Monaco, U.K., Bielorussia S.S.R., Morocco and Tunisia, Denmark, Australia, Norway, Pakistan, Indonesia, U.S.S.R., India, Syria, Netherlands, Finland, Mongolia, Ukraine S.S.R., Poland, French Territories, Vatican City, New Zealand, Southern Rhodesia, U.K. Territories.

Question 24

- (a) Would it be advisable and practicable to reduce the excess of requirements by the application of suitable percentages to the number of channels and/or hours of transmission requested?
- (b) If so, would it be advisable to apply suitable percentages for each band?

Replies

24 (a)

Total number of answers: 48
No answers: 4

Yes: 8, viz: Colombia, Cuba, Nicaragua, Uruguay, Argentine, Bolivia, Switzerland, Mexico.

No: 40, viz: U.N.O., South African Union, Albania P.R., Belgium, Belgian Congo, France, Southern Rhodesia, U.K. Territories, Brazil, Egypt, Italy, Czechoslovakia, U.S.A., New Zealand, Iceland, Monaco, Sweden, U.K., Syria, Chile, Netherlands, Austria, Canada S.C.A.P., Roumania P.R., Bielorussia S.S.R., Morocco and Tunisia, Denmark, Australia, Norway, Pakistan, Indonesia, U.S.S.R., India, Finland, Mongolia, Ukraine S.S.R., Poland, French Territories, Vatican City.

24 (b)

Total number of answers: 33
No answers: 19

Yes: 7, viz: Argentine, Switzerland, Nicaragua, Uruguay, Mexico, Colombia, Cuba.

No: 26, viz: Mongolia, Ukraine S.S.R., French Territories, Vatican City, Austria, Canada, Roumania P.R., Albania P.R., Bielorussia S.S.R., Morocco and Tunisia, U.S.S.R., India, Bolivia, New Zealand, Monaco, Czechoslovakia, Egypt, U.S.A., U.K. Territories, U.K., Southern Rhodesia, Brazil, Chile, Syria, Netherlands, Italy.

Question 25

Should the needs of countries which have not submitted their requirements be taken into consideration?

Replies

Total number of answers:

47

No answers:

5

Yes, 27, viz: Finland, Mongolia, Poland, Argentine, Nicaragua, Uruguay, Denmark, Syria, Netherlands, Chile, Iceland, Sweden, Pakistan, Indonesia, U.N.O., Colombia, Cuba, Egypt, Italy, Mexico, Czechoslovakia, U.S.A., Austria, Canada, S.C.A.P., Portugal, Switzerland.

No: 6, viz: Australia, South African Union, India, U.S.S.R., Bielorussia S.S.R., Ukraine S.S.R.

Abstentions: 2, viz: Norway, Brazil.

Other Replies: 12, viz: French Territories, Morocco and Tunisia, New Zealand, Monaco, U.K., U.K. Territories, Southern Rhodesia, Roumania P.R., Albania P.R., Belgium, Belgian Congo, France.

Question 26

In the allocation of M.F. channel-hours for national and "primary" coverage should any preference be given to services which cannot technically (as distinct from economically) be provided in any other way?

Replies

Total number of replies:

36

No answers:

16

Yes: 14, viz: Netherlands, Mexico, U.S.A., New Zealand, U.N.O., South African Union, Belgium, Belgian Congo, Bolivia, Australia, Indonesia, India, Canada, Roumania P.R.

No: 7, viz: Czechoslovakia, Mongolia, Poland, Albania P.R., Bielorussia S.S.R., U.S.S.R., Ukraine S.S.R.

Abstentions: 12, viz: France, Morocco and Tunisia, Monaco, U.K., Norway, Pakistan, Colombia, French Territories, Argentine, Vatican City, U.K. Territories, Southern Rhodesia.

Other replies: 3, viz: Switzerland, Uruguay, S.C.A.P.

Question 27:

Where M.F. channel-hours are allotted to a nation for "primary" coverage as the most economic means (but not the ultimate high quality means) of providing service, should any allocation made for the purpose in bands applicable to international and intercommonwealth "auxiliary" broadcasting be taken into account when allotting the same nation frequency hours to fulfil its international or intercommonwealth aspirations?

Replies:

Total number of answers: 32
No answers: 20

Yes: 3, viz: U.S.A., New Zealand, Australia.

No: 13, viz: Mongolia, Ukraine S.S.R., Poland, Mexico, Czechoslovakia, Canada, U.K., U.K. territories, Southern Rhodesia, Bielorussia S.S.R., Pakistan, U.S.S.R., Albania P.R..

Abstentions: 16, viz: French Territories, Argentine, Vatican City, Brazil, Colombia, U.N.O., South African Union, Norway, Belgian Congo, Belgium, Roumania P.R., S.C.A.P., Uruguay, Indonesia, India, Morocco and Tunisia.

Question 28:

In arriving at a basis for the distribution of such M.F. broadcasting frequency hours as may be made available for "auxiliary" international and intercommonwealth services, should any loading, or preference be allowed to nations broadcasting from world centers which to groups of nations are natural foci of world news culture and are recognized as being peculiarly equipped to meet the needs and desires of large blocks of the world's listeners?

Replies:

Total number of answers: 35
No answers: 17

Yes: 8, viz: Netherlands, Australia, U.K., Indonesia, South African Union, New Zealand, U.K. territories, Southern Rhodesia,

No: 12, viz: Mongolia, Ukraine S.S.R., Poland, Bielorussia
S.S.R., Pakistan, U.S.S.R., Mexico, Czechoslo-
vakia, U.S.A., Albania P.R., Bolivia, India.

Abstentions: 13, viz: French Territories, Argentine, Vatican
City, Morocco and Tunisia, Monaco,
Norway, Roumania P.R., U.N.O., Brazil,
Colombia, Belgium, Belgian Congo, France.

Other Replies: 2, viz: Uruguay, S.C.A.P.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/1949

Document No. 448-E

12 January 1949

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Committee 3

DRAFT REPORT ON THE WORK OF THE GENERAL PRINCIPLES COMMITTEE

First Part

I. CONSTITUTION, COMPOSITION AND TERMS OF REFERENCE.

Committee 3 was set up by the Plenary Assembly on October 26th, 1948. Initially, the following countries stated that they wished to take part in its work:

Albania, Australia, Austria, Belgium, Bielorussian S.S.R., Brazil, Canada, Chile, China, Overseas Territories of the French Republic, United Kingdom Colonies and Protectorates, Cuba, Denmark, Dominican Republic, U.S.A., Finland, France, Guatemala, India, Indonesia, Ireland, Iceland, Italy, Luxembourg, Mexico, Monaco, New Zealand, Pakistan, Netherlands, Poland, Portugal, Morocco and Tunisia, Yugoslavia, Ukrainian S.S.R., Southern Rhodesia, Roumania, United Kingdom, Switzerland, U.S.S.R., Uruguay, Venezuela, and the Observer of the United Nations.

Later, the following were added to this list:

Argentina, Belgian Congo, Bolivia, Bulgaria, Colombia, Czechoslovakia, Egypt, El Salvador, Hungary, Nicaragua, Norway, Panama, Portuguese Colonies, South Africa, Sweden, Vatican City; in addition, the following Observers:

Popular Republic of Mongolia, S.C.A.P., U.N.E.S.C.O., as well as the expert of the I.F.R.B.

. . .

Mr. H. J. Van den Broek (Netherlands) was Chairman, Mr. Jacques Meyer (France), First Vice-Chairman; Professor Viljo Viktor Yloestalo (Finland); Second Vice-Chairman; Mr. J. M. Leproux (France), Rapporteur.

Owing to his commitments in other Committees, the Second Vice-Chairman has only been able to attend a limited number of meetings of Committee 3.

The Plenary Assembly gave the following terms of reference to Committee 3:

"To examine and recommend the types of priorities and the general principles which may serve as a basis for the final draft of the High Frequency Broadcasting Assignment Plan or Plans, for which purpose the following should particularly be taken into account:

- a) The reports and documents of the Planning Committee (Geneva and Mexico Sessions).
- b) The comments sent by the different countries and the documents of this Conference which contain points of view or information on the subject."

II. MEETINGS AND WORKING GROUPS.

The Committee held 21 plenary meetings after its opening meeting on October 27th and up to the date of the examination of this Report, (the figures in brackets give the Document numbers of the reports of the meetings concerned): October 28th (27), October 29th (50), November 3rd (77), November 4th (85), November 10th (116), November 11th (130), November 12th (131), November 15th (163), November 16th (164), November 17th (196), November 19th (197), November 22nd (202), November 23rd (232), November 25th (233), November 26th (234), November 29th (240), December 1st (288), December 2nd (292), December 3rd (303), December 8th (324), December 9th (333), December 10th (327), December 22nd, morning (), December 22nd, afternoon (), December 23rd (), January 3rd, morning (), January 3rd, afternoon (), January 4th, morning (), January 4th, afternoon, (), January 7th, morning (), January 7th, afternoon (), January 8th (), January 10th, morning (), January 10th, afternoon ().

Plenary meetings of the Committee were held on almost all working days (apart from Saturdays), except when this was prevented either by Plenary Sessions of the Conference or by meetings of Working Groups of the Committee.

Three Working Groups were successively set up:

Group A, whose task was to classify and define the various types of broadcasting. It was composed of representatives of:

Vatican City, Brazil, U.S.A., India, Morocco and Tunisia, Mexico, Portugal, United Kingdom, U.S.S.R.; and later, Cuba and Italy.

Chairman: Father Soccorsi (Vatican City).

Reports: Documents 171 and 290.

Group B, whose task was to propose additional questions for the Committee's questionnaire. The Group was composed of representatives of:

Argentina, Canada, Overseas Territories of the French Republic, India, Roumania, Switzerland.

Chairman: Mr. Barajas (Mexico).

Reports: Document 221.

Group C, entrusted with examining, classifying and interpreting the replies to the questionnaire. It was formed from representatives of:

Argentina, Colombia, U.S.A., France, Indonesia, Italy, New Zealand, Pakistan, Portugal, United Kingdom, Czechoslovakia, Ukrainian S.S.R., U.S.S.R., Uruguay.

Chairman: Professor A. S. Bokhari (Pakistan).

Reports: Document 375. The replies in full are contained in Document 384 (2 volumes).

III. THE APPROACH TO THE PROBLEM.

The terms of reference, which the Plenary Assembly had given to Committee 3 on October 26th did necessarily bear relation to points 2 and 3 of the Agenda established for this Conference by the Atlantic City High Frequency Broadcasting Conference (1947). These points were as follows:....

2. Consideration of the question of priorities in order to take into account any needs for adjustment which have been brought to light by the work of the Planning Committee.
3. Re-examination of general and technical principles and data in the light of any new material which has become available since the Atlantic City Conference, with a view to establishing the basis of a final frequency assignment plan.

With reference to the question of priorities, it should be noted that the following conclusion was reached by the Committee which was asked to examine this problem, amongst others, at the Atlantic City RHF Conference: "....it is not possible now to draw up a table of priorities." (See Rhf Documents 128, 137 and 147).

It can be understood, therefore, that Committee 3 of the Mexico City Conference began its work with some circumspection, but this fact did not exclude either good humour or the desire to succeed.

Theoretically, there were several possible methods of tackling the problem. However, in the light of the experience gained at Atlantic City, seemed desirable to proceed with great prudence. Confused and fruitless discussions might have resulted if a draft list of general principles, or table of priorities, had been submitted to the Committee for consideration. Besides, it would then have been necessary that one or several drafts of this nature would have been submitted to the Committee for its consideration; but this did not in fact take place. The reason was probably - and certainly this was so in the case of the Chair - that the delegations were taken aback by the complexity of the problem and by the gravity of the decisions to which a discussion on drafts of this nature might lead.

The Chair therefore considered that it was useless to try to go forward too quickly, and that the first step might well be the drawing up of a certain number of questions. The replies to these questions would enable account to be taken of the opinions of the different delegations with regard to the problems which had been raised.

On the basis of these replies, it might then perhaps be possible to attempt to establish at least a number of general principles. If, during the work of the Committee, it proved impossible to accomplish this limited task, then the only course would be to raise this question in the Plenary Assembly, stating that, pending further instructions, it seemed that high frequency allocation plans could only be drawn up on a "practical" or "empirical" basis.

During its meeting on October 28th, the Committee authorized the Chairman to present a draft questionnaire; this was done on November 4th (Document 49).

Several plenary meetings of the Committee were necessary before the text of 5 questions could be approved (Documents 198 and 262). About 20 other questions were added to them at the proposal of Working Group B (Document 221). All delegations were then invited to reply to the final group of questions (Document 265). These replies, classified and coordinated by Working Group C, are dealt with in paragraphs IX and X of this Report.

It would be vain to deny that the debates in Committee 3 were at times laborious and that it was not always possible to achieve progress as rapid as the great majority of the Committee would, no doubt, have desired. This seems especially to have been the case when the Committee examined the texts of the first questions contained in Document 49.

However, beneath these discussions, which appeared to be purely theoretical and only concerned with details, there lay not only a keen appreciation of the problems at stake, but also a strong desire to make a genuine, constructive contribution to this Conference, not an illusory one which it would find to be of no service.

A number of delegates often wondered if it was really necessary to discuss at such length the text of certain questions and if it would not be better to reserve their mental energy for framing replies. On reflection, however, they were obliged to admit that the manner in which a question is drawn up can greatly influence the reply. Moreover, the importance of this reply was measured by the fact that it, in turn, would perhaps serve as a basis for the formulation of general principles.

Therefore, the discussions within Committee 3 had a definite value, even when they were most difficult, and progress was extremely slow. These debates enabled the delegations, without any positive conclusions being reached or decisions taken, to exchange their views on matters which most directly concerned them.

Very often one had the impression that slowly and laboriously, but nevertheless surely, the dim outlines of a new international charter of high frequency broadcasting were being sketched in the course of these discussions. This goal will certainly not be obtained during this Conference nor perhaps during the next; but something appears to be crystallizing and, in the opinion of its Chairman, Committee 3 may point to this with some pride.

He wishes to add that although, at certain meetings, the discussions were more lively than is customary, the greatest cordiality did not cease to reign amongst the delegations. The tone of the debates remained courteous and good faith remained absolute, even if, in exceptional cases, the customary vigour of the statements became somewhat vehement in form.

IV. DEVELOPMENT OF THE DEBATES.

The first meetings of Committee 3 were spent in preliminary discussions and in an exchange of views with regard to the classification and definition of the various types of broadcasting. These discussions led to the formation on November 3rd of Working Group A whose composition has been given above and whose work will be briefly summarized in Section V.

At this stage of the debates, several delegations submitted documents for the Committee to study.

The examination of the questionnaire, contained in Document 49, began on November 10th. The Committee accepted this document as a basis for discussion, on the understanding that it would be entirely free to modify, or to reject, one or several questions, or to add others. Indeed, it seemed impossible not to let the Committee itself judge the final form of the questionnaire, to which all delegations would be invited to reply.

There was a risk that discussion on the best procedure to follow might be unduly prolonged, but, at the end of the meeting on November 11th, the Delegation of Pakistan submitted the following resolution which was unanimously adopted:

"The Committee adopts in general the questionnaire in Document 49 as the basis of discussion, in the purely arbitrary order in which the questions are given, approving or rejecting the individual questions as they are given; next considering additional questions - if any - and finally considering the order of the questions as they would appear in the final form."

The procedure having thus been determined, the questions could now be examined one by one.

. . .

The discussions during the meeting next day showed the arduous task which the Committee had given itself by agreeing to discuss, down to the smallest details, the texts of the proposed questions.

With regard to the first question, the Delegation of India made a counter-proposal (Document 104) which received a great deal of support during the debates on November 12th. After re-drafting (Document 115), the text of this question was unanimously adopted on November 15th with slight modifications only.

Two meetings, on November 16th and 17th, were required to complete discussion of the first part only of question No. 2. This question concerns the practicability of assigning a minimum number of channel hours to each country requesting it. It gave rise to prolonged but instructive discussions on the relationship between national sovereignty in broadcasting matters, as well as on the right of each country to a minimum part of the high frequency spectrum.

After this, progress was somewhat quicker. At the next meeting (November 19th), discussion was resumed on the second part of question No. 2 which the Delegations of Argentine and U.S.S.R. had re-submitted by way of an amendment. After minor alterations, this question and question No. 3 were approved.

In none of the cases mentioned, had it been necessary to take a vote. The Committee, like its Chairman, considered that it was desirable to avoid votes as far as possible, since a majority would not be able to impose its will on a minority in these matters.

However, time was short and at the meeting of November 23rd the Chairman felt it was necessary to put to the vote the amended text of question No. 4, which was adopted by 27 votes to 4, with 2 abstentions.

The text of these 4 questions, as approved, is in Document 198.

. . .

Two days later, the Committee stated that it accepted the date of December 17th, which the Plenary Assembly had fixed for the handing in of the final report. During the same meeting, the Committee appointed a Working Group to collect, group, classify and, if necessary, to draw up such additional questions as the delegations wished to add to the questionnaire. It asked this Group to submit its report as soon as possible.

Finally, it adopted unanimously a new text for question No. 5 (Document 262).

A further meeting was held on November 26th. It was decided by 27 votes to 8 that the new text of question No. 5 would not only include that of question No. 6, as had been decided the previous day, but that it also made question No. 7 superfluous. In this way, the examination of the questionnaire of the Chairman could be considered as complete.

However, before asking for replies, the Committee declared that it would await the result of the work of Working Group B, which it had just set up.

Meanwhile, the report of Group A was to be discussed.

This Report (Document 171) was presented to the Committee at its meeting on November 29th.

It was then examined at two meetings, held on December 1st and 2nd; this examination showed such wide differences of opinion that it was decided to ask the Working Group to reconsider the majority of its recommendations.

However, the Committee, in one meeting (December 3rd) and almost without discussion, adopted the report of Working Group B (Document 221) which contained amongst other things, the text of the additional questions which the Group proposed should be added to the questionnaire.

Immediately afterwards, the Committee appointed a new Working Group to classify and coordinate the replies. Thanks to the efforts of Mr. Bokhari, Chairman of the new Working Group, the additional questions were combined, with those of the questionnaire, in a single document (Document 265).

The replies were to be handed in to the Group by 2 p.m. on December 8th, at the latest, but this target date was later postponed until the afternoon of December 9th.

After having given Group A several days to reconsider Document 171, the Committee met on December 8th to study the results, contained in Document 290.

These results amounted only to a decision taken by a small majority and the Committee, on the proposal of the Chair, attempted in the first place to see if it could agree upon a compromise text. After one and a half meetings, these efforts proved unsuccessful. The Chairman then proposed that the Committee accept the evidence and recognize that it seemed impossible to obtain unanimity or quasi-unanimity - which were, in his opinion, indispensable - despite the long debates and the manifest good will of the members of the Committee. He proposed that questions of classification and definition should be set aside and that the Committee pass on to discuss another subject, at any rate until such time as a new compromise text might be submitted, which had a real chance of being accepted either unanimously or by a very large majority.

This proposal met with vigorous opposition from certain delegations, who considered the procedure irregular and insisted that Document 290 be immediately discussed and put to the vote. This conflict found a happy solution on the next day, December 10th, when the delegations, who in protest had left the meeting on the previous day, again attended the meeting. During this meeting, it was decided to ask the delegations if they accepted or rejected Document 290, this being done, not in order to impose the will of the majority, but simply "for statistical reasons". A compromise text proposed by the Soviet Delegation was submitted to the delegations under the same conditions. For the results see the end of paragraph V.

Moreover, it was decided that question No. 5, as well as any replies which might already have been received, be examined separately from the others by Group C.

During the work of Working Group C, i.e. from December 11th to 21st, the plenary meetings of the Committee were interrupted in order that the Working Group might hand in its report as soon as possible.

They were resumed on the morning of December 22nd. In accordance with Committee 3's terms of reference and with a decision of the Coordinating Committee (Document 109), the Committee then decided to examine the questions of principle raised in Appendices B

of the Reports of the Planning Committee (Geneva and Mexico Sessions). This work was carried on whilst waiting for the Secretariat to accomplish the monumental task of the translation, mimeographing and distribution of the voluminous Report with annexes of Working Group C.

This examination of the Appendices B was mainly devoted, as will be seen in paragraph VII, to discussion of the basic principles of the Soviet Plan and it was completed at the end of the morning of January 7th.

Committee 3 was then able to tackle the last part of its work: examination of the Delegations' replies to the questionnaire (Document 265), as contained in extenso in Document 384 and as classified and interpreted by Working Group C in Document 375, which was accepted as a working document during the afternoon meeting on January 7th. After having decided on the procedure to be followed in this case, the Committee began detailed consideration of Document 375 on the morning of January 10th.

V. WORKING GROUP A.

The following terms of reference were given to this Group, whose Chairman was Father Soccorsi and whose composition has been given above:

- "1. Determine and define the criteria for classifying the various types of high frequency transmissions, taking into account the destination of these transmissions, as well as the nature of the programmes and the technical conditions of operation.
2. Determine and define a practical classification, as simple as possible, capable of being used immediately by the appropriate Committees, for statistical analysis and other purposes.
3. This work should be undertaken on the basis of all proposals and documents already submitted, or later to be submitted, to the present Conference, and on the basis of documentation of the Atlantic City HFB Conference.
4. Proposals for definition and for classification should be submitted in a form which in no way prejudices later discussions on the principles of priority in Committee 3."

The Group, constituted on November 3rd, has held numerous meetings. As working documents it had at its disposal, among others:

- No. 25 - The Question of Priorities - Brief Summary of the Atlantic City Documents;
- No. 28 - Morocco and Tunisia - Classification of Short Wave Transmissions;
- No. 38 - India - Types of Broadcasting Services;
- No. 53 - Portugal - An attempt to classify HF Broadcasting Services;
- No. 54 - Brazil - Proposal for Classification of Broadcasting Services.

After long discussions, and thanks to the untiring efforts of the chairman, a report on "Proposal for Classification and Definition of different Types of Transmissions" was presented on the 29th November (Document No. 171).

This was composed of four parts, referring to classification and proposed definitions, according to:

- I. Destination of transmissions,
- II. Nature of programmes,
- III. Technical conditions,
- IV. Necessity for using high frequencies.

While the report had not been voted on within the Working Group, and some delegations had only made reservations with regard to certain points, violent opposition against the proposals contained therein became manifest when the document was discussed in the plenary meetings of the Committee. During the meeting of December 1st, part III was approved by 22 votes to 13, after a vote taken because no question of principle seemed to be involved. On the following day, part II was completely eliminated by 29 votes to 3. As to part IV, the Delegation of New Zealand proposed a new wording, as well as an addition establishing a classification into "indispensable services" and "auxiliary services".

But the real stumbling block was undoubtedly part I, which proposed a classification into:

- a) National Transmissions,
- b) Mixed Transmissions,
- c) International Transmissions,
- d) Special Transmissions.

The opposition arose principally against the admission, within the classification, of the "mixed transmissions" which included, amongst others, "transmissions in the language of the transmitting country to persons enjoying the rights of citizenship of that country but living outside its frontiers." Certain delegations, and amongst them especially those of the Western hemisphere, considered that such a classification was of an inadmissible political character. While they were aware that opposition against the classification would not automatically signify the elimination of the objectionable transmissions, they did not want to see them "acknowledged and sanctioned" in any official document of the conference.

Other delegations on the contrary, insisted on a clearer and more complete definition of the classification in question.

To this divergence of viewpoints must be added the request made by certain delegates to eliminate completely or partially category d) in which had been included the transmissions by the United Nations (including those by UNESCO), and those from the Vatican City and the International Red Cross. Other voices were raised insisting that category a), contrary to the proposal contained in Document 171, should cover only national transmissions in the strictest sense of the word, and that it should not cover transmissions intended for colonies, protectorates, territories under mandate and other countries members of a national community.

For these reasons and instead of proceeding to a vote which in the circumstances, would have had no practical significance, it was decided that parts I and IV as well as the proposal from New Zealand be referred to the Working Group with the request that the problem be reconsidered in the light of the discussions within the Committee.

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A few days later, Working Group A submitted a new draft of part I (Document No. 290). The main characteristic of the new classification consisted in the fact that the "mixed transmissions" and the "special transmissions" of Document 171 had disappeared completely. Furthermore, the first of the two types of transmissions which had been preserved (type A) only included "transmissions intended for the interior of the transmitting country or for other regions of said country", while the other type (type B) covered "transmissions intended for the colonies, protectorates, possessions or mandated territories of the transmitting country" as well as "for other countries".

This problem had already caused lively discussions within the Working Group. The text just mentioned had only been adopted by 5 votes to 3, with 3 abstentions.

This was the reason for the Chairman's proposal (as stated in Section IV) during the session of December 8th, in which Document 290 was to be discussed, that a compromise text be found. Responding to this suggestion, the Delegation of the USSR proposed the following text:

A. National Transmissions (Transmissions for the Interior)

Transmissions by a country intended exclusively for listeners residing within its territory or territories.

B.. International Transmissions (Transmissions for the Exterior)

Transmissions by a country intended for listeners abroad, residing beyond the frontiers of the transmitting country:

1. In the language of the transmitting country.
2. In other languages.
This type includes the transmissions by the United Nations (also UNESCO).

The following introduction preceded this text:

"In order to facilitate the discussion, and without prejudice as to priorities, the different types of transmissions are classified in the following two categories":

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The next day, the Argentine Delegation, also in response to the suggestion of the chair submitted the following text in the name of several friendly delegations:

"For reasons of a practical nature, and without prejudice to the question of priorities, the high frequency broadcasting transmissions are classified into the following three types:

- Type "A" Transmissions intended for reception within the territory of the transmitting country, or other regions of said country not included under types B or C.
- Type "B" Transmissions intended for reception in the colonies, protectorates, possessions or territories under mandate of the transmitting country or vice-versa, or within the respective territories, or between these territories.
- Type "C" All transmissions intended for reception by other countries, including the transmissions which a country member of a commonwealth of nations may intend for one or several other countries, members of that same commonwealth, 1) in the principal language of the transmitting country or, 2) in other languages. This type includes the transmissions by the United Nations (also UNESCO).

The Committee, by 26 votes to 20 and 7 abstentions, refused to accept the text submitted by the Argentine Delegation as a basis for discussion. Due to the opposition of certain delegates it became impossible to consult the Meeting to find out if it would be willing to discuss the text submitted by the USSR.

The following day, December 10th, the votes taken "for statistical reasons" under the conditions described in Section IV, gave the following results:

Text of Document 290: for 21, against 34, abstentions 2.
Text of USSR: for 30, against 20, abstentions 5.

VI. WORKING GROUP "B"

This Group, set up on November 25th, but unable to commence its work until a few days later, presented its report in time for discussion at the meeting of December 3rd.

The Committee had given this Group the following terms of reference:

"To group, classify, if necessary combine and finally draft the additional questions submitted by the delegations, with a view to presenting to the plenary Committee such questions as should be added to the questionnaire".

The report of the Group (Document 221) is a notable proof of the considerable efforts made under the competent guidance of Mr. Barajas, with record speed which demanded prolonged work, at times until the early hours of the morning. Sixty supplementary questions had been submitted by the various countries. Of these, 31 were combined to form 8 new questions, and 11 were thought to contain new ideas, so that 19 questions were added to the original 5 of the questionnaire.

Annex B of the report, which contained the 8 questions of part a) and the 11 questions of part b) just mentioned, was approved by the Committee without discussion in the course of the session of December 3rd, by 25 votes against 7 and 4 abstentions. It was understood that parts c), d) and e) of Annex B, which contained questions to be referred to other Committees, and which did not refer to general principles or modified questions already approved, would not be taken into consideration.

The additional questions were then, together with those drafted by the Plenary Committee, published in Document 265, to which all Delegations were invited to reply.

VII. APPENDICES B OF THE REPORTS OF THE PLANNING
COMMITTEE (Geneva and Mexico Sessions).

The terms of reference given by the Plenary Assembly to Committee 3 showed that the latter's work should, amongst other factors, be carried out in the light of the reports and documents of the Planning Committee (Geneva and Mexico Sessions). Moreover, document 109, issued by the Coordinating Committee stated that the Appendices B of these reports should most especially occupy the attention of Committee 3.

This task was undertaken by the Committee on December 22nd, 1948. At the request of several Delegations, Prof. Siforov of the Soviet Delegation was first invited to explain the general outlines of the principles on which his Delegation's plan is based. A large number of Delegates then expressed their wish to put questions to the speaker concerning both the validity of the principles and the manner in which they had been applied.

With the best of grace and with obvious care to forget no detail, Prof. Siforov replied to the questions put to him. Six plenary meetings of the Committee were devoted to this exchange of views which, for several Delegations cast a great deal of light on important points which had hitherto remained more or less obscure. A vote of thanks to Prof. Siforov was adopted unanimously and with hearty applause.

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It soon appeared that, after the questions and answers concerning the Soviet Plan, the majority of Delegations did not consider as useful a more thorough study of the appendices B at this stage of the work of Committee 3.

At the meeting on the morning of January 7th, the following resolution was passed, giving the reasons for this opinion:

"Committee 3:

1. Considers that the general principles, on which the Soviet Plan is based, as well as those contained in Appendices B of the Reports of the Planning Committee (Geneva and Mexico Sessions) are included in the questionnaire distributed as document 265;

2. Is of the opinion that the best way to discuss these principles is to include such discussion in a general debate on the report of Working Group C, distributed as document 375."

It was also decided to start the examination of document 375 at the next meeting (January 7th, afternoon).

Committee 3 - Working Documents

- 25 - Question of priorities - A Brief Summary of the Atlantic City Documents (1947)
- 28 - Morocco and Tunisia - Classification of Short Wave Transmissions
- 38 - India - Types of Broadcasting Services
- 49 - Draft Questionnaire
- 53 - Portugal - Attempt to classify high frequency broadcasting services
- 54 - Brazil - Proposal of Classification of Broadcasting Services h/f
- 58 - Portugal - General Principles in the Field of Frequency Economy
- 76 - Terms of Reference of the Working Group of Committee 3
- 87 - United Kingdom - Proposed Revision of Document 49.
- 88 - United Kingdom - Principles of allocation of frequencies for h/f broadcasting
- 96 - Uruguay - Comments on questionnaire of document no. 49.
- 98 - USSR - Brief Explanatory Note to Projected Plan for the Distribution of Frequencies for Short Wave Broadcasting, prepared by the Soviet Delegation
- 104 - India - Modifications and additions to Document No. 49
- 109 - Committee I - Notice . Working Group of Committee 1
- 115 - Text of Question No. 1 as proposed by the India Delegation
- 120 - UNESCO - A Memorandum submitted to the Mexico International High Frequency Broadcasting Conference by the Director General of UNESCO
- 135 - France - A composite Proposal presented by the Head of the French Delegation at the conclusion of the Meeting of the General Principles Committee. 16 November 1948
- 147 - Guatemala - supports Annex V of Document No. 105 Rhf (Atlantic City) by Argentine.
- 157 - France - Elaboration of Principles to be adopted for the purpose of regulating the use of High Frequency Broadcasting.
- 171 - First Report of Working Group A of the General Principles Committee 29 November 1948.

- 189 - Brazil. Points of view on Plan of Distribution of Frequencies
- 198 - General Principles Committee. Text of Questions I, II, III and IV.
- 204 - Benelux Countries - Comments on the bases of draft plans (see corrections document no. 230-E)
- 221 - Report of Working Group B of the General Principles Committee.
- 262 - General Principles Committee. Text of Question V
- 265 - Working Group C of General Principles Committee. Questionnaire
- 283 - Working Group C of the General Principles Committee
- 290 - Second Report of Working Group A of the General Principles Committee
- 291 - Constructive suggestions submitted by the Soviet Delegation for the General Principles Committee
- 319 - Portugal - Comments on the requirements presented by various countries for long programmes
- 364 - Corrigendum to Document No. 319 (concerns the French text only)
- 375 - Report of Working Group C of the General Principles Committee
- 384 - Replies to the questionnaire contained in doc. no. 265
- 406 - Proposed Conclusions and Resolutions based on Documents Nos. 375 and 384 (Working Group C), submitted by the Chair
- 407 - Vatican City - Conclusions.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 449-E

January 12, 1949

Original: RUSSIAN

Committee 5

Addendum to Document No. 382

The Delegation of the U.S.S.R. begs to introduce the
following addendum to Document No. 382 in tabulation No. I:

1	:	2	:	3	:	4	:	5	:	6	:	7	:	8	:	9	:	10	:	11:	12
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48	:	UNO	:	118	:	Special	case	:	59
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INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 450-E

12 January 1949

Original: SPANISH

Committee 6

PORTUGAL

CONTRIBUTION TOWARDS THE ELABORATION
OF A FREQUENCY ASSIGNMENT PLAN

A PRACTICAL METHOD

FOR THE REDUCTION OF REQUIREMENTS

S U M M A R Y

1. INTRODUCTION
2. GENERAL CONSIDERATIONS
3. IN SEARCH OF A SOLUTION
 - a) Mathematical Formulae
 - b) Requirements
4. HOW CAN THE REQUIREMENTS BE REDUCED?
 - a) The Disparity Observed
 - b) Reductions to be made
 - c) Criteria for the Reductions
5. AVAILABILITIES
 - a) The Case of the 6 Mc/s Band
 - b) Basic Channel-Hours
6. EXAMPLE OF APPLICATION
 - a) Foreword
 - b) Definitions
 - c) First Reduction
 - d) Second Reduction
 1. Statistical Graphs
 2. Reduction Curves
 3. Comments on the Method used
 4. Results
 - e) Third Reduction
 - f) Compensations
7. RESULTS OBTAINED
8. CONCLUSIONS

1. INTRODUCTION

This work represents the contribution which the Delegation of Portugal wishes to make towards the elaboration of a plan for the assignment of high frequencies for broadcasting services, submitting to the Conference material which should be of use for the development of said plan, since up to now it has not been possible to find an acceptable solution to the problem.

We first wish to state the reasons which have led us to conceive the method proposed, giving its description and justification, and we also present an example of its application, based upon the approximate data which it has been possible to obtain from Forms 4, and from the information contained in the yellow documents.

We then present the results obtained, and although it is indicated that the last phases of the proposed method have not been applied, in view of its somewhat subjective character, we wish to point out that the general results which could be obtained would not be very different.

Comparing these results with those produced by the draft plan of the U.S.S.R. and of the formula of India, we have arrived at the conclusion that the method proposed seems to be the most equitable, in view of the fact that it proposes reductions for the great majority, if not the total, of the countries and, although satisfying none completely, does not impose excessive sacrifices on any.

2. GENERAL CONSIDERATIONS.

The Delegation of Portugal has been gravely concerned for some time about the work of the Conference which, after more than two months of activity, still seems very far from pointing to the road that will finally lead to a satisfactory solution.

This situation doubtlessly has been viewed with grave concern by the other delegations that, like ours, sincerely desire that the C.I.R.A.F. should finish its work with satisfactory results, which, though not coinciding exactly with the ambitions that each delegation has for its country, at least would be equitable in the imposition of necessary sacrifices and would put an end to the present chaos in the ether.

Two delegations have presented important contributions

for the elaboration of plans for the assignment of frequencies; one of them, in the form of a complete draft plan, and the other, from the viewpoint of a method of overall assignments of channel-hours to each country. Both proposals are based upon the application of mathematical formulae which, according to the discussions that have taken place and, above all, according to the replies to the questionnaire in Doc. 265, lead to the conclusion that neither of them enjoys sufficient support to be considered as a promising basis for the work.

However, we understand that something useful for the preparation of another, more satisfactory Plan, may be extracted from the U.S.S.R. Plan, especially concerning the experience acquired in the technical field.

In view of the replies given by different countries to question 7 of Doc. No. 265, we believe that we can arrive at the conclusion that any plan based on a mathematical formula should not be taken into consideration.

Taking into account the reasons set forth, the Portuguese Delegation, wishing to make the maximum contribution to help this Conference (in spite of its reduced size) arrive at a solution which will give a minimum of general satisfaction, began the objective study of the situation in the light of the present state of the Conference. As far as was possible, this delegation has taken into consideration the different opinions expressed, and the various documents already published on the subject which, in our opinion, were worthy of consideration.

3. IN SEARCH OF A SOLUTION.

a) Mathematical formulae:

After the submission of the Soviet formula, we noticed at once that its rigidity did not allow universal application to all the countries whose high frequency broadcasting requirements are determined by a combination of different factors, a fact well known to every one engaged in the study of these problems.

Our opinion is fully confirmed by the number of negative replies to the Questionnaire (Doc. No. 217) contained in Document No. 399, in addition to the answers to Question No. 7 of the Questionnaire (Doc. No. 265 of Committee 3).

With respect to India's formula, in our opinion it has the same shortcoming of rigidity, although in a lesser degree, which makes the application of the Soviet formula difficult.

It also seems to us that it does not meet the broadcasting requirements of a sufficient majority of countries to justify consideration.

Nevertheless, it does seem to offer greater possibilities of being perfected and takes into account a larger number of factors. In this respect we have made several attempts at applying the Plan, with quite different results. We have concluded from these results that the application of mathematical formulae results either in an extremely rigid criterion, which in application is necessarily unfair to the majority, or, if the influence of the factors is counteracted by their increased number, leads to an arbitrary result due to the criterion according to which these factors have been introduced and the different weight attributed to them.

This conclusion was eloquently confirmed later on by the diversity of the answers to Questions 7 b) and 7 c) of the Questionnaire in Document No. 265 of Committee 3.

b) Requirements:

While we were making various attempts to find an appropriate formula, an analysis of the Requirements contained in Forms 4 and the yellow documents submitted by the various countries was necessary. We then reached the conclusion that the best point of departure for any solution would be the Requirements themselves as submitted by the various countries, since no one could better take into consideration all the pertinent factors. (Document No. 407, Page 2).

This system still has a great disadvantage, known to every one, in that not all countries have limited their requirements to the absolutely indispensable minimum.

However, after weighing all the advantages and disadvantages, we reached the conclusion that a plan which is not based on the requirements submitted would never enlist the necessary minimum of initial support.

A more detailed statistical analysis of the channel-hour requirements submitted was then made and divided into the two categories of transmissions adopted by the Conference for statistical purposes, with the idea of seeking an acceptable criterion for a reduction.

4. HOW CAN THE REQUIREMENTS BE REDUCED?

a) The disparity observed

From a detailed study of the requirements for channel-hours it is seen that the disparity in Requirements in relation to availabilities is due to the following circumstances:

1. Use of several frequencies for the same transmission circuit.
2. Broadcasts of long duration.
3. Multiple service -- several programs for the same reception area.
4. Consecutive multiple service - consecutive programs for several reception areas.

It is obvious that as reductions are necessary, the first thought that occurs to us is to try to obtain voluntary reductions. Unfortunately, we do not believe that this ideal procedure is possible, but in case this suggestion, submitted by at least two Delegations (Document No. 407 of The Vatican City, Page 3, and the statement by the Delegation of Switzerland in Committee 3 on 7 January 1949), bears fruit, this circumstance would serve merely to lighten the reductions we have been forced to suggest later on by way of a solution.

b) Reductions to be effected:

It being necessary to make reductions, after a detailed analysis of the above mentioned list, it appears that No. 1 suggests the first possibility of a reduction as already suggested in the recommendations of Atlantic City and those already proposed at this Conference in Document No. 277 (paragraph 5 a) by the U.S.S.R. Delegation.

We believe No. 4 is the one which offers the least possibility of economy by reason of the fact that the pure and simple elimination of a country's broadcast to a given reception area, when it is otherwise impossible to satisfy it, appears unacceptable. This conception, which we have already set forth in Document No. 319 and which is also recommended by the U.S.S.R. Plan (Document No. 277, end of paragraph 5), seems difficult to answer.

The transmissions referred to in No. 2 are, in our opinion, also capable of reduction if we find an appropriate criterion.

Our Document No. 319 especially referred to this type of transmission, which, in our opinion, would furnish the largest part of the necessary economies. We can also say that these are the only really substantial economies after the voluntary ones and those resulting from the use of one frequency for each program. The object of this document, prepared after study of the answers to Question No. 17 of the Questionnaire (Document No. 265), was to call the attention of the Conference to the facts already noted which seemed most important to us.

It is necessary to say that after publication of Document No. 319 referred to, we have heard some criticism

and also some favourable comments on the impossibility of accepting reductions in the duration of long transmissions.

This problem has been partly dealt with in Question No. 17 of Document No. 265, and if we can draw the conclusion from the predominantly negative answers that reductions or strict limits in the duration of transmissions are inadmissible, an examination of the comments on the negative answers clearly shows that there is no open opposition to the reduction in the duration of the transmissions as a criterion for reduction in determining the total number of channel-hours for each country.

Actually, the majority of the countries do not want to be prevented from making as lengthy transmissions as they wish, within the number of channel-hours available to them. One of the comments mentioned refers to the right which each country has to regulate its transmissions as it sees fit, according to its interests and customs and in the manner it considers most suitable.

Properly speaking, the total assignment arrived at by the application of this system of reduction does not refer to a decrease in the transmissions. If a reduction in each one of the transmissions is considered, it is only in order to arrive at the total number of channel-hours which we believe necessary. The division of that total number among the desired transmissions must be according to each country's own criterion. Suppose that a given country has requested four services of 18 hours each daily. We would have:

$$18 + 18 + 18 + 18 = 72$$

If the criterion selected for reduction determines that 18-hour transmissions would be reduced to 10 hours each, that country would have:

$$10 + 10 + 10 + 10 = 40$$

which would not prevent the total number from being used in the following manner, for example:

$$16 + 11 + 8 + .5 = 40$$

Although with respect to these reductions or to others which may be effected, it is timely to consider that the Delegations must decide whether or not they are disposed to make certain sacrifices with regard to the Requirements they have submitted, and when we say sacrifices we do not in any way mean to fail to consider that the criterion for reduction must be fair and equitable in application. The Conference has reached a point where it is absolutely necessary to consider only the constructive contributions such as those we have just referred to because otherwise, it is best to decide immediately and openly that it is impossible to find a solution.

With respect to the transmissions referred to in No. 3, the examination of the Requirements demonstrates that it is also impossible to obtain a reasonable economy by applying the generally acceptable conception that these transmissions are in addition to others already assured by high frequencies. Therefore, it is necessary to consider that there being so many difficulties involved in the distribution of high frequency availabilities, that it is not fair for certain countries to allow themselves the luxury -- excuse the expression -- of using more than one program for the same reception area when other countries have no possibility of obtaining frequencies for their vital transmissions.

There are enough Requirements of this kind, but the problem, nevertheless, presents a difficulty in solution which prevents the application of a simple criterion of elimination because it is absolutely necessary to take into consideration that there are many programs of this type in service at present.

Thus, it is proposed in this case that the reductions to be made be progressive reductions, i.e., the greater the number of existing simultaneous programs, the greater should be the reduction, taking into consideration only the services at present in operation.

These are the simple principles which we intend to apply to all requirements with the object of obtaining

the economies necessary to make possible the elaboration of a plan. In other words, to obtain the corresponding reductions so that the 15,000 (app) channel-hours applied for may be adjusted to the 5,500 channel-hours available.

c) Criteria for the Reductions

We have attempted to ignore all personal criteria in this matter of making reductions. To this end, we have made several statistical analyses, in order to see whether a careful study of all cases would lead to a criterion which would allow a systematic application. We shall later refer to the method found.

It is evident that when speaking of a solution for systematic application, we are perfectly aware of the fact that we are not free from the risk of committing some injustice, unavoidable when a criterion of uniform type is applied. We therefore believe that, after the application of the criterion for reduction, a careful examination should be made of each particular case and of the figures arrived at, and that an attempt should be made to compensate all unfavourable cases, where justifiable, with small compensations which may be taken either from others who have been dealt with to better advantage, or from a reserve which it will be absolutely necessary to establish, whatever system may be employed for the reductions.

For this distribution or adjustment it will also be necessary to take into consideration the requirements for difficult circuits, by means of a supplementary distribution, in accordance with the recommendations of Committee 4.

For this reason, the Delegation could not presume to act as a judge for the requirements of the other countries, and therefore, while proposing a solution that seems possible, limits itself to suggesting a procedure to be applied by a competent committee or working group, with the hope that it will be acknowledged that our method has the necessary possibilities.

5. AVAILABILITIES

a) The Case of the 6 Mc/s Band.

All delegations know perfectly well what happens with

reference to the requirements in the 6 Mc/s band and it would be useless to cite any specific cases.

On one hand, the stations of limited power in the tropical regions and, on the other, the situation prevailing at present in Latin America, have led Committee 6 to devote special attention to this subject, and the Delegation of Overseas France, in its very interesting Document No. 374 gives us the following table of requirements for this band together with the 7 Mc/s band, the use of which, however, was not allocated to broadcasting in Zone No. 2.

Europe (including USSR)	530	channel-hours		
Asia (North of the 30° N para- 11e1)	230	"	"	
Asia (South of the 30° S	860	"	"	
Australasia	90	"	"	
Africa	460	"	"	
South & Central America	1,910	"	"	
North America	130	"	"	
	<u>4,210</u>	"	"	

This table is sufficiently expressive, especially if one takes into account that the two last groups do not contain requirements in the 7 Mc/s band. From it may be seen the considerable disproportion between the requirements of the countries of Central and South America in comparison with the other countries.

If we consider other sources of information, such as the report of the Geneva Committee, we find the following figures.

6 Mc/s Bands:

Total Requirements	3,818	channel-hours		
Requirements of Latin American Countries	2,046	"	"	
Percentage of the Re- quirements of the La- tin American Countries in this band	53%			

We know that the 6 Mc/s band contains 25 channels,

corresponding to 600 exclusive channel hours. The calculations presented by the Delegation of the U.S.S.R. show that 1200 possible channel-hours may be counted on, which does not mean that two stations may be placed in every channel, but that it only represents the order of the sharing possibilities which exist.

The figures which we give in this work must be taken only as approximate, a point which we wish to emphasize again, in view of the fact that Committee 5 has not yet finished the analysis of the requirements presented by the different countries. We have therefore decided to use as a basis the official documents available, from the Geneva Committee and the Mexico Committee, in Forms 4 and in the yellow documents submitted by the countries during the Conference.

The figures which we find for the requirements of the Latin American countries in the 6 Mc/s band, taken from Forms 4 and from the yellow documents amount to:

2,340 channel hours,

which figure differs somewhat from the 1,910 and 2,046 referred to above. We believe, nevertheless, that the proportion should be maintained, in view of the fact that the requirements of the other countries have also been increased since the Geneva Session.

Taking therefore into consideration the great number of the Latin American requirements and the special characteristics of their broadcasts, it occurred to us that this problem should be dealt with separately, amongst the interested parties, assigning to them "en bloc" the proportional share which is due to them, taking into consideration the requirements of the other countries in the 6 Mc/s band, and the availabilities which exist in that band.

Under these conditions and taking as a basis the Geneva figure, already mentioned, we obtain for the 6 Mc/s band the following:

$0.53 \times 1,200 = 636$ channel hours for the Central and South American Countries.

564 channel hours for the remaining countries.

We are aware that this rather simple criterion is not without difficulties in view of the necessity for studying the technical bases underlying sharing, a matter which has been entrusted to Committee 6D. But we believe that, nevertheless, it would be very desirable for the parties interested to find a practical method of solving this difficult problem, within the scope of this Conference, or in the coming Inter-American Conference. We therefore do not hesitate to make this suggestion, after having taken into account the replies of the Central and South American countries to Question 23 of the Questionnaire, Doc. No. 265.

b) Basic Channel Hours

Let us then consider, in the method which we propose, that the problem of high frequency assignments to the Central and South American Countries in the 6 Mc/s band is being dealt with separately. Thus, we would have available in the 6 Mc/s band for allocation amongst all the remaining countries, and in the other bands for allocation amongst all countries, including the South American countries, the following:

Taking as a basis the total number of 5,500 channel hours available, as indicated in Document No. 277, we would have for allocation:

$$5,500 - 636 = \underline{4,864}$$

a figure which we shall take as a basis for the example of the application of the method which we propose.

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6. EXAMPLE OF APPLICATION

a) Foreword

In the first place we wish to call attention to the title of this chapter and ask our critics to interpret it in the true meaning of the words. It is really an example of application based upon figures which we might classify as approximate, due to the fact that, unfortunately, we are not in possession of the conclusions of Committee 5. The figures which we have used for our estimates given below have been taken, as already stated, from Forms 4, respective supplements and from the yellow documents, submitted by the various countries in the course of this Conference. Some cases, however, have been taken into consideration with the aid of details which we have been able to obtain from Forms A of Committee 5.

It will easily be understood that we cannot call the following calculations anything but an example of application, on account of the lack of precision of the figures employed but, in fact, we do not believe that this example is very far from the truth on the whole.

Other circumstances which contribute to the lack of precision of the figures is the fact that we have had to divine from Forms 4 what should be considered as distinct programs. We hope that the delegations whose figures do not coincide precisely with the real ones will pardon us; we may justify this lack of precision somewhat by the fact that Committee 5 also has experienced difficulty in solving this problem in spite of the fact that they had all the necessary information and worked on it for more than two months.

If the method presented has any merit, it would be an easy matter to substitute the figures employed by us with the precise ones and make the necessary rectifications.

b) DEFINITIONS:

Before going into the matter of reductions it might be suitable to keep in mind certain terms for which we have established the following definitions:

Program Hours - uninterrupted duration of a transmission for a given reception area, supposing that only one frequency is used for this service.

Service Hours - Total of program hours destined for a given reception area during 24 hours.

Note - Program Hours have been obtained from Forms 4, by the difference between the starting hour and the finishing hour of each continuous transmission, even though they be broadcast simultaneously on one or many frequencies.

Service Hours have been obtained by means of adding up the various program hours made by a given transmitting station destined for the same area.

With the object of studying this problem completely, a list was drawn up of all the requirements presented, in accordance with the foregoing definitions.

In Annex I we give a list of the countries with the total number of channel hours requested, with the total number of program hours (deducted from Forms 4 and complementary information) and also the percentage of program hours in relation to channel hours.

In Annex II we present a detailed summary of the services required by each country, divided for statistical purposes into national and international services. This list does not include the requirements presented by the Central and South American Countries for the 6 Mc/s band, which are shown separately in Annex III.

The load of the various broadcasting bands has not been studied, because we think it completely unnecessary to do so, before the requirements have been limited in such a way that they can be adjusted to the availabilities.

c) First Reduction

The first reduction to be made consists, as we already have indicated, in the application of the principles of Atlantic City and of those agreed upon at this Conference, referring to the use of a single frequency for each circuit.

From the analysis of the requirements in this manner we have obtained the figures contained in Annex I, and the total number of channel-hours asked for is:

14 526

and the total of service hours:

9 433

distributed as follows:

National services	5 351
International services	4 082

with the exclusion of 2 340 service hours required by the Central and South American countries in the 6 Mc/s band which, as already stated, have not been taken into account for the purpose of this study.

d) Second Reduction - Duration of service hours.

We have already justified the reasons upon which we have based this reduction. We shall now try to arrive at a criterion for doing so.

To this end we have taken from Annex II, for each service period (in integral numbers of hours) the number of services required and we have established a complete table, contained in Annex IV, which shows the number of services and the total of service hours required for each service period.

We wish to point out here that we are perfectly aware of the decisions taken by Committee 3 when it established the classification of transmissions for statistical purposes, but since we proposed to make a statistical analysis in order to arrive at conclusions, we believe that our procedure is perfectly correct.

With the elements contained in this table we have drawn up the graphs in figures 1 and 2, respectively, for national and international services and in which we have taken as abscissae the duration of the services and as ordinates the totals of the requirements for these durations, grouped in two-hour periods. Thus, for instance, the ordinate corresponding to 14 hours is the total of the service requirements with duration between 12 and 14 hours. These groups of two-hour periods have been selected in order to show clearly the law of variation of requirements with reference to the duration of the services, which is represented by the full line.

d.1) Statistical Graphs

Analysis of Fig. 1 - National service.

This curve is rather significant and from it we may deduce immediately that a great part of the requirements is situated within the durations between 12 and 20 hours, and one easily arrived at the conclusion that the application of deductions to transmissions of short duration not only constitutes a heavy sacrifice, but also furnishes only very small economies. On the other hand, the reductions imposed upon transmissions of long duration, in our opinion, signify sacrifices which can be borne much easier and which will make a far more important contribution to the economy of the plan which it is desired to establish.

Analysis of Fig. 2 - International service.

In contrast with the foregoing case, this curve shows us that in the international services things are entirely different. The transmissions, to a great extent, are of short duration, in which case it is worthwhile, for the benefit of the plan which it is desired to establish, to make reductions in transmissions of short duration.

In Fig. 3 the two curves have been placed together, with the object of showing clearly the fundamental differences between the requirements for national and international services.

d.2) Reduction Curves.

Taking as bases the graphs in Figs. 1 and 2, and taking into account the considerations expressed, we thought of drawing two new curves with characteristics different from one another in order to arrive at the appropriate reductions in the durations of services with the object of obtaining the necessary economies with a minimum of useless sacrifices.

These curves are those shown in Fig. 4 and were obtained after several attempts, beginning with the smaller reductions (curves n_1 , n_2 , n_3 and i_1 i_2).

Only with the aid of curves N and I was it possible to obtain the necessary economies which gave us totals more or less on the level of the possibilities since in the reductions corresponding to the third phase - multiple services - according to our investigations only some 400 hours could be obtained.

d.3) Comments on the method used.

With the foregoing proposed reductions, one obtains at the end some 700 free hours, which we believe sufficient to correct the most flagrant cases of injustice and to furnish supplementary frequencies for difficult circuits.

We can already foresee criticisms of the considerable economies which we have been compelled to propose for the duration of the longest transmissions. In fact, these reductions tend to limit the duration of transmissions to a maximum of 8 hours daily only as a criterion of reduction in order to arrive at an overall figure for allotment to each country. Within this figure, each country will be entitled to propose the distribution it deems most convenient.

This figure of 8 hours corresponds, within the normal activity of the listener, to the time which he can devote to listening to the radio since, in principle we assume he will have to sleep 8 hours and work another 8 hours.

On the other hand, this limitation will in our opinion have beneficial effects in the future since, without cutting off all possibility of using high frequencies as a means of broadcasting, it may constitute a strong stimulus for the development

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of other means whenever this should be possible, and where everybody would have complete liberty for his schedule. This case refers to the medium waves, frequency modulation, tropical waves and the use of recordings, etc., a subject on which the answers to the questionnaire previously referred to have been in agreement, but for which no practical solution has been found.

We hope to have found it by this method.

The development of the two final curves in fig. 4 really corresponds to the possibilities shown by figs. 1, 2 and 3 and are not the result of any concept of priorities or of an idea to favor one service more than another. They are the result of the fact that it is necessary to look for economies where it will really be possible to find them and, in accordance with a progressive criterion, without inflicting unnecessary harm.

We shall give a few explanatory examples:

If we simply eliminate all national transmissions of a duration of up to 4 hours, we see from fig. 1 that the economy thus obtained would only amount to 373 channel-hours and, from Annex II, we see that we would inflict sacrifices upon 22 countries!

The same system applied to international transmissions would give us an economy of close to 997 hours, affecting 53 countries.

These two opposite examples show clearly in our opinion, the justice of the criterion adopted. In fact, a reduction of 50% in the first case would give us only 186.5 hours, with the inconveniences known to everybody. The same 50% in the second case would give us 498.5 hours which certainly seems tempting.

As to the reductions which could be imposed in the international services, in consequence of the foregoing, it is necessary to stress that, up to a certain point, they correspond to the affirmative replies to Question 3, in which it is recommended as one of the most fruitful means of making economies, that recordings be employed, that they be standardized, and that the interchange of programmes be encouraged.

International transmissions, although generally of relatively short duration, as may be seen from fig. 2, can still stand a reduction, if they are essentially limited to the broadcasting of news, information and events of current interest.

The balance of the material of these transmissions could and should be substituted, to great advantage, by the interchange of recordings, intended for local transmission by means other than high frequencies.

In this connection it should also be noted that Committee 4 has recommended the standardization of recording systems and, in our opinion, the Conference should go somewhat further in this direction.

d.4) Results

The application of the curves in fig. 4 to the total of service hours, in accordance with the duration of these services, as shown in Annex IV, furnishes us with the tables in Annexes V and VI, for national and international services respectively.

In these tables we find the following totals of service hours respectively:

National service	2,658
International service.	<u>1,968</u>
Total.	<u><u>4,626</u></u>

which, compared to 4,864 channel-hours available, leaves us a margin of 238 channel-hours to be distributed later.

This number is clearly insufficient for the necessary reserve for making corrections, for difficult circuits, for special cases and for flagrant injustices in the application of the method, and it will be increased by the following reduction:

e) Third Reduction - Multiple services.

We have already referred to this possibility, where we believe that close to 400 additional channel-hours can be economized, from the reduction of the allocations corresponding to requirements for services designed for the same reception area.

The Conference up to now has not taken any decision on this case, and we do not believe that the question has as yet been raised. We believe that it is indispensable to take a decision on this matter since we do not think it fair that some countries should be deprived of using high frequencies while others use, or propose to use, more than one programme for the same destination, at times even simultaneously.

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As yet it is not easy to extract from Forms 4 the indispensable information, with the necessary accuracy, to make an exact calculation dealing with this aspect of the problem. To this end, it would be necessary to be able to use the results obtained by Committee 5 which, as we know, has not yet finished its work.

On the other hand we did not wish to delay the presentation of this document for that reason only since the main issue of this document is contained in the foregoing chapter, and the Conference is in need of material for discussion.

Apart from this fact, it seemed preferable not to pass judgment on each case of multiple transmissions of the different countries, since this is a very delicate matter and some of these transmissions, as may be seen from Forms 4, may cause various interpretations and considerable discussion.

~~We have thought it preferable to leave this work, if considered to be necessary, to an appropriate committee.~~

f) Compensations

We have seen that approximately 638 service hours are available for making compensations in the cases of countries for which the application of this method, as a uniform criterion, has been frankly unfavorable and also to provide additional frequencies in cases of difficult circuits, etc.

As to the distribution of these frequencies, we did not think that we should do it ourselves: in the first place because, practically, we have not made the reductions referred to in the foregoing paragraph and, secondly, because even though we had done it, we understand that we should not on our own initiative constitute ourselves as judges on the cases of other countries, as previously stated. This case could be solved as the foregoing one by means of an appropriate committee, if this should be thought convenient.

We have shown that there are some cases which surely should receive compensations, and this matter should be dealt with when the requirements are examined, case by case.

7. RESULTS

It is easy to arrive at the conclusion that, not having conveniently taken into consideration the application of the two last phases of the method, it is not possible to publish complete

results, establishing the overall figure of frequencies to be allocated to each country.

We also wish to recall the fact that we have only proposed the presentation of an example of application and that the basic figures used, although close enough, are not precise in their reference to individual cases, and only offer an approximation for the whole.

Nevertheless, it has seemed to us absolutely necessary to analyze what the effect of the method is on the countries as a whole; in this respect we have prepared a list of service hours already reduced by the application of the criteria which we have submitted but have not yet made the relative reductions for multiple service or the compensations or corrections to which we have referred.

It has not seemed advisable to us, therefore, to publish the lists since the work could not be considered complete due to the fact that the initial figures offered us no assurance of their accuracy. Nevertheless, we have used the figures which we have arrived at for lack of more exact figures in order to make an anonymous diagram in which the results of our method at the present phase of application could be analyzed.

The diagram in Fig. 5, contains by groups of countries, the percentages of Requirements met in accordance with the figures obtained by the application of our method, according to the figures indicated in the U.S.S.R. Plan, and by the application of India's formula. In this diagram the relative general satisfaction of Requirements in the three methods indicated can be compared.

It is recalled that we have not taken into consideration the Requirements of the Latin American countries in the 6 Mc/s band but that we calculated their remaining Requirements in percentages in relation to the total.

Examination of the three diagrams shows them to be self-explanatory.

It is seen, for example, that in relation to India's formula that:

30% of the Requirements are satisfied in the case of
42 countries

From 30% to 60% of the Requirements are satisfied in the case of
21 countries

" 60% to 100% of the Requirements are satisfied in the case of
15 countries.

In relation to the U.S.S.R. Plan it is seen that:

30% of the Requirements are satisfied in the case of
36 countries

From 30% to 60% of the Requirements are satisfied in the case of
24 countries

" 60% to 100% of the Requirements are satisfied in the case of
23 countries

According to our method, it is seen that:

30% of the Requirements are satisfied in the case of
14 countries

From 30% to 60% of the Requirements are satisfied in the case of
61 countries

" 60% to 100% of the Requirements are satisfied in the case of
4 countries.

The different configuration of the respective curve in figure 5 is to be observed and it is to be noted that actually no requirements are satisfied to a greater extent than 70%.

It seems to us that detailed comments on these results, which we have grouped in the following table, in order to facilitate comparison, are unnecessary, but we cannot fail to emphasize that our method entails a smaller number of sacrifices, a minimum number of satisfied countries, and certainly a large number of unsatisfied ones.

In our opinion, the merit of the system lies in this fact.

Comparison of the results:

	<u>Up to 30%</u>	<u>From 30% to 60%</u>	<u>From 60 to 100%</u>
U.S.S.R. Plan	36	24	23
India's formula	42	21	15
Portugal's method	14	61	4

Note: The totals do not coincide because the U.S.S.R. Plan and India's formula take into consideration a different number of countries.

The diagram in Figure 5 indicates the percentage of Requirements satisfied by our method in relation to the channel-hour Requirements, for the purpose of comparison with the other methods indicated.

If we further reduce the channel-hours requested to the corresponding service hours, which actually represent the minimum Requirements of each country, we shall obtain the diagram in Figure 6, which more clearly shows the real facts, because we see that there is no reduction below 40% in the service hours requested, nor are there in practice any Requirements satisfied above 65%.

8. CONCLUSIONS

It seems to us that we have clearly stated the proposition that this method is an absolutely generic one in the part which has been dealt with in detail realizing that we must take into consideration the subjective aspect of the problem as it was impossible to avoid so doing - as is the general consensus of opinion.

The tables and diagrams of the results which we submit, in our opinion, show the merits of the system, bearing in mind always that it is necessary to reduce the 15,000 Requirements to the 5,500 availabilities. We know that the spirit of justice and equity which has inspired the preparation of these bases will certainly not excite excessive enthusiasm. There lack beneficiaries to warrant much praise. But we sincerely believe that only in this spirit will the Conference accomplish its purpose.

Portugal is one of the Delegations which thinks of the great advantages which would ensue for world broadcasting if the Conference at Mexico City could arrive at a satisfactory conclusion. Accordingly, it believes that with the present Plan, which has not been submitted until this time in order to make use of the long and useful discussions and documents presented in the course of the Conference, it has made a real contribution.

Mexico City,
January 1949

For the Delegation of Portugal

M. BIVAR,

Head of the Delegation

ANNEX I

TABLE OF TOTALS OF CHANNEL HOURS AND OF PROGRAM HOURS REQUIRED
BY EACH COUNTRY

COUNTRY	CHANNEL-HOURS	PROGRAM HOURS	PERCENTAGE
Afghanistan	88	49	57%
Albania	29	27	93
Argentina	239	227	91
Australia	257	213	83
Austria	60	48	80
Belgium	80	66	83
Bielorussia S.S.R.	54	54	100
Bolivia	88	88	100
Brazil	302	302	100 (x)
Bulgaria	42	24	57
Burma	336	73	22
Canada	221	202	92
Chile	328	328	100
China	287	191	67
Colombia	192	152	100
Czechoslovakia	74	48	65
Belgian Congo	165	138	84
Costa Rica	50	50	100
Cuba	347	282	82 (x)
Denmark	31	31	100
Dominican Rep.	163	142	87
Ecuador	265	265	100
Egypt	98	88	90
El Salvador	100	58	58
Ethiopia	72	72	100
Finland	34	34	100
France	269	196	73
French Oversea Territ.	710	667	94
Greece	20	20	100
Guatemala	195	172	89
Haiti	141	87	62 (x)
Honduras	132	132	100
Netherlands	192	77	40
East Indies	45	45	100
New Zealand	89	49	55
Nicaragua	300	300	100
Norway	64	48	75
United Nations Org.	118	69	59
Pakistan	233	149	64
Panama	284	284	100

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Paraguay	94	74	79
Peru	174	174	100
Philippines	151	133	88
Poland	163	100	61
Portugal	93	75	81
Portuguese Colonies	249	249	100
Southern Rhodesia	14	10	72
Roumania	114	93	82
Hungary	20	20	100
Iceland	44	26	59%
India	411	379	92
Indonesia	262	262	100
Iran	58	29	50
Iraq	54	41	76
Ireland	37	37	100
Italy	223	86	39
Lebanon	20	20	100
Liberia	24	24	100
Luxembourg	74	35	47
Mexico	509	501	98
Monaco	84	47	56
Mongolia	207	200	97
Morocco	80	80	100
Scap	131	131	100
Siam	23	23	100
Union of South Africa	197	176	90
Sweden	45	40	89
Switzerland	102	82	80
Syria	47	47	100
Turkey	42	42	100
Ukrainian S.S.R.	113	87	77
United Kingdom	679	477	70
U.K.Territories	929	752	81
Uruguay	118	107	91
U.S.A.	400	189	47
U.S.A.Territories	61	59	99
U.S.S.R.	945	653	69
Vatican City	126	62	49
Venezuela	203	203	100
Yugoslavia	171	120	71
TOTAL	14 526	11 773	

(x) Subject to rectification

ANNEX II

TABLE OF SERVICES REQUIRED EXCLUSIVE OF REQUIREMENTS OF
CENTRAL AND SOUTH AMERICAN COUNTRIES IN THE
6 Mc/s BAND

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.
Afghanistan	N. I.	- - - - - 2,2,2,4,5,5,5,7,17	-	49
Albania	N. I.	- - - - - 1,1,2,2,2,2,2,2,3,3,3,4	-	27
Saudi Arabia	-	There is no information	-	-
Argentina	N. I.	6,7,12,12,14,14 6,7,7,9,9,9,10,14	65	71
Australia	N. I.	10,14,18,18,18,18,18,18 1,1,1,1,1,1,1,1,1,1,1,2, 2,2,2,2,2,2,3,3,3,3,3,5,6, 7,9,13	132	81
Austria	N. I.	- - - - - 6,6,8,10,18	-	48
Belgium	N. I.	17,24 2,3,4,5,5,6	41	25
Bielorussia S.S.R.	N. I.	5,7,7,7,7,7 7,7	40	14
Bolivia	N. I.	6,6,6,6, 3,3,4,4,4,4	24	22
Brazil	N. I.	15,16,16,16,16,16,16,17 3,3,3,4,4,4,4,4,5,6,6,	128	46
Bulgaria	N. I.	- - - - - 5,6,6,7	-	24
Burma	N. I.	9,14 6,11,16,17	23	50

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.
Canada	N.	4,16,16,16,17,17,18,18,18	140	
	I.	5,5,5,6,6,7,8,8,12		62
Chile	N.	13,13,13,13,18,18,18,18,18,		
	I.	18,18,18	196	
China	N.	3,4,4,4,5,5,5,5,5,5,6,6,6,7,		
	I.	9,9,1,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,3,3,3,3,4,4,4,4,4,5,5,5,5,7,8	88	
Colombia	N.	- - - - -	-	
	I.	14,14,14,14		56
Czechoslovakia	N.	5,5,5,9,10,14	-	
Belgian Congo	I.	4,4,4,4,5,6,6,6,6,6,6,7,8,		48
	N.	14,14	100	
	I.	3,4,7,10,14		38
Costa Rica	N.	- - - - -	-	
	I.	16		16
Cuba	N.	- - - - -	-	
	I.	5,5,5,10,10,10		45
Denmark	N.	3	3	
	I.	6,6,7,9		28
Dominican Rep.	N.	- - - - -	-	
	I.	7,7,7,7,9,13		50
Ecuador	N.	4,15,15,15	49	
	I.	4,4,10,10,14,15,15,15,15,15		117
Egypt	N.	- - - - -	-	
	I.	3,5,16,16,16,16,16		88
El Salvador	N.	13	13	
	I.	6,13,13,13		45
Ethiopia	N.	13,13	26	
	I.	5,5,9,11,16		46
Finland	N.	12	12	
	I.	4,6,12		22

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.
France	N.	4,4,4,4,4,4,4,4,4,4,5,6,6, 7,8,8,8,8,8,8,8,10,11	141	
	I.	1,1,1,2,2,3,3,3,3,3,3,3,3,4, 4,7,8		54
Oversea French Territ.	N.	2,2,2,3,3,3,3,4,4,5,5,6,17,18, 18,18,18,18,18,18,18,18,18,19, 19,19,19,19,19,19,19,19,19,19, 19	467	
	I.	1,1,2,2,2,3,3,3,4,4,4,4,5,5,5, 19,19,19,19,19,19,19,19,19		200
Greece	N.	-----	-	
	I.	2,8,10		20
Guatemala	N.	-----	-	
	I.	13		13
Fiji	N.	6,6,6,	18	
	I.	2,3,4,5,6,6,7		33
Honduras	N.	-----	-	
	I.	-----		-
Hungary	N.	-----	-	
	I.	3,3,7,7		20
Iceland	N.	-----	-	
	I.	4,10,12		26
India	N.	2,3,7,7,7,9,9,12,12,13,13,13, 14,14,14,14,14,15,15,17	224	
	I.	3,4,6,7,7,10,13,14,16,16,19, 20,20		155
Indonesia	N.	14,14,14,14,14,14,14,14,14,14, 14,14,14,14,14,14,14	238	
	I.	1,2,2,4,4,4,7		24
Iran	N.	7,11	18	
	I.	1,1,1,1,1,1,2,3		11
Iraq	N.	13	13	
	I.	1,1,1,3,3,4,5,5,5		28

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.
Ireland	N. I.	- - - - - 3,4,4,4,6,8,8	-	37
Israel		There is no information		
Italy	N. I.	- - - - - 1,2,2,3,4,4,4,5,5,5,6,6,11, 14,14	-	86
Lebanon	N. I.	- - - - - 10,10	-	20
Liberia	N. I.	- - - - - 2,3,9,10	-	24
Luxembourg	N. I.	- - - - - 2,2,2,2,3,3,3,4,14	-	35
Mexico	N. I.	12,12,12,12,12,12,12,12,12, 12,12,12,12,12,12,17,17,17, 17,17,17,17,17,17,17,17,17, 17,17 2,2,2,2,2,3,4,4,6,6,7,8,8,8, 9,10	418	83
Monaco	N. I.	- - - - - 2,8,9,14,14	-	47
Mongolia	N. I.	4,4,5,5,10,12,20,20,20,20,20, 20,20,20	200	-
Morocco & Tunisia	N. I.	2,2,2,2,2,2,3,4,4,4,4,6,8 2,3,4,5,6,7,8	45	35
Netherlands	N. I.	5,5,5,9, 2,4,5,5,5,5,9,9,9	24	53
Curacao & Surinam	N. I.	2,8,15,16 4	41	4
New Zealand	N. I.	9,20,20 - - - - -	49	-
Nicaragua	N. I.	- - - - - 10,10,10	-	30

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.
Norway	N. I.	17,17 2,2,2,2,2,2,2	34	14
U.N.O.	N. I.	- - - - - 2,2,2,2,4,4,4,4,4,4,5,5,5, 6,8,8	-	69
Pakistan	N. I.	1,1,1,1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1,1,1,1, 1,1,1,1,2,2,2,2,2,2,2,2,2, 2,2,2,2,2,2,2,2,2,2,2,2,2, 2,2,3,3,3 1,1,1,1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,1,1,1,1,1, 1,1,1,1,1,1,1,1,2,2,3,3,3,	87	62
Panama	N. I.	6,6,9 - - - - -	21	-
Paraguay	N. I.	- - - - - 12,12,16,17,17	-	74
Peru	N. I.	3,5,16,17,17 - - - - -	58	-
Philippines	N. I.	18,18,18,18,18,18,18, 1,2,4	126	7
Poland	N. I.	- - - - - 5,13,13,14,16,17,22	-	100
Portugal	N. I.	2,2,2,2,2,3,3,3,4,4,5,5,7,11 2,2,3,3,3,7	55	20
Portuguese Col.	N. I.	1,1,2,2,2,2,3,3,5,5,5,5,6,6, 6,6,6,6,6,6,7,7,7,8,8,8,9,9, 9,9,11,11,11,11,13 2,7,8	222	17
Southern Rhodesia	N. I.	10 - - - - -	10	-

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.
Roumania	N.	13,13	26	
	I.	1,1,2,2,3,4,4,4,4,4,4,4,5,5, 6,6,8		67
Scap	N.	19, 19, 19,	57	
	I.	6,6,9,9,14,15,15		74
Siam	N.	2,3,5,6	16	
	I.	1,2,2,2,		7
Union of S. Africa	N.	18,18,18,18,18,18,18,18,18, 1,1,1,1,1,1,1,1,1,1,4	162	14
Spain	-	There is no information		
Sweden	N.	19	19	
	I.	2,3,3,3,3,3,4		21
Switzerland	N.	- - - - -	-	
	I.	2,2,2,2,2,2,2,2,3,3,6,6,12, 18,18		82
Syria	N.	12	12	
	I.	2,3,4,4,5,7,10		35
Turkey	N.	- - - - -	-	
	I.	2,3,3,4,6,7,17		42
Ukrainian S.S.R.	N.	1,2,2,3,4,5,5,7,8,8,13	58	
	I.	2,2,2,2,2,2,2,3,5,7		29
United Kingdom	N.	4,5,6,7,13,16,17,17,19,19	123	
	I.	1,1,1,1,1,1,1,1,2,2,2,3,3,3,3, 3,3,3,3,4,4,4,4,5,6,7,7,10,11, 11,15,15,15,15,16,16,16,16,16, 16,17,17,17,17,19		354
U.K.Territories	N.	2,4,4,5,6,6,7,7,7,7,7,8,8,8,9, 11,11,11,11,11,11,11,13,13,13, 13,15,15,16,16,16,16,18,18,18, 18,18,18,18,19,24		487
	I.	2,3,3,6,6,6,7,7,7,7,8,8,8,8,8, 8,8,8,10,15,19,19,21,21,21,21		265

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.
Uruguay	N.	- - - - -	-	-
	I.	2,2,2,3,3,3,3,3,4,4,4,4,	-	37
U.S.A.	N.	2,2,6,9,9	28	-
	I.	1,2,2,2,2,2,2,2,3,3,4,4,4,5,5, 5,5,6,6,6,7,7,7,7,7,7,7,7,16,18	-	161
U.S.A.Territories	N.	- - - - -	-	-
	I.	1,1,2,2,2,2,3,3,3,4,4,4,5,7,7,9,	-	59
U.S.S.R.	N.	2,2,2,2,3,3,3,3,3,4,4,4,4,4,4,4, 6,6,6,6,6,6,6,6,6,7,8,8,8,8,8, 8,8,8,8,8,8,8,8,8,9,11,12,17, 17,18,18,18,18,18,18,18,18,19,19,- 19,19,20,20,20,20	604	-
	I.	1,2,2,2,2,2,2,3,3,4,5,6,7,8	-	49
Vatican City	N.	- - - - -	-	-
	I.	1,1,1,1,1,1,1,1,1,1,1,1,2,2,2,2, 2,2,2,2,2,2,2,2,2,3,3,5,5,8	-	62
Venezuela	N.	10,10,10,10,10,10,10,10,10,10,10, 10,10,10	140	-
	I.	4,4,4	-	12
Yugoslavia	N.	15,15	30	-
	I.	3,3,4,5,6,6,8,8,9,9,9,10,10	-	90
Yemen	-	There is no information	-	-
Totals			5351	4082
Total			94	33

ANNEX III

TABLE OF SERVICE REQUIREMENTS OF CENTRAL AND SOUTH AMERICAN COUNTRIES IN THE 6 Mc/s BAND

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.	TOTAL
Argentina	N. 8,9,14,14,17,17 I. 5,7		79	12	91
Bolivia	N. 6,6,10,10,10 I. - - - - -		42	-	42
Brazil	N. 16,16,16,16,16,16,16,16,16 I. - - - - -		128	-	128
Chile	N. 6,18,18,18,18,18,18,18 I. - - - - -		132	-	132
Colombia	N. 12,12,12 I. 12,12,12,12,12,12,14,14		36	100	136
Costa Rica	N. - - - - - I. 6,6,6,16		-	34	34
Cuba	N. 12,12,12,12,12,12,19,19,19, 19,19,19,19 I. 16,16		205	32	237
Dominican Rep.	N. - - - - - I. 4,6,7,7,8,9,10,12,12,17		-	92	92
Ecuador	N. 10,10,15,15 I. 4,15,15,15		50	49	99
El Salvador	N. 12 I. 12,12,12,12,12,12,12,12		12	96	108
Guatemala	N. - - - - - I. 13,13,13,13,13,13,13,13, 13,13,13,16		-	159	159
Haiti	N. 6,6,6,6,6,6 I. - - - - -		36	-	36
Honduras	N. 18,18,18,18,18,18,24 I. - - - - -		132	-	132
Mexico	N. 12,12,12,12,12,12,12,12,12, 12,12,12 I. - - - - -		144	-	144

COUNTRY	P.	SERVICE HOURS	TOTAL N.	TOTAL I.	TOTAL
Nicaragua	N.	10,10,10,10,10,10,10,10,10,10, 10,10,10,10,10,10,10,10,10,10, 10,10,10,10,10,10,10,10,10,10,	270		
	I.	- - - - -		-	270
Panama	N.	17,17,17,17,17,17,17,18,18, 18,18,18,18,18,18	263		
	I.	- - - - -		-	263
Peru	N.	1,2,2,3,3,3,3,5,5,5,6,13,16, 16,16,17	116		
	I.	- - - - -		-	116
Uruguay	N.	9,9	18		
	I.	3,3,5,5,7,14,15		52	70
Venezuela	N.	17,17,17	51		
	I.	- - - - -		-	51
Totals			1714	626	2340

ANNEX IV

GROUPING OF SERVICES ACCORDING TO DURATION AND CATEGORY

Duration in hours	<u>NATIONAL SERVICE</u>		<u>INTERNATIONAL SERVICE</u>	
	Number of Services	Service hours	Number of Services	Service hours
1	33	33	118	118
2	54	108	135	270
3	24	72	91	273
4	40	160	84	336
5	28	140	57	440
6	46	276	43	258
7	25	175	46	322
8	33	264	29	232
9	16	144	20	180
10	18	180	24	240
11	15	165	5	55
12	23	276	6	72
13	20	260	9	117
14	28	392	16	224
15	11	165	12	180
16	16	256	19	304
17	28	476	10	170
18	58	1044	4	72
19	23	437	12	228
20	14	280	2	40
21	-	-	4	84
22	-	-	1	22
23	-	-	-	-
24	2	48	-	-

TOTALS

5351

4082

ANNEX V

TABLE OF REDUCTIONS TO BE MADE IN THE NATIONAL
SERVICE BY THE APPLICATION OF GRAPH 4

Duration requested in hours	Reduction Coefficient	Number of Services	Total to be allotted
1	.90	33	30
2	1.60	54	87
3	2.25	24	54
4	2.80	40	112
5	3.30	28	93
6	3.85	46	177
7	4.30	25	108
8	4.70	33	155
9	5.15	16	83
10	5.50	18	99
11	5.80	15	87
12	6.15	23	142
13	6.30	20	126
14	6.65	28	186
15	6.80	11	75
16	7.00	16	112
17	7.25	28	202
18	7.40	58	430
19	7.90	23	175
20	7.75	14	109
21	7.80	-	-
22	7.90	-	-
23	7.95	-	-
24	8.00	2	16

Total..... 2.658

The results approximate the next higher
complete number

ANNEX VI

TABLE OF REDUCTIONS TO BE MADE IN THE INTERNATIONAL SERVICE
BY THE APPLICATION OF GRAPH 4

Duration requested in hours	Reduction Coefficient	Number of Services	Total to be alloted
1	.70	118	83
2	1.25	135	169
3	1.75	91	159
4	2.25	84	189
5	2.75	57	157
6	3.10	43	133
7	3.50	46	161
8	3.85	29	112
9	4.25	20	85
10	4.60	24	110
11	4.80	5	24
12	5.20	6	31
13	5.40	9	49
14	5.70	16	92
15	6.00	12	72
16	6.10	19	116
17	6.40	10	64
18	6.70	4	27
19	6.85	12	83
20	7.05	2	15
21	7.30	4	29
22	7.50	1	8
23	7.75	-	-
24	8.00	-	-
Total.....			1.968

The results approximate the next higher
complete number

R E S U M E

CHANNEL-HOURS AVAILABLE

CHANNEL-HOURS REQUESTED

1. Channel-hours available	5.500
2. <u>6 Mc/s</u> - Possibility of assignments: 1,200 channel-hours	
Less 53% for South American Countries: 1,200 x 0.53	<u>- .636</u>
3. Total available	<u>4.864</u>

1. Total of requirements	14.526
2. Requirements for South American countries in 6 Mc/s band	<u>- 2.340</u>
3. Channel-hours for application by the method	12.186
4. 1st reduction by considering one frequency for each program	<u>- 2.753</u>
Total of service-hours	9.433
5. 2nd reduction - reduction in the length of services	<u>- 4.807</u>
	4.626
6. 3rd reduction - estimate of reduction for multiple-services for the same zone	<u>- .400</u>
	4.226
7. Compensations for difficult circuits and special cases of injustice	<u>.638</u>
	<u>4.864</u>

ERRATA SHEET
TO
GRAPHS OF DOCUMENT NO. 450

CORRIGENDUM
AUX
DIAGRAMMES DU DOCUMENT NO. 450

FE DE ERRATAS
A LOS
GRÁFICOS DEL DOCUMENTO NO. 450

СПИСОК ОШИБОК
В
ГРАФИКАХ ДОКУМЕНТА № 450

Changes in English Text:

FIGS. 1 and 2, in the title, change "TRANSMISSIONS" to "SERVICES";

" " " ", below graph, change "Transmissions" to "Services".

FIG. 3, below graph, change "Transmissions" to "Services".

FIG. 4, in the title, cancel "OPERATING TIME" and insert "LENGTH OF
SERVICE";

" ", below graph, after "Hours" and before "Requested" insert "of
Service".

FIG. 5, below graph, cancel "in Relation to the Requirements".

FIG. 6, in the title, after "HOURS" and before "REQUESTED" insert "OF
SERVICE"

" ", below graph, cancel "in Relation to the Requirements".

Modifications au Texte Français:

- FIG. 1 et 2, dans le titre, au lieu de "ÉMISSIONS" lire: "SERVICES";
" " " ", au-dessous du diagramme, au lieu de "Émissions" lire:
"Services".
- FIG. 3, dans le titre, entre "COMPARAISON" et "ENTRE" insérer:
"GRAPHIQUE"; dans le même titre, au lieu de "INTERNATIONAUX"
lire: "INTERNATIONAL", et au lieu de "NATIONAUX" lire:
"NATIONAL"; supprimer: "LES DEMANDES POUR LES SERVICES".
- FIG. 4, dans le titre, au lieu de "ÉMISSIONS" lire: "SERVICES";
" ", au-dessous du diagramme, entre "d'Heures" et "Demandées"
insérer: "de Service".
- FIG. 5, dans le titre, après "FRÉQUENCES" supprimer: "DEMANDEES";
" ", au-dessous du diagramme, au lieu de "Proportion Dans Laquelle
les Demandes Sont Satisfaites (en % des Demandes)" lire:
"Pourcentage de Satisfaction".
- FIG. 6, dans le titre, au lieu de "D'ÉMISSION" lire: "DE SERVICE";
" ", au-dessous du diagramme, au lieu de "Proportion Dans Laquelle
les Demandes Sont Satisfaites (en % des Demandes)" lire:
"Pourcentage de Satisfaction".

Cambios al Texto Español:

- FIG. 5, bajo el gráfico, cancele "con Relación a las Solicitudes".
- FIG. 6, bajo el gráfico, cancele "con Relación a las Solicitudes".

Изменения в русском тексте:

- РИС. 1 и 2, в заголовке заменить "ПЕРЕДАЧ" на "ОБСЛУЖИВАНИЯ";
" " " ", внизу графика заменить "передач" на "Обслуживаний".
РИС. 3, внизу графика заменить "передач" на "Обслуживаний".
РИС. 4, в заголовке заменить "ПЕРЕДАЧИ" на "ОБСЛУЖИВАНИЯ".
РИС. 5 и 6, **вычеркнуть** два слова "затребованных заявок".

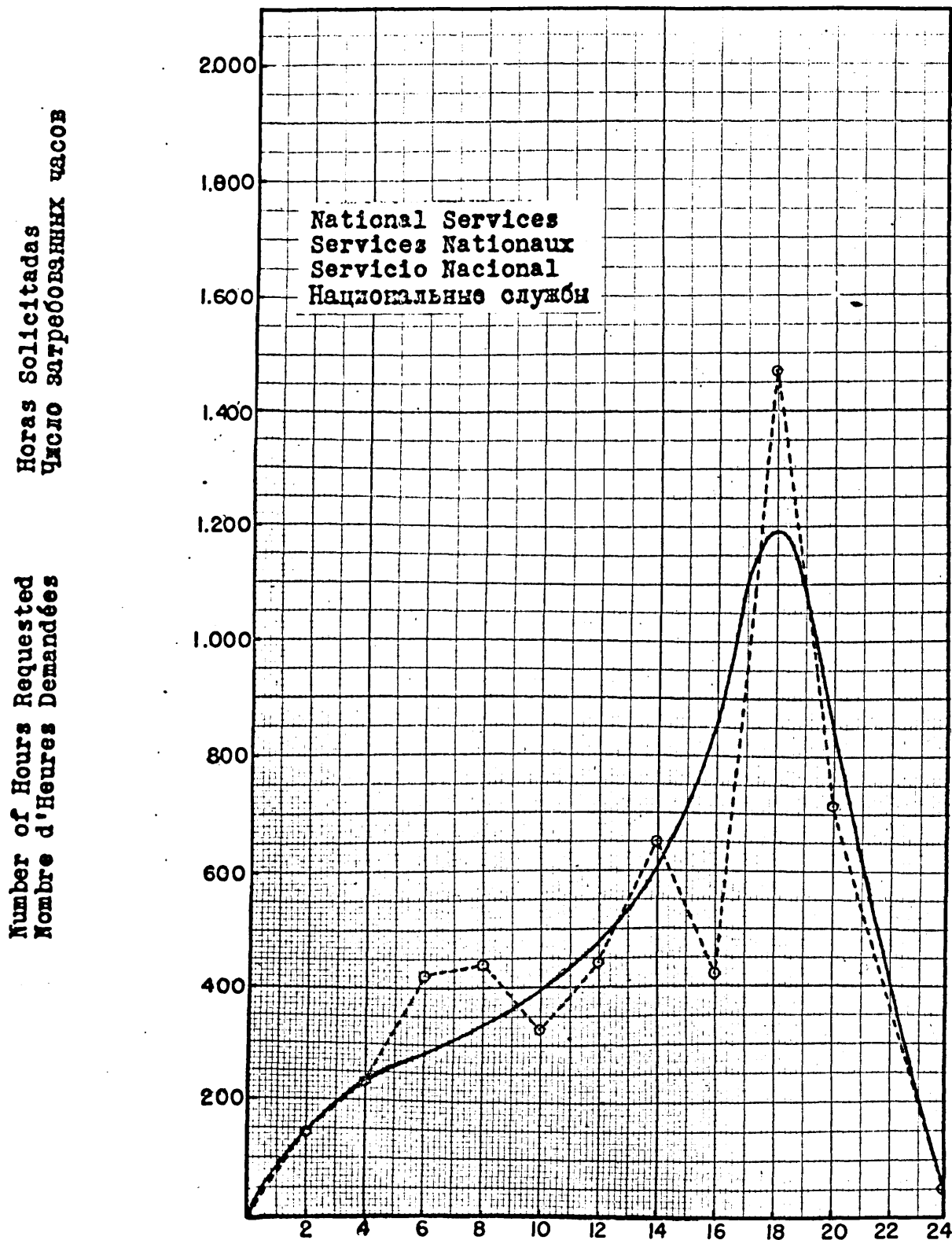
FIG. 1 - GRAPH SHOWING THE NUMBER OF HOURS REQUESTED AS A FUNCTION OF THE DURATION OF THE TRANSMISSION.

(Doc. 450)

FIG. 1 - VARIATION DU NOMBRE D'HEURES DEMANDÉES EN FONCTION DE LA DURÉE DES ÉMISSIONS.

FIG. 1 - GRÁFICO DE DISTRIBUCIÓN DE LAS SOLICITUDES EN FUNCIÓN DE LA DURACIÓN DE LOS SERVICIOS.

РИС. 1 - ГРАФИК, УКАЗЫВАЮЩИЙ НА ЧИСЛО ЧАСОВ, ЗАТРЕБОВАННЫХ В ЗАВИСИМОСТИ ОТ ДЛИТЕЛЬНОСТИ ПЕРЕДАЧ.



Duration of the Transmissions (in 2-Hour Units)

Durée des Émissions (de 2 en 2 heures)

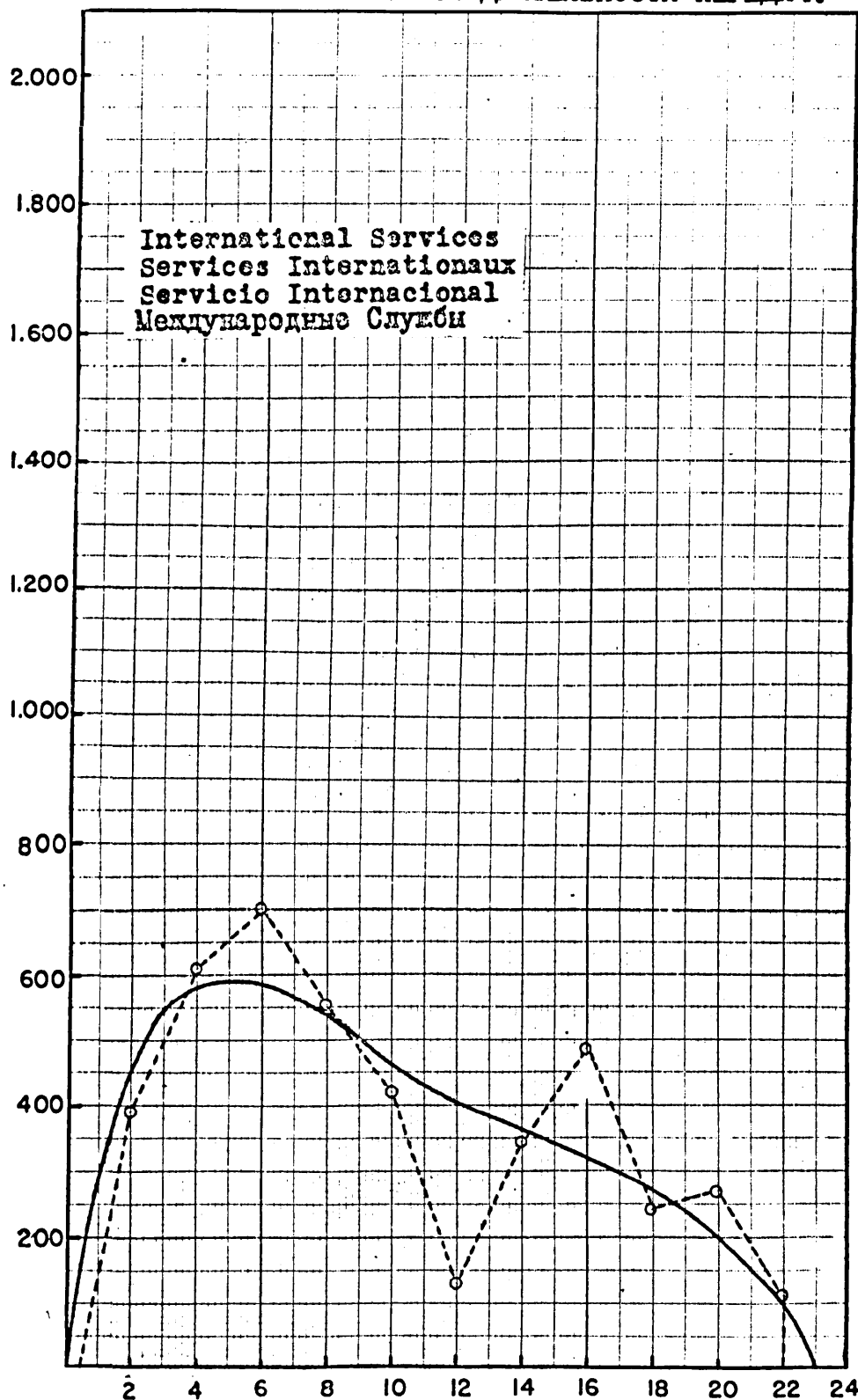
Duración de los Servicios, agrupados de 2 en 2 horas

Длительность передач (группированных по 2-х часовым периодам)

- FIG. 2 - GRAPH SHOWING THE NUMBER OF HOURS REQUESTED AS A FUNCTION OF THE DURATION OF THE TRANSMISSIONS. (Doc. 450)
- FIG. 2 - VARIATION DU NOMBRE D'HEURES DEMANDÉES EN FONCTION DE LA DURÉE DES ÉMISSIONS.
- FIG. 2 - GRÁFICO DE DISTRIBUCIÓN DE LAS SOLICITUDES EN FUNCIÓN DE LA DURACIÓN DE LOS SERVICIOS.
- РИС. 2 - ГРАФИК, УКАЗЫВАЮЩИЙ ЧИСЛО ЧАСОВ, ЗАТРЕБОВАННЫХ В ЗАВИСИМОСТИ ОТ ДЛИТЕЛЬНОСТИ ПЕРЕДАЧ.

Horas Solicitudes
Число затребованных часов

Number of Hours Requested
Nombre d'Heures Demandées



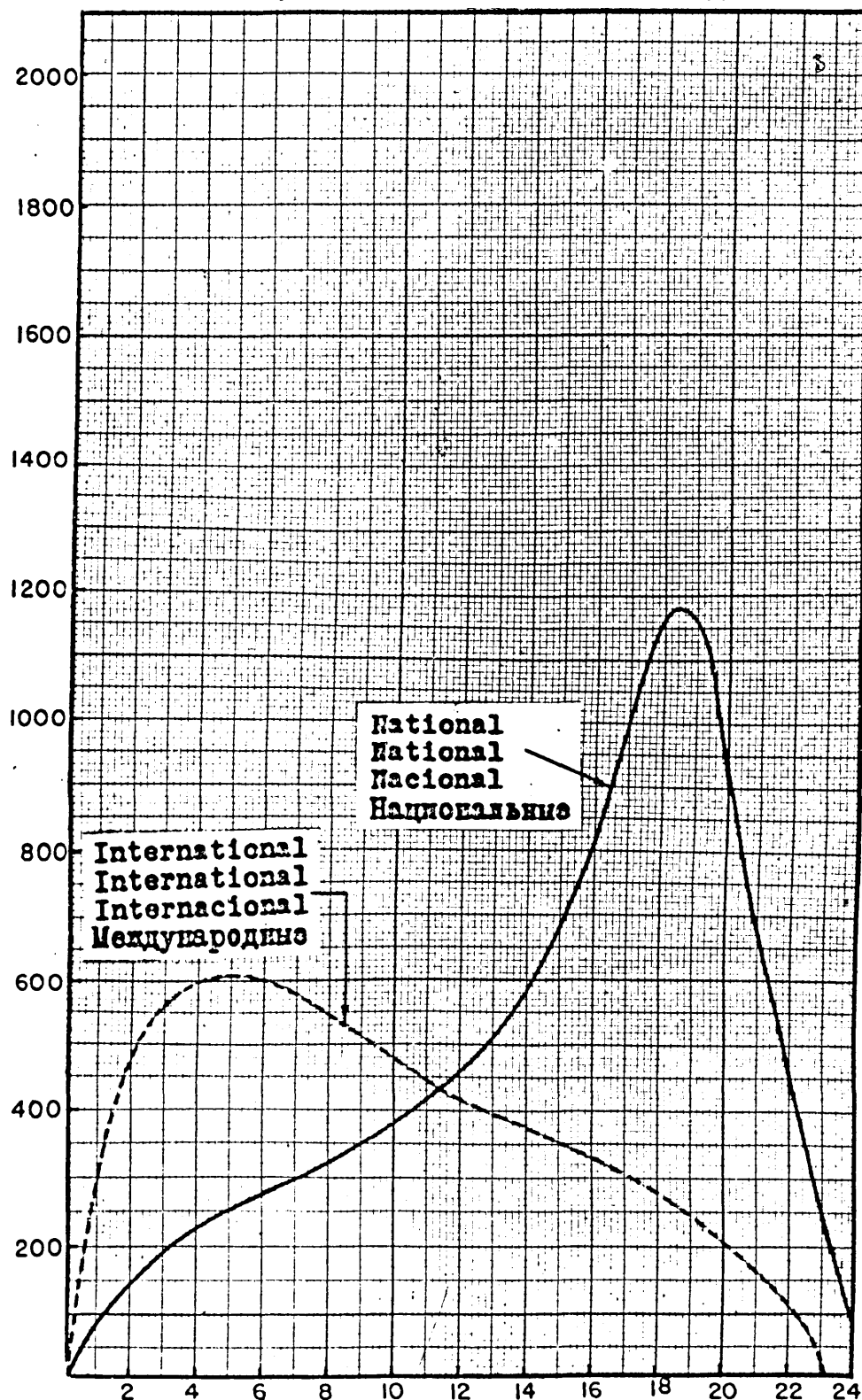
Duration of the Transmissions (in 2-Hour Units)
Durée des Émissions (de 2 en 2 heures)
Duración de los Servicios, agrupados de 2 en 2 horas
Длительность передач (передаваемых в течение каждых двух часов)

FIG. 3 - GRAPH COMPARING THE REQUIREMENTS FOR NATIONAL (Doc. 450) AND INTERNATIONAL SERVICES.

FIG. 3 - COMPARAISON ENTRE LES DEMANDES POUR LES SERVICES NATIONAUX ET LES DEMANDES POUR LES SERVICES INTERNATIONAUX.

FIG. 3 - GRÁFICO COMPARATIVO DE LAS SOLICITUDES PARA LOS SERVICIOS NACIONAL E INTERNACIONAL

РИС. 3 - ГРАФИК, ПОКАЗЫВАЮЩИЙ СРАВНЕНИЕ МЕЖДУ ЗАЯВКАМИ ДЛЯ НАЦИОНАЛЬНЫХ, И ЗАЯВКАМИ ДЛЯ МЕЖДУНАРОДНЫХ СЛУЖБ.



Duration of the Transmissions (in 2-Hour Units)

Durée des Émissions (de 2 en 2 heures)

Duración de los Servicios, agrupados de 2 en 2 horas

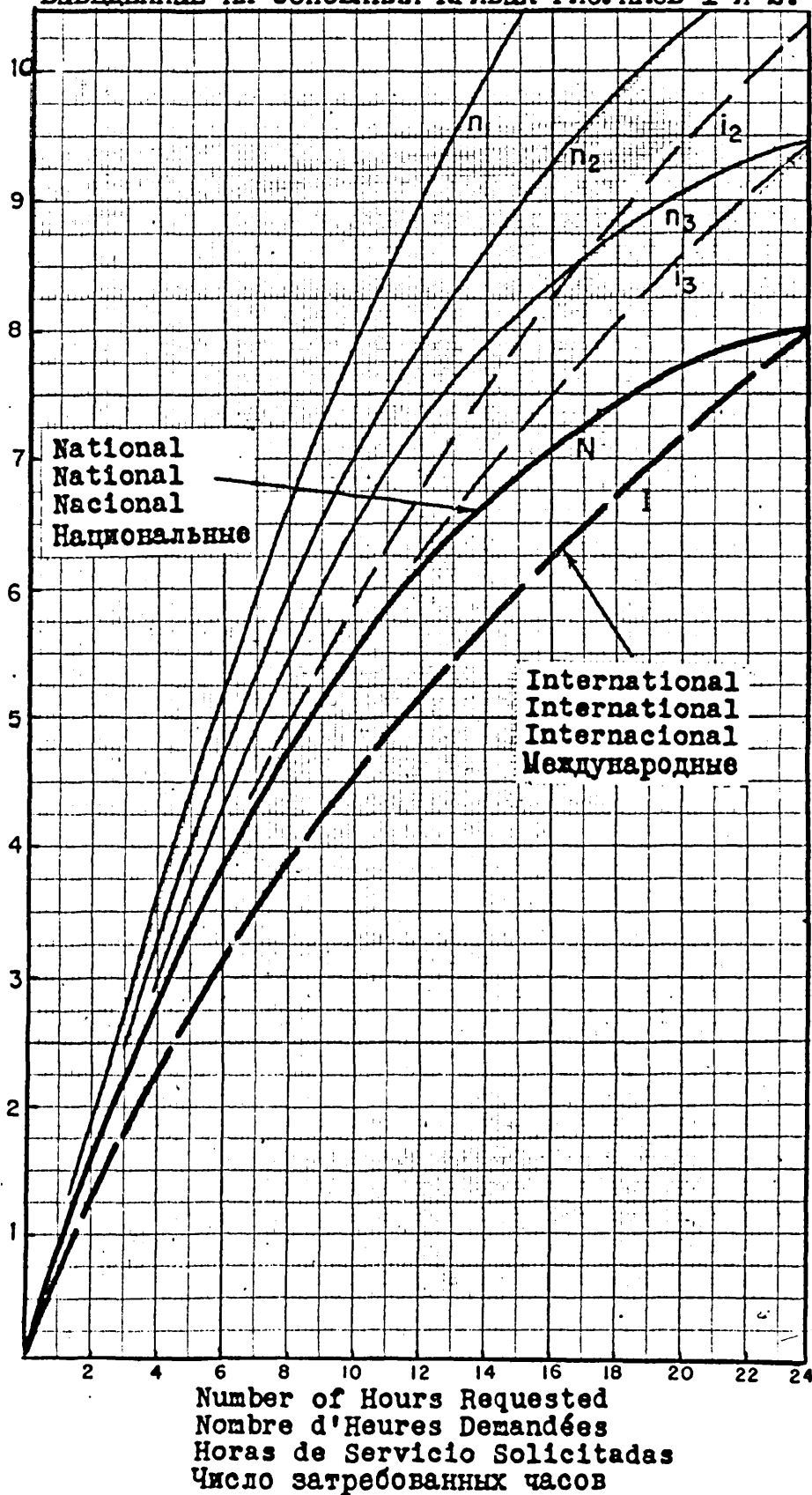
Длительность передач (передаваемых в течение каждых двух часов)

FIG. 4 - LAWS FOR REDUCING THE OPERATING TIME, DEDUCED (Doc. 450)
FROM THE GRAPHS IN FIGS. 1 & 2.

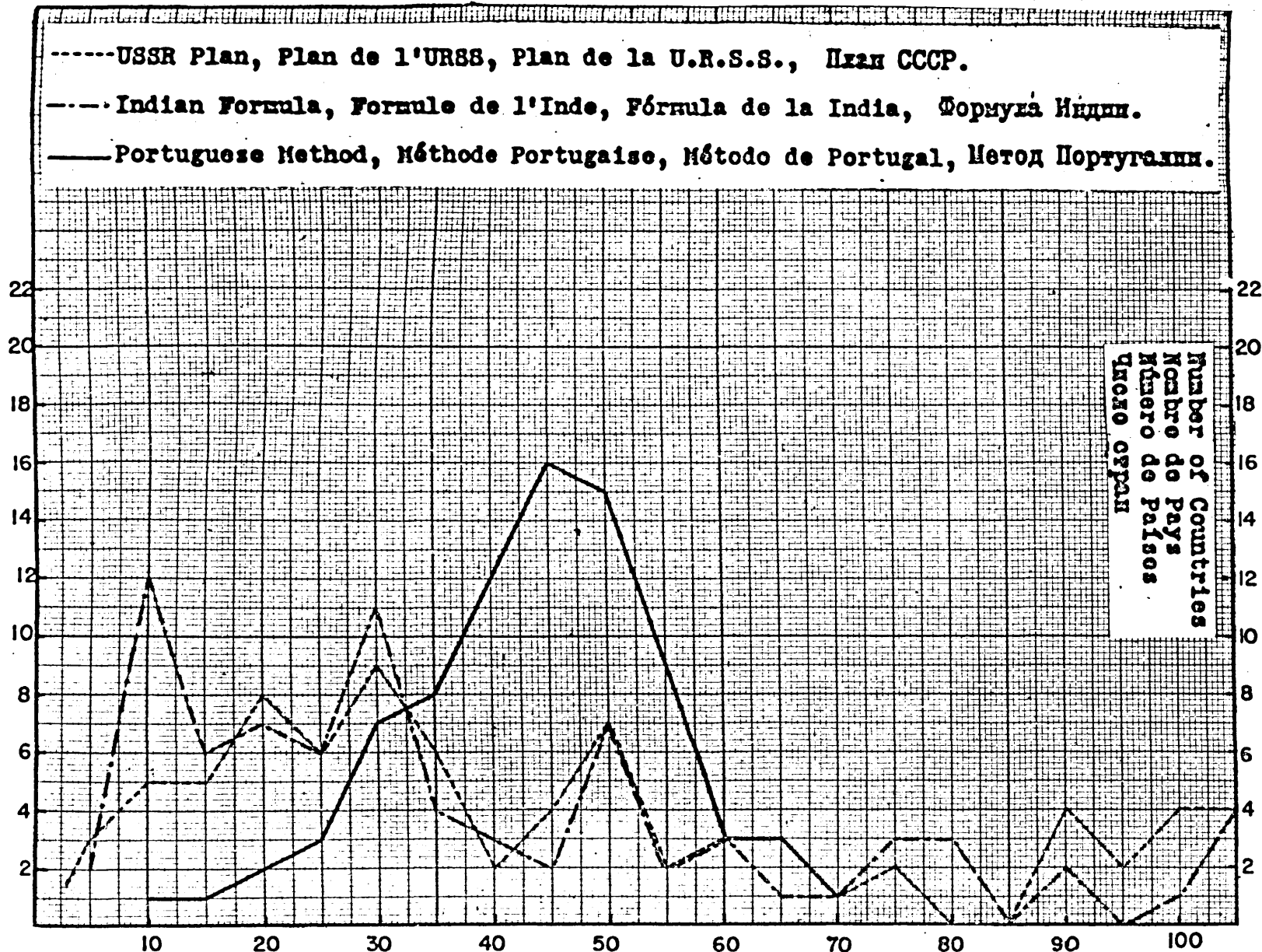
FIG. 4 - LOIS DE LA REDUCTION DE LA DURÉE DES ÉMISSIONS,
DÉDUITES DES COURBES DES FIG. 1 & 2.

FIG. 4 - LEYES DE REDUCCIÓN DE LAS HORAS DE SERVICIO,
DEDUCIDAS DE LOS GRÁFICOS DE LAS FIG. 1 Y 2.

РИС. 4 - ПРАВИЛА ДЛЯ СОКРАЩЕНИЯ ЧАСОВ ПЕРЕДАЧИ,
ВЫВЕДЕННЫЕ НА ОСНОВАНИИ КРИВЫХ РИСУНКОВ 1 И 2.

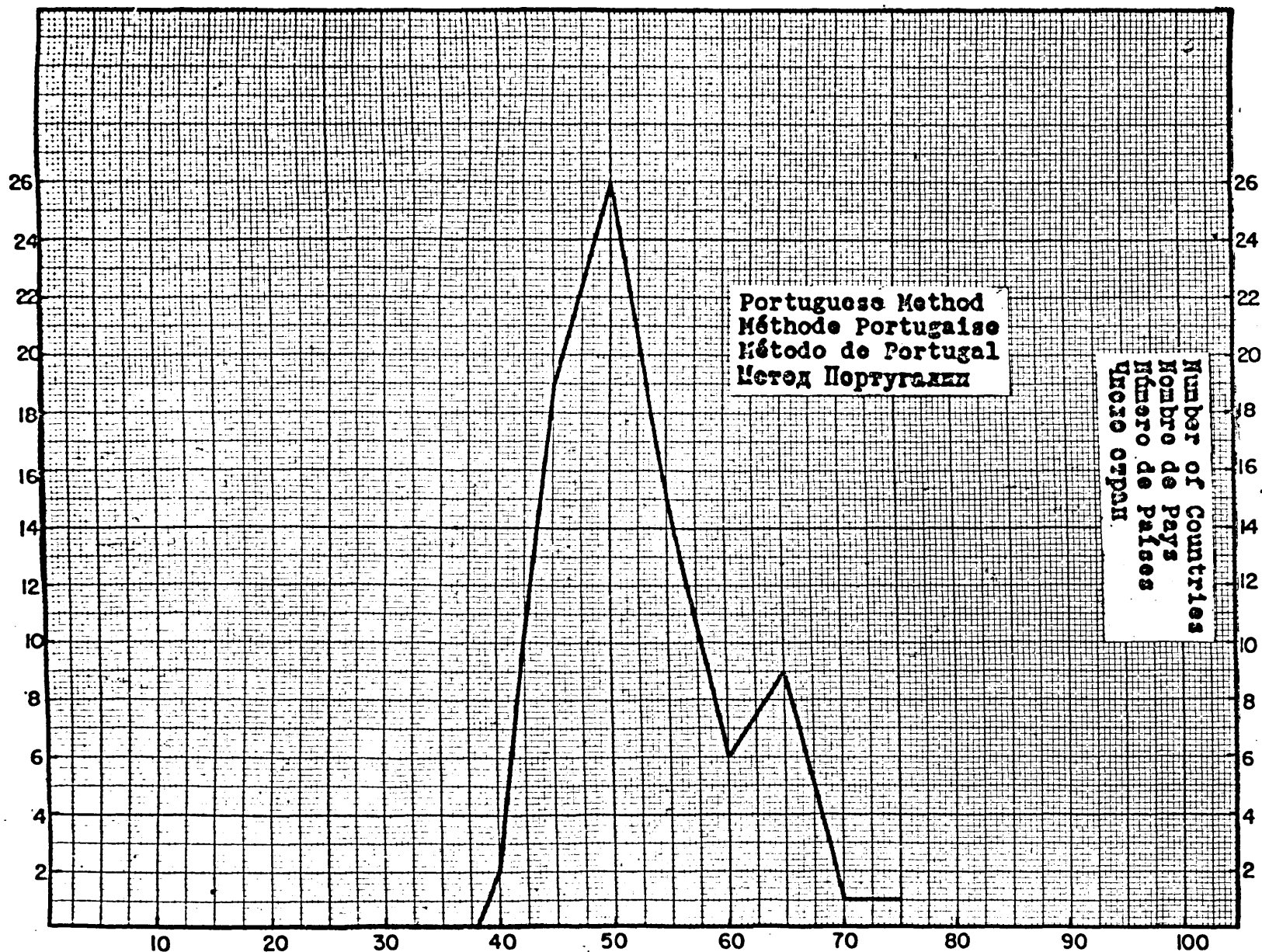


Number of hours assigned
Nombre d'Heures Attribuéés
Horas de Servicio Atribuidas
Число выделенных часов



Percentage of Satisfaction in Relation to the Requirements
 Proportion Dans Laquelle les Demandes Sont Satisfaites (en % des Demandes)
 Porcentaje de Satisfacción con Relación a las Solicitudes
 Процентное отношение удовлетворения затребованных заявок

FIG. 5 - GRAPH SHOWING THE PERCENTAGE OF SATISFACTION AS A FUNCTION OF THE CHANNEL HOURS REQUESTED.
 FIG. 5 - PROPORTION DANS LAQUELLE LES DEMANDES D'HEURES FRÉQUENTES DEMANDES SONT SATISFAITES.
 FIG. 5 - GRÁFICO ESTADÍSTICO DE PORCENTAJES DE SATISFACCIÓN CON RELACIÓN A LAS HORAS-FRECUENCIAS SOLICITADAS.
 РИС. 5 - ГРАФИК, УКАЗЫВАЮЩИЙ ПРОЦЕНТНОЕ ОТНОШЕНИЕ УДОЛЕТВОРЕНИЯ ЗАЯВОК, В ЗАВИСИМОСТИ ОТ ЗАТРЕБОВАННЫХ КАНАЛО-ЧАСОВ. (Doc. 450)



Percentage of Satisfaction in Relation to the Requirements
 Proportion Dans Laquelle les Demandes Sont Satisfaites (en % des Demandes)
 Porcentaje de Satisfacción con Relación a las Solicitudes
 Процентное отношение удовлетворения затребовавшихся заявок

FIG. 6 - GRAPH SHOWING THE PERCENTAGE OF SATISFACTION IN RELATION TO THE NUMBER OF HOURS REQUESTED. (Doc. 450)
 FIG. 6 - PROPORTION DANS LAQUELLE LES DEMANDES D'HEURES D'EMISSION SONT SATISFAITES.
 FIG. 6 - GRAFICO ESTADISTICO DE PORCENTAJES DE SATISFACCION CON RELACION A LAS HORAS DE SERVICIO SOLICITADAS.
 FIG. 6 - ГРАФИК, УКАЗЫВАЮЩИЙ ПРОЦЕНТНОЕ ОТНОШЕНИЕ УДОВЛЕТВОРЕНИЯ ЗАТРЕБОВАННОГО ЧИСЛА ЧАСОВ.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 451-E

14 January 1949

Mexico City, 1948/49

LIST OF DOCUMENTS PUBLISHED BY THE
INTERNATIONAL HIGH FREQUENCY BROADCASTING CONFERENCE
MEXICO CITY 1949.

No. 401 - 450.

No. of Document	No. of Committee	T I T L E
401	-	List of Documents published by the International High Frequency Broadcasting Conference, Mexico City, 1949. (No. 351 - 400).
402	1	-Agenda of the Coordinating Committee. Meeting of 5 January 1949.
403	4	-Report of the Technical Principles Committee. 25th Meeting. 21 December 1948.
404	2	-Report of the Credentials Committee. Eighth Meeting. 21 December 1948.
405	Brazil	-Replies of the Delegation of the U.S.S.R. to the Questions formulated by the Delegation of Brazil regarding the Soviet Plan and Conclusions drawn by the Brazilian Delegation on the said Plan.
406	3	-Proposed Conclusions and Resolutions based on Documents Nos. 375 and 384 (Working Group C) submitted by the Chair.
407	Vatican City-	Conclusions suggested by the analysis of the Replies to the Questionnaire (Document No. 265) of the General Principles Committee.
408	4	-Report of Working Group C of the Technical Principles Committee. (This Document replaces Document No. 208).
409	2	-Constitution of Delegation of Poland.
410	4	-Report of Working Group 4 B of the Technical Principles Committee. (This document replaces Document No. 306).

N ^o of Document.	No. of Committee.	TITLE.
411	6	-Agenda for the 15th Meeting of the Plan Committee. 7th January 1949.
412	5	-Draft Report of the Requirements Committee. (Amendments to Document No. 329.)
413	Belgium Belgian Congo	-Notice concerning Power of Proxy.
414	-	-Corrigendum to Document No. 391 - E.
415	1	-Schedule of Meetings from 10 - 15 January 1949.
416	4	-Measurements in the Vertical Plane of the Radiation of a Rhombic Antenna.
417	2	-Notice from the Delegation of the Portuguese Colonies concerning Proxy.
418	-	-Tabulation of Information Received from the Various Countries.
419	1	-Summary of Decisions taken at the Meeting of the Coordinating Committee. 5 January 1949.
420	-	-Minutes of the Plenary Assembly. Thirteenth Session. 23 December 1948.
421	5	-Report of the Requirements Committee. Fifth Meeting. 6/8 December 1948.
422	5	-Report of the Requirements Committee. Sixth Meeting. 13 December 1948.
423	5	-Report of the Requirements Committee. Seventh Meeting. 15 December 1948.
424	5	-Report of the Requirements Committee. Eighth Meeting. 23 December 1948.
425	5	-Corrigendum to Document No. 382 - E.
426	2	-Notice from the Delegation of the Peoples' Republic of Albania concerning Power of Proxy.

No. of Document	No. of Committee	TITLE
427	-	-Notice from the Secretariat on the subject: United States Transit Visa.
428	2	-Notice from the Delegation of Poland concerning Power of Proxy.
429	2	-Corrigendum to Document No. 377-E.
430	2	-Notice from the Delegation of El Salvador concerning Power of Proxy.
431	2	-Notice from the Delegation of Hungary concerning the Power of Proxy.
432	Turkey	-Comments regarding the information concerning Turkey appearing in the Conference documents.
433	Brazil	-Proposal intended to expedite the termination of the Conference.
434	5	-Report of the Requirements Committee.
435	Chile	-Considerations on the Soviet Plan.
436	5	-Agenda of the 10th Meeting of the Requirements Committee. 13 January 1949.
437	1	-Report of the Drafting Group of the Coordinating Committee.
438	1	-Coordinating Committee. Agenda of the Meeting on the 12 January 1949.
439	5	-Report of the Requirements Committee. Ninth Meeting. 7 January 1949.
440	1	-Report of the Coordinating Committee to the Plenary Assembly. Internal Regulations.
441	1	-Draft Agenda for the Plenary Assembly of 14 January 1949.
442	Guatemala	-Considerations concerning Doc. No. 382.
443	Bielorussian S.S.R.	-Notice concerning Proxy.

No. of Document	No. of Committee	TITLE
444	Ukrainian S.S.R.	-Notice concerning Proxy.
445	4&6	-Report of Joint (second) Meeting of the Technical Principles and the Plan Committees. 8 December 1948.
446	4&6	-Report of Joint (third) Meeting of the Technical Principles and the Plan Committees. 15 December 1948.
447	-	-Classification of Document No. 265.
448	3	-Draft Report of the General Principles Committee First Part. (This document replaces Document No. 328).
449	5	-Addendum to Document No. 382.
450	Portugal	-Contribution towards the Elaboration of a Frequency Assignment Plan.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 452-E

11 January 1949

Original: ENGLISH

Committee 6

REPORT OF THE PLAN COMMITTEE

15th Meeting

7th January 1949

1. The fifteenth meeting of Committee 6 was opened at 16:00 hours by the Chairman, Mr. Pedersen, assisted by the first Vice-Chairman, Mr. Arkadiev.

2. The Chairman first requested the Committee's approval of the Agenda (Document 411), after making one correction to this document, viz. under Item 1, the Documents concerned should be Nos. 363, 385 (with Annex in Document No. 394) and 400.

The Agenda was approved after this amendment had been made.

3. The Chairman then asked the Committee to consider the reports of the 12th, 13th and 14th meetings, dealing first with the report of the 12th meeting (Doc. 363). He made one typographical correction to Para. 4 of this report, the words "this band" should be inserted following the phrase "We therefore had the situation whereby". The delegate for India wished to amend the following paragraphs:

"5.18" the word "list" to be substituted for "tabulate" in the last line of the paragraph.

"5.27" The first sentence should read "The delegate for India said that it was necessary for the Committee to be uniform with regard to countries lying inside as well as those outside the tropical zones, as the P.F.B., etc. etc."

The third sentence should read, "Also, it was necessary, etc. etc."

The fourth sentence should read "His Administration had only submitted requirements for the bands above 6 Mc/s to this Conference, as far as they related to the same service, those falling, etc. etc."

Before the last sentence insert "He therefore suggested that even in the cases of countries who submitted their requirements in the tropical bands only to the P.F.B., this Conference should send the related requirements (those above 6 Mc/s, but pertaining to the same service) of these countries also to the P.F.B.".

With these amendments Doc. 363 was then approved.

- 3.1. Regarding Document 385, the Chairman noted one small correction in the English version, Page 2, para. 5.1, the word "section" should be replaced by "action".

The delegate for Indonesia wished to amend para. 8.1. to read as follows "At this point the delegate for Indonesia said that he had already submitted a proposal for the bases of a plan, etc. etc."

The delegate of Argentina called the Committee's attention to a mistake in the Spanish version of this Document (para. 7.3) in which reference is made to the number of hours of transmission in each band without specifying, as in the English version, that reference is made to those in operation at present.

The delegate for the U.S.S.R. wished to eliminate the word "unofficial" in para. 4, in the phrase, "been unofficial discussions".

With these amendments, Doc. 385 was then approved.

- 3.2. Regarding Document 400 the delegate for Argentina wished to correct the use of the word "directions" to read "directives" in paras. 4, 4.1 and 4.12 of the Spanish version.

With these amendments Doc. 400 was then approved.

4. Regarding Item 2 of the Agenda, the Chairman proposed that this Document (No. 374) should be passed to the appropriate Working Group 6D for consideration.

This procedure was agreed by the Committee.

5. Item 3 of the Agenda was the report by the Chairman of Working Group A, Mr. Arkadiev, and the consideration of Document No. 399, the report of this group.

Mr. Arkadiev said that Document 399 was a preliminary report of the Working Group, which had been approved by all members, with the exception of the delegates for India and Cuba, who had been unable to attend the meeting which had dealt with this report. He drew the Committee's

attention to the proposal given at the end of the report which requested the countries to verify the interpretation given to their replies to Doc. 217. The Working Group considered this very necessary, so that the final report on this work could be drawn up.

5.1. The Chairman thanked the Working Group for their excellent work, and in particular the Chairman, Mr. Arkadiev. He said that the Committee had previously agreed that the countries should be given the opportunity to comment on the classification of the replies. He requested those delegations present, if possible, to give their comments at this present meeting.

5.2. The delegate for Indonesia then submitted the following statement:

"The Delegation for Indonesia having studied the Preliminary Report No. 4 of Working Group A of the Plan Committee (Doc. No. 399) is obliged to make the following remarks:

"Although our delegation has replied to the questions in para. 1 of Doc. 217 and submitted these answers in time to Committee 6 and although for that reason we have not been included in the list of countries which had not replied to the questions (see section 6.8 of Doc. 363), it proves that our replies have not been listed in the classification in Doc. 399.

Referring to our replies to the questions in para. 1 (see our form I, Working Group 6C and the attached remarks) we request you to include Indonesia in the classified answers as follows:

Question "A",	para. 1,	Doc. 217	Category B
" "B",	" "	" "	" "	" "	" C
" "C",	" "	" "	" "	" "	" C
" "D",	" "	" "	" "	" "	" A

"Furthermore, our delegation cannot agree with the classification of our replies to the questions in para. 2 of Doc. 217. From our comments made on Appendix B, Annex 5, of the Mexico City's Planning Committee's Report we quote the following (C II):

'Therefore the Indonesian Delegation does not think it useful to try to make proposals for the improvement of the bases laid down in Appendix B, Annex 5' and on the basis of this quotation we request you to list Indonesia under Category B of Question A, para. 2, Doc. 217, instead of under Category A.

"We further refer to para. B of our comments in which we declared the following:

'Probably owing to this circumstance the allocated number of channel hours (73) is far too small and definitely inadequate to meet Indonesia's very modest requirements'.

and therefore it is obvious that we are opposed to the number of channel hours as determined by the India formula. Thus we request you to list Indonesia under Category B (Question C, para. 2, Doc. 217) instead of under Category C.

"On page 9 of Doc. 399 the countries are mentioned who have submitted concrete proposals with regard to Annex 5 of Appendix B.

"Indonesia is listed under Category C. However, the proposal of Indonesia is not included in the Annex A to Doc. 399 and I request you to remedy this omission and to add the Indonesian proposal to the said Annex."

5.3. The Chairman in reply said that it was not quite clear why the reply from Indonesia had not been included in the report, and he asked Mr. Arkadiev to check the answers received in order to clarify this point.

5.4. The delegate for Roumania wished to submit two modifications to the classification of his delegation's reply:

(I) Regarding Question (b) para. 1, Doc. 217.

Roumania now appeared in both categories B and C in the French version of Doc. 299. This should be amended to Category B only.

(II) Regarding Question "C" para. 1 Roumania should be under category A not category B.

5.5. The delegate for Morocco & Tunisia stated that the French version of Doc. 399 was not very clear with regard to classifications listed in the second part of Page 8. Also on Page 9 the last three paragraphs were not very clear, and required some revision.

5.6. The delegate for Belgium pointed out that in the French version of Doc. 399 in the classifications given to the replies to Question (C) the U.S. Territories had been listed under categories B, C and D. He suggested that the delegation concerned be asked to clarify the correct category.

Mr. Arkadiev said that in the original of Doc. 399, the Russian version, the U.S. Territories was listed under category B only.

5.7. The delegate for the U.K. said that with regard to Question (b) para. 1, neither the U.K. nor the U.K. Colonies were listed at all in the French version of Document 399. The U.K. should be included under category C, and the U.K. Colonies under category D.

5.8. The delegate for Chile said that his reply had been correctly interpreted, however he requested that in the Annex to Doc. 300 under para. 11 (1) the words "number of inhabitants per square mile" be substituted for the phrase "Density of population".

5.9. The delegate for Argentine wished to reserve comment on Document 399 until the next meeting, as he wished to verify, in particular, para. 2 of the Annex, although he expected that his delegation's reply had been correctly interpreted.

5.10. The delegate for France said that their reply had been correctly interpreted, with the exception of Question "d", para. 1. France should be listed under category D instead of category C. Also with regard to the Annex, para. 26 (1), he submitted the following text to replace the existing version:

1) Every formula contains, inevitably, a certain arbitrary element the importance of which can be reduced if a greater number of factors is taken into consideration; in this respect, the formula presented by India offers certain advantages.

5.11. The delegate for the French Overseas Territories submitted the following text to replace para. 61 (2) in the Annex:

2) For countries situated within the Tropical Zone, greater weightage should be attributed to area, on account of the high degree of atmospheric noise which, in those regions, makes it impossible to use medium waves and compels the use of high frequencies for the national broadcasting requirements.

5.12. The delegate for Portugal said that his reply had been interpreted correctly except for Question (a) para. 2. Here Portugal should be under category B not category A. Also under Question "C" para. 2, the Portuguese Colonies should be under Category B not Category A. Regarding the Annex para. 47 (1) he wished to add the words "but this formula is not useful because it has in reality the same inconveniences", to end of this sentence.

- 5.13. The delegate for Egypt wished to have his reply to Question "C" para. 2 under category B, not category C, as at present.
- 5.14. The delegate for Pakistan wished to reserve comment on document 399 until a later stage. (This reservation was subsequently withdrawn, as the answer concerned had been correctly interpreted).
- 5.15. The Chairman joined with all delegates present in expressing his thanks to the Working Group. He then turned to the question raised in the last paragraph of Document 299 and asked for comment on this point.
- 5.16. The delegate for Morocco & Tunisia said that on the whole the Working Group considered it useless to continue on the lines of Document 217, however, as two members of the Group were absent at the last meeting no decision could be taken.
- 5.17. The delegate for Belgium suggested that Group A should only consider the majority views expressed in the replies.
- 5.18. The delegate for Morocco & Tunisia said that this raised a very interesting point. By adding up the classifications of replies given in Document 299, it could be seen that there was no favourable majority view, but mainly opposition views expressed. It was indispensable that the attention of the Committee be drawn to this fact, viz, that only 15 countries wish to improve a formula, whilst 35 countries reject the idea altogether.
- 5.19. The delegate for Italy supported the delegate for Morocco & Tunisia in that the Committee must decide whether it was worth while proceeding to further analyse the replies with a view to preparing a basis for a plan.
- 5.20. The Chairman understood that the wish of the Committee was that the Group should further study the replies as an aid to the establishment of a basis for a plan, as so far only a statistical analysis had been made.
- 5.21. The delegate for India supported this view, and drew the Committee's attention to the fact that 10 countries have not so far replied to Document 217. He considered it also necessary to find the opinion of those countries listed under category D in the replies to paragraph 2. The results obtained were not conclusive, and when these further replies and opinions had been received the Working Group would then be able to explore the various possibilities.

5.22. At this point the delegate for Morocco & Tunisia suggested that the debate on this item be postponed either to a later date or to point 7 of the present Agenda.

5.23. The delegate for the U.S.S.R. said that Document 399 showed the non uniformity of the replies and the complexity of the problem before the Conference. He considered that this Document did not give too black a picture. In the replies to paragraph 1, questions (a) and (b), a majority of countries accepted or made comments. It was question (c), the most acute question, that the majority of countries were against. However, this plan had been the first attempt, and it was better to suffer defeat, than refuse to make any attempt at all. It was necessary to keep in mind the ratio of the demands to the available channel-hours, and not believe that the problem can be magically solved. He therefore, must agree with the Chairman's proposal regarding Working Group A.

5.24. The delegate for the French Overseas Territories agreed with the delegate for Morocco & Tunisia that the discussion should be postponed to a later date, and that other proposals should be studied meanwhile. He fully agreed with the delegate for the U.S.S.R., that even if the U.S.S.R. plan was not further studied, it had at least forced delegations to give certain comments.

5.25. The delegate for Roumania supported the Chairman's proposal that the Working Group should first finish the task of analysing completely the comments, as it was necessary to know the final position with regard to the U.S.S.R. plan and the Indian basis.

5.26. After establishing from the Chairman of Working Group A that his Group had a number of proposals under discussion, the Chairman proposed the postponement of the debate until item 7 of the Agenda was reached.

This was agreed by the Committee.

6. Item 5 of the Agenda was the report of the Chairman of Working Group C, Mr. Esping. He regretted that he had no report to give as his Group had been delayed in their work by the vacation.

7. Item 6 of the Agenda was the report of the Chairman of Working Group D, Mr. Navatta. He said that one meeting had been held, and at this meeting two sub-working Groups had been established. The first, with a membership of the delegates for the U.K., U.S.S.R., Argentine and India was to carry out a statistical survey of transmitters in all the zones. The second, with a membership of the delegates for the French Overseas Territories, India, Argentine and Italy was to attempt to simplify the methods of field strength calculation. A discussion on the suggestions

put forward by the Working Group members would take place, before drafting the questionnaire for Committee 4. The documents submitted by the delegations of French Overseas Territories and Indonesia had been given to the Secrétariat for translation, and would be discussed as soon as available.

7.1. The Chairman asked Mr. Navatta whether his Group had studied the revised version of Document 318, the proposal by the U.K. delegation, which had been passed to Working Group D from Working Group B.

7.2. Mr. Navatta said that he had received a note from the Chairman of Working Group B, Mr. Trimmer, on the subject, and the question would be discussed at the next meeting of his Group.

8. With regard to item 7 of the Agenda, the Chairman suggested that delegates having views on the future work of the Committee, should if possible present them in written form at the next meeting.

8.1. The delegate for Morocco & Tunisia had two immediate proposals:

- (a) That Mr. Trimmer be consulted regarding the proposed interviewing of delegations by Working Group B.
- (b) That the discussion on Item 7 of the Agenda be postponed, and that Working Group A should prepare concrete proposals for the next meeting appertaining to this subject.

8.2. These proposals were supported by the Chairman of Working Group A, Mr. Arkadiev.

9. A discussion then took place with regard to the programme of meetings for the Working Groups for the week January 10th to 15th inclusive, after which the meeting closed at 18:40 hours.

The Reporter

R. Craig

The Chairman

Gunnar Pedersen

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 453-E

12 January 1949

Committee 2

MONACO

Power of Proxy

The Delegation of Monaco wishes to state that it has conferred power of proxy upon the French Delegation to represent it at the Conference in all instances of absence.

Consequently, the French Delegation may, when taking part in the discussions in the various Committees, or in Plenary Assemblies, present and defend the particular viewpoints of the Delegation of Monaco, vote in its name, and submit to the technical Committees all useful data concerning high frequency broadcasting in Monaco.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 454-E

12 January 1949

Original: ENGLISH

Committee 6

PLAN COMMITTEE

Agenda for the 16th Meeting

to be held at 3:30 p.m., 13th January 1949

1. Coordination with Committee 4, information from the Chairman.
2. Report of the Chairman of Working Group A.
3. Report of the Chairman of Working Group B.
4. Report of the Chairman of Working Group D.
5. Continuation of general discussion on the future work of the Committee.
6. Miscellaneous.

GUNNAR PEDERSEN,
Chairman of Plan Committee

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 455-E

13 January, 1949

Mexico City, 1948/49

SUPPLEMENT NO. 3 TO DOC. NO. 144-E

Further replies received from various countries to the Planning
Committee telegram concerning Imports and Exports.

Country	1946		1947		Expressed in millions of:
	Imports	Exports	Imports	Exports	
Iran	4,114	2,570	4,705	2,324	Rials

The following is a correction to Doc. No. 144

Turkey

625 (instead of 652)

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 456 - E

13 January 1949

Mexico City, 1948/49

Supplement No. 3 to Doc. No. 145-E

Further Replies received from various countries to the
Planning Committee telegram on illiteracy, etc.

Country	<u>1</u> % Illiteracy	<u>2</u> Number Students High Schools	<u>3</u> No. Students Univ. Colls. Tech. Schools	<u>4</u> No. of High Schools	<u>5</u> No. of Univ. Colleges, Technical Schools
Australia	3	281 000	172 000	1 500	11
Bulgaria	12	200 621	42 540	287	
Peru	58	58 708	34 423	210	

The following is a correction for Doc. 145

Czechoslovakia	0	307 000	65 500	2 616	19
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INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 457-E

13 January 1949

Original: FRENCH

Committee 1

REPORT TO THE PLENARY ASSEMBLY

of 14 January 1949

on the Proposals of the Bielorussian S.S.R.

(Doc. 381)

The 13th Meeting of the Plenary Assembly (afternoon of 23 December) delegated (by a vote of 46 for, 10 against and 2 abstentions) to the next meeting of Committee 1, the task of considering, for purposes of recommendation, the proposals of the Bielorussian S.S.R. found in Document No. 381-E.

After lengthy consideration and discussion in Committee 1, the proposals were put to the vote, the Delegates being invited to vote separately on each paragraph. Paragraph 1 was amended, substituting the words: "To do everything possible to carry out the decisions previously taken . . ." for the former wording of the text. It was adopted by a large majority.

Paragraphs 2 and 3 were rejected, also by a considerable majority.

Since this decision was preceded by a lengthy discussion in Committee 1, it is recommended that the Plenary Assembly take this fact into account when considering the present report.

Chairman of Committee 1

M. PEREYRA

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 458-E

13 January 1949

Committee 1

AGENDA

Plenary Assembly of 14 January 1949

1. Approval of Minutes of the 12th and 13th Sessions (Documents Nos. 391 and 420).
2. Report on the Bielorussian proposal (Document No. 457)..
3. Proposed amendments to the Rules of Procedure (Document No. 440).
4. Decision on the subject of the questions raised in Documents No. 264 (Yugoslavia) and 388 (S.C.A.P.)
5. Consideration and approval of the Report of Committee 5 (Document No. 434).

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 459 - E

13 January 1949

Committee 2

CORRIGENDUM TO DOCUMENT No. 377 - E

Item 12 to read as follows:

12. Chile - Letter of credence signed by the President of the Republic of Chile, and countersigned by the Minister for Foreign Affairs of Chile.

Item 44 to read as follows:

44. Paraguay - Letter of credence signed by the President of the Republic of Paraguay, and countersigned by the Minister for Foreign Affairs of Paraguay.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 460-E

12 January 1949

Original: SPANISH

Committee 6

First Report of Working Group D of the
Plan Committee

Up to the present, the full Group has had two meetings. For the purpose of accomplishing the work entrusted to it and in accordance with information already given at the last meeting of the Committee, it decided to form two sub-Groups 6-D1 and 6-D2.

Sub-Working Group 6-D1, composed of the Delegates of the U.K., the U.S.S.R., India and the Argentine, has met on every working day since its formation.

The directives given to this sub-group were not stated in exact terms, but the task undertaken tends to yield statistical data with respect to the requirements for channel-hours in the 6 and 7 Mc/s bands, with the object of demonstrating the importance of the requirements in those bands. Maps were prepared on which the world was divided into 13 zones. Each zone embraces several areas such as Committee 5 uses to determine the OWF for specific circuits. In establishing the limits of each one of these large zones, the sub-group, in accordance with the practical experience of the members thereof, tried to group those areas in which sharing would be difficult.

The list of the large zones, classified from A to M, is as follows, the areas within each zone being indicated by the numbers 1 to 65. The numbering coincides with Committee 5's numbering:

A	North America	1-2-3-4-5-6-7-8-9
B	Central America	10-11
C	South America	12-13-14-15-16
D	Western Europe	17-18-27-28-36-37
E	Eastern Europe	19-20-21-29-30-31
F	Middle East	38-39
G	North Africa	46-47-48
H	South Africa	52-53-57
I	Orient	40-41-42-43-49
J	Northern Far East	22-23-24-25-26-32-33-34-35
K	Southern Far East	44-45-50-51-54-64-65
L	Australia, New Zealand	55-56-58-59-60
M	Central Pacific	61-62-63

The final information furnished by sub-Group 6-D1 will tend to simplify the problem of sharing channels in the 6 and 7 Mc/s bands and it will be grouped under the following titles:

1. The number of requirements in determined zones where channel sharing seems difficult.
2. The possibility of the simultaneous use of a channel in several of the large zones.

To expedite the work, the sub-group prepared forms in which the information was arranged under the following headings:

- a) Zone in which the signal would originate.
- b) Zone or zones to which the signal is directed.
- c) Time of transmission.
- d) Maximum and minimum distance of the service zone.
- e) Transmitter power.

It is believed that with this information Committees 4 and 6 would be in a position to apply in a practical manner, the technical conclusions already available, in order to determine the maximum possibilities of using the 6 and 7 Mc/s bands.

The greatest difficulty which has arisen in connection with the work realized up to the present time has been the lack of a directive regarding the use of the information furnished by Committee 5. In order that this work may proceed, Committee 6 must take a decision as to the following: Must sub-Group 6-D1 use the frequency requested by the country or the one indicated by Committee 5? Until this question is settled, it will be difficult for the sub-group to function effectively.

The Working Group also calls Committee 6's attention to the following point: If it is decided to accept the recommended frequencies as indicated by Committee 5, and if this frequency differs from the one required by the country, information will not be available as to the antennas used. Once these questions are settled, it is believed that if this sub-group has the necessary information at its disposal, it will be able to complete its work within a week.

Sub-Group 6-D2 is made up of the Delegates of France Overseas, Indonesia, Italy and the Argentine. Its task is to supply, as far as possible, field intensity curves for distances between 0 and 6000 km. for a transmitter of 1 kW radiated power, using an omnidirectional antenna.

With the information available, the group will prepare curves for 0°, 20°, and 40° North and South latitude for each even hour between 00 and 24 hrs. These curves will express the field intensity in db with respect to V/m in relation to distance and the time of day. They will be prepared for the directions, North, South, East and West.

This sub-group expects to finish its work by the end of next week.

The group decided not to undertake the consideration of the questions to be formulated for Committee 4 until it has available the information which the respective sub-groups are preparing, in order to put the questions into the most effective and concrete form possible. This decision was taken on account of the present overload of work in Committee 4.

In conclusion, in order to proceed efficiently with the work undertaken, it becomes necessary for Committee 6 to take a decision regarding the question previously formulated.

Chairman, Working Group 6-D

ANTONIO NAVATTA

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 461-E

13 January 1949

Original: ENGLISH

Committee 4

Report of the Technical Committee

27th Meeting

3 January 1949

1. Before starting the meeting the Chairman said that he thought the necessary quorum was not present, and when this was confirmed, he proposed to adjourn the meeting for the morning.
2. The delegate for Argentine suggested that the meeting should be adjourned and then after half an hour another meeting could be convened. According to parliamentary procedure a quorum would not be necessary at the second meeting. He emphasized that the Committee had lost a great deal of time in the past, and that it was necessary to work hard to finish by the target date.
3. The Chairman said he agreed that the necessary quorum need not be present at the next meeting and asked if there were any objections to the procedure suggested by the delegate of Argentine.
4. There were no objections to the procedure suggested.
5. The delegate for the U.S.S.R. asked what the agenda would be for the 28th meeting.
6. The Chairman said the agenda would be the discussion and approval of Report No. 5 of Working Group 4A, which he believed had already been approved and adopted in the Working Group itself.
7. Mr. Richardson confirmed that Report No. 5 as given in Document 300 has been approved by his Working Group.
8. The meeting was therefore adjourned at 1025 hours.

The Reporter:

P. N. Parker

The Chairman:

M. L. Sastry

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 462 - E

13 January 1949

Mexico City, 1948/49

This document concerns the Spanish Technical
Vocabulary, and is addressed to the Spanish-speaking
Delegates only.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 463 - E

13 January 1949

Original: SPANISH

Committee 2

REPUBLIC OF COLOMBIA

Power of Proxy

1. During my absence, the first assistant, Mr. Carlos E. Arboleda Roman, will be authorized to vote or to delegate the vote of my Delegation.

Carlos E. Arboleda
Head of the Delegation of
the Republic of Colombia

2. I herewith authorize the Delegate of the Argentine Republic to carry the vote of Colombia in all meetings in which I cannot be present.

Carlos Arboleda Roman
First Assistant of the
Delegation of the Republic
of Colombia

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 464-E

13 January 1949

Original: ENGLISH

Committee 4

REPORT OF THE TECHNICAL COMMITTEE

28th Meeting

3 January, 1949

(Morning Session)

1. The Chairman said that the agenda for the 28th meeting of the Technical Committee was the discussion and approval of the 5th Report of Working Group 4A of the Technical Principles Committee, dealing with Atmospheric and Industrial Noise Protection ratios in the presence of Fading; Document No. 300.
2. The Chairman then asked for comments on this document.
3. The delegate for the U.S.S.R. read the special reservation of the U.S.S.R., the Ukrainian S.S.R., and Bielorussian S.S.R. as given in Annex B to Document No. 300. He said that his delegation again wished categorically to protest against the method used in compiling Document No. 300 as it did not reflect the true course of the discussions or the decisions which had taken place in the Working Group. His delegation, therefore, proposed that Paragraph 4 of the 5th Report should be deleted from the text of the Report while it should be clearly indicated that Annex A contained the views of only the delegation of the U.S.A. The delegate of the U.S.S.R. further stressed the fact that point 4 had not been adopted or voted upon at the preceding meeting of the Working Group, and since this was a violation of the rules of procedure his delegation wished to protest, and insist upon the deletion of Point 4 from the Report.
4. The Chairman then called upon the Chairman of Working Group 4 A to give his comments on the U.S.S.R. statement.
5. Mr. Richardson said that Annex A contained the substance of a document which had been prepared by the delegation of the U.S.A. and explained the method of taking account of fading. This document had been clarified several times in the Working Group by the delegate for the U.S.A. and when the figures regarding the correction to be added to

the figure for the steady state condition in order to take fading into account were eventually adopted there had been unanimous agreement, as recorded in Paragraph (5) of Document No. 300. Continuing, Mr. Richardson said that when the draft report came up for discussion in the Working Group it was finally decided to vote whether to retain Paragraph 4. It was the opinion of the majority of the members of the Working Group that Paragraph 4 as well as also Annex A should be retained as part of the report.

6. The delegate for the U.K. said that as far as Paragraph 4 and Annex A were concerned, the various figures quoted in the document were adopted by his delegation and other delegations present at the Working Group, on the assumption that the methods of correction etc. given in Annex A would also be adopted and included in the report. Mr. Fryer pointed out that Annex A showed in effect how the figures to be adopted were related to the noise data contained in Circular No. 462 (the only noise data at present available) and without that Annex the figures themselves had little, if any, practical value. The United Kingdom, therefore, considered it essential that Annex A and Paragraph 4 should be retained. If they were deleted, the U.K. delegation would be compelled to withdraw its support from the entire document. The delegate for the U.K. then said that he would like to raise a further point at this stage of the discussion. At the last meeting, when the 4th Report of Working Group 4 A was discussed, it was decided to increase the ratio for steady carrier to average atmospheric noise from 34 to 38 db, and therefore, on the basis of that decision it would be necessary to amend the figures in Document No. 300 to bring them into line with the new figures of the earlier report.

7. The Chairman then suggested that the Report should be taken paragraph by paragraph, each paragraph being adopted, amended or rejected as would be decided by the Committee.

8. The delegate for the U.S.S.R. stated that the explanation given by the Chairman of Working Group 4 A did not satisfy his delegation in any way. Mr. Richardson had not indicated that Paragraph 4 had been included without any decision having been taken to include it. The U.S.A. document dated 11th November 1948 had been read by the delegation of the U.S.A. when decisions were taken in regard to the 42 db, but this document had not been adopted as a necessary additional document. The U.S.S.R. delegation also wished to object categorically to the U.K. Delegate's statement that the delegation of the U.K. and other delegations had based their support for Document No. 300 on the condition that both paragraph 4 and Annex A were adopted. The delegate for the U.S.S.R. also wished to point out that when the figure of 42 db was voted upon a great majority of delegations had not understood the document submitted by the delegation of the U.S.A. because a large number of delegations, after the adoption of the figure of 42 db had expressed their surprise at the contradictions contained in the U.S.A. document. This was supported by the fact that Mr. Veatch had proposed that those delegations who wished to

understand the document further should lunch with him and he would then explain it to them. The delegate for the U.S.S.R. said that he would like to add that the U.S.A. document dated 11th November 1948, explained in a very vague manner the method of calculating the necessary corrections in regard to fading, and his delegation, therefore, considered that technical documents to which reference was necessary for methods of calculation ought to be very clear. The figure of 42 db, therefore, was adopted when the document explaining its derivation was not clear to all delegates. As an example of the careless manner in which this report was formulated, it had been stated in Annex A that the necessary protection ratio for the median signal to atmospheric noise was 54 db while at the same time 42 db was given as the necessary protection ratio of the median signal to the average atmospheric noise. It therefore appeared that one and the same signal must exceed the average value of atmospheric interference by 54 db and at the same time also by 42 db; this seemed to indicate that mathematically $54 = 42$ which was clearly not intended. The delegate for the U.S.S.R. therefore proposed that, since the figure of 42 db was apparently carelessly derived, Paragraph 4 of the 5th Report of Working Group 4 A should be deleted, and Annex A should be clearly indicated as containing the specific views of the delegation of the U.S.A. and other delegations supporting the U.S.A. document.

9. The delegate for Roumania then said that the reservations made by his delegation were contained on page 7 of the document under discussion. He wished, however, to point out a correction in regard to this reservation in Paragraph 3 on page 7 of Annex B. This should read: "that the curves contained in NBS Circular 462 related rather to Paragraph 7" and not "to question 7". He supported the opinions expressed by the delegate for the U.S.S.R. and said he would like to add that when the Working Group had voted on the protection ratio in regard to atmospheric interferences, they did not discuss or vote on the contents of Annex A. Paragraph 4 had been accepted on the understanding that the value of 42 db was derived by the addition of 8 db to the value of 34 db. When the time came he would like to submit on behalf of his delegation a statement on the subject of protection ratios on industrial noise.

10. The delegate for the U.S.A. said that Annex A of Document No. 300 was an explanation of technical facts in an attempt to put the derivation of the figure for the ratio of signal to atmospheric noise on a sound technical basis. Annex A was necessarily complicated because fading was a very complicated subject. Since this document had been issued a graphical representation had been prepared which it was hoped would make Annex A perfectly clear. The graphical representation was based on the figure of 38 db under steady state conditions. The delegate of the U.S.A. distributed copies of the graphs to all delegates.

11. The Chairman then proceeded to deal with Document No. 300 paragraph by paragraph.

12. Paragraph 1 was approved.

13. Paragraph 2 was approved.
14. Paragraph 3 was approved.
15. Some discussion took place on paragraph 4.
 - 15.1 The delegate for the U.S.A. proposed that the graphical representation of Annex A be included as part of the report.
 - 15.2 The Chairman said that it was necessary to decide whether an allowance should be made to the steady state condition figure of 30 db, already adopted by this Committee at the previous meeting, or whether a figure should be adopted for the overall protection required.
 - 15.3 The delegate for the U.S.S.R. then renewed his proposal to delete paragraph 4 as a whole, stating that this paragraph had been included illegally in the Report. Continuing, the delegate of the U.S.S.R. said that Annex A had not served as a guide when 42 db was adopted, and Annex A in view of its inaccurate contents could not serve as a technical document for future reference. The fact that the U.S.A. considered it necessary to submit explanatory curves only confirmed the fact that the document was not clear. The U.S.S.R. delegation, therefore, insisted on their proposal to delete Paragraph 4 entirely, leaving Annex A, with any curves, as a statement of the views made by the delegation of the U.S.A. and any other delegation supporting it.
 - 15.4 The delegate for Argentina said that the curve should remain as a part of Annex A as the point of view of the U.S.A. delegation.
 - 15.5 The delegate for Mexico said that the subject of the relationships of fading had not been sufficiently discussed as there had not been a really clear explanation of this, and if, therefore, the subject was not to be discussed any further, his delegation would have to vote for the deletion of Paragraph 4.
 - 15.6 The Chairman pointed out that if Paragraph 4 were deleted entirely, the subject could not be discussed further but if it was not deleted it could be further discussed either in the Working Group or the main committee. It would, therefore, be necessary to vote twice on this subject, firstly, to reject, adopt or retain Paragraph 4 for discussion, and secondly, whether to reject it summarily or not.

- 15.7 The delegate for the U.S.S.R. then put forward a proposal that paragraph 4 be deleted completely and suggested that Annex A be discussed after this proposal had been voted upon.
- 15.8 The delegate for Bulgaria agreed that this question of retaining or deleting paragraph 4 could only be resolved by a vote. He added that the appending of the views of the U.S.A. delegation contained in Annex A should be voted on separately.
- 15.9 The delegate of the U.S.S.R. supported by the delegates of Bulgaria, Ukraine SSR, Czechoslovakia and Roumania requested a secret ballot on this subject.
- 15.10 The delegate for the U.S.S.R. asked the Chairman the position with regard to a violation of procedure in Working Group 4A, stating that this subject must receive sufficient attention, as the main committee was about to vote on something which concerned a wrong decision taken at Working Group 4A. He asked if it was correct to approve a wrong action by the Working Group by a means of a vote in the present committee.
- 15.11 The Chairman replied that any point of procedure concerning Working Group 4A must be discussed in the Working Group itself and not in the main committee. He added that it was for the main committee to accept or reject a recommendation of the Working Group.
- 15.12 The Committee decided by a secret vote of 17 for to 10 against with one disqualification not to delete paragraph 4.
- 15.13 The delegate for the U.S.S.R. stated that his delegation still considered it wrong to preserve paragraph 4 and they would submit their views in writing on this subject.
- 15.14 The Chairman confirmed that these views would be included in the minutes of the meeting. (1)
- 15.15 The delegate of Roumania submitted the following reservation:

"The Delegation of the Roumanian People's Republic and the Delegation of the Federal People's Republic of Yugoslavia make the following reservations on the subject of the adoption of paragraph 4 of the Fifth Report of Working Group 4A at the meeting of 3 January 1949 of Committee 4:

(1) These will be annexed to the report of the 29th meeting.

"1. The contents of the paragraph do not correctly reproduce the course of the discussion in the Working Group, for the reason that; at the time when the decision was taken on supplementary protection to allow for fading, Annex A had not yet been put for discussion by the Working Group.

"2. Annex A, which gives the views of the U.S.A. delegation on the correction to be made in the ratio of steady-state signal to atmospheric radio noise, in order to allow for short and long term fading, could not therefore afford a basis for the Working Group's decision.

"Nor, in the opinion of our Delegations, did it afford a basis for the plenary meeting of the Committee, inasmuch as a fairly large number of delegates who were in favor of its adoption said nevertheless that its contents were far from clear, so that it is not possible to base on it a decision of our Committee.

16. The Chairman then proceeded to paragraph 5 of the Report of Working Group 4 A.

16.1 The delegate for Argentine pointed out a discrepancy between the figures in the document under discussion and those given in paragraph 5 of Document No. 380 which had replaced Document No. 213.

16.2 The delegate for the U.K. pointed out that two corrections should be made in order to remain consistent; these were firstly that the figure of 34 db should become 38 db to keep in line with the earlier decision, and secondly the 42 db figure which was derived from the figure of 34 db must be increased to 46 db.

16.3 The delegate for India asked for clarification on the figure of 46 db. He said that an allowance of 8 db had been made to take account of all types of fading, and he was not clear whether this included both long and short term fading.

16.4 The Chairman requested the Chairman of Working Group 4 A to clarify the position on this point.

16.5 Mr. Richardson said that, as previously pointed out, the 42 db was a compromise figure agreed to on the basis of the U.S.A. proposals of 46 db, and U.S.S.R. proposals of 39 or 40 db. This compromise figure should now become 46 db.

16.6 The Chairman said that the point under discussion was the additional allowance to be made for short and long term fading, which from Mr. Richardson's remarks was a combined figure of 8 db for both short and long term fading.

- 16.7 The delegate for India said that he merely wished to clarify that the additional factor was for all types of fading..
- 16.8 The delegate for Argentine said that in Document No. 380 the ratio of 38 db fixed for steady state conditions referred to a bandwidth of 4 kc/s, whereas Paragraph 5 of Document No. 300 it was specified that the correction for fading was for a bandwidth of 6 kc/s.
- 16.9 The Chairman requested Mr. Richardson to clarify the position.
- 16.10 Mr. Richardson stated that reference to Annex A and the diagram showed that a correction of 1.8 db was necessary when changing from a 4 kc/s to a 6 kc/s bandwidth.
- 16.11 The Chairman said that he therefore understood that the 8 db was the overall correction for all three factors, i.e., short and long term fading and bandwidth correction.
- 16.12 The delegate for Pakistan stated that the figure of 42 db if derived from the curves given in NBS Circular 462 was not a compromise but a correct figure.
- 16.13 The delegate for the U.S.S.R. asked the delegate for the U.S.A. whether it was rational to add 4 db to the figure of 42 db since in Working Group 4 A the U.S.A. had agreed to the figure of 42 db.
- 16.14 The delegate for the U.S.A. referred the delegate of the U.S.S.R. to Annex A and the accompanying graph which explained fully the exact basis upon which the figure, now 46 db, took into account both day to day and hour to hour fading. Referring to the graph, the delegate for the U.S.A. pointed out that the 38 db figure which had been adopted by Committee 4 in Report No. 4 of Working Group 4 A had been used as the steady state basis in the left-hand lower portion of the diagram. This figure of 38 db was the ratio of the steady signal to the steady average atmospheric noise in a 4 kc/s bandwidth. Further to the right of the graph, to take into account fading within the hour, 8.2 db had been added. Further to the right still, day to day variation of 6 db, as documented in PFB documents, had been added. The NBS Circular 462 quoted a field intensity of 15 db above the average atmospheric noise for radio telephony and this was indicated in the centre of the diagram. The average atmospheric noise varied from day to day and in order to take this into account an additional 10 db had been included. To the right of the graph it could be seen that 46.1 db was the ratio of signal to average atmospheric noise in a 6 kc/s bandwidth. This explained the basis of the 46 db and on this basis it could be considered that 4 db should be added to the 42 db figure in order to make it technically correct.

- 16.15 The delegate for the U.S.S.R. pointed out that a figure of 42 db had been adopted at the meeting of Working Group 4 A. He further pointed out that this figure of 42 db was slightly higher than similar figures adopted at Atlantic City, at the Planning Committee in Geneva, and those recommended in other documents. As far as the Report of the Atlantic City Conference was concerned, in Chapter V, Section A, Paragraph 3, sub-paragraph (b), it was stated: "As far as possible for average propagation and noise conditions the level of the wanted signal should be 40 db above the atmospheric noise level". Committee 4, therefore, adopted a standard 2 db higher than this recommendation. The delegate for the U.S.S.R. then quoted an extract from the decisions of the Planning Committee in Geneva as follows: "High frequency broadcasting circuits should be engineered on sound engineering principles for which the signal to atmospheric noise and the signal to receiver noise ratios should both be 40 db. Nevertheless, it is realized that it will not be practicable to reach this figure in all cases. Accordingly a figure of 30 db is accepted as a minimum standard for both these ratios". Similar views were expressed by Dr. Van der Pol in his document 45, dated May 28th, 1948. The delegate for the U.S.S.R. gave further examples from other documents, and then proceeded to point out that it had been agreed by a majority vote at a meeting of Working Group 4 A that the Circular of the Bureau of Standards No. 462, must be used when the question of high frequency propagation and interference level was being discussed. The delegate of the U.S.S.R. then quoted from Page 160, table 8.1 of NBS Circular No. 462 where he said that it was recommended that a figure of 38 db should be used for standard broadcasting and a figure of 27 db should be used for international broadcasting. The delegate of the U.S.S.R. then asked the delegate of the U.S.A. why the 46 db which was in contradiction to Circular No. 462. The Committee was trying to increase already accepted technical standards and this would involve a considerable increase in power, which would be less convenient to the smaller countries. It was the view of his delegation that the figure of 42 db should be preserved as being in accordance with all the technical standards, while at the same time it was more than sufficient when compared with the recommendations given in the various documents quoted above.
- 16.16 The delegate for the U.K. pointed out that the difficulty at present being experienced was due to Paragraph 5 being discussed prior to any discussion on Annex A from which it was directly derived. Mr. Fryer again pointed out the usefulness of the U.S.A. document (Annex A) and the accompanying graph, in deriving the fading allowance and showed with reference to the third paragraph of Annex A, how a full and adequate allowance for all types of fading had been allowed in the

Report. The delegate for the U.K. emphasised the necessity for the technical committee to base its decisions on genuine technical data. There had been many references to 40 db and the Geneva Planning Committee etc. but this was the first Conference at which actual experimental data had been produced and it was the duty of the Committee to accept that data.

- 16.17 The delegate for the U.S.A. mentioned that since Circular 462 had been compiled, additional information had become available, and this additional information had been incorporated in Annex A and the accompanying graph. In reply to a question from the Egyptian delegate, the delegate for the U.S.A. stated that the information on long term fading of the signal was based on a CRPL report by Newbern Smith and M.B. Harrington entitled "The Variability of Sky Wave Field Intensities at Medium and High Frequencies". This report was based on measurements that had been taken over a period of not less than 10 years.
- 16.18 The delegate for the U.S.S.R. said that since Circular No. 462 indicated that only 38 db was necessary for satisfactory broadcasting, taking into account all types of fading, then the delegate of the U.K., in accepting Circular No. 462 as being based on a sound technical basis, should accept the figure of 38 db; otherwise the delegate for the U.K. should explain why he had voted for the use of Circular No. 462 as a guide. There was also some difference of opinion between the views expressed in Circular No. 462 and those expressed by the delegate of the U.S.A. in Annex A. The delegate for the U.S.S.R. reaffirmed his delegation's support for the retention of the figure of 42 db.
- 16.19 The Chairman then said that there were two modifications to paragraph 5 as proposed by the U.K. delegation and supported by the delegation of the U.S.A.: firstly to alter the figure of 34 db to 38 db in line 1, and secondly, in view of the first change, to alter the overall figure of 42 db to 46 db.
- 16.20 The delegate for Pakistan requested that it should be made clear that the figure of 46 db referred to the noise curves given in Circular No. 462, or at least to the Annex A curves of Document No. 300.
- 16.21 The delegate for Egypt said he thought it would be clearer if one bandwidth only was referred to, as, at the moment, it quoted 38 db for 4 kc/s and 46 db for 6 kc/s.
- 16.22 The delegate for the U.S.S.R. on behalf of his delegation and that of the Ukraine S.S.R., submitted a proposal that paragraph 5 be adopted as shown in Document No. 300. The delegate for the U.S.S.R. said that his delegation proposed that the

figures proposed by Working Group 4 A should be maintained, i.e., 34 db as the necessary technical minimum for the steady carrier to average atmospheric noise, and 42 db as the ratio of median carrier to average atmospheric noise, taking all types of fading into account. He then asked that the voting on the proposal should be by secret ballot.

- 16.23 The Chairman pointed out that according to previous procedure, the vote must first be taken on the U.K. proposal but he said he would agree to a proposal submitted by the U.S.S.R. that voting on both the U.K. and the U.S.S.R. proposals should take place at the same time.
- 16.24 The delegate of the U.K. then suggested the inclusion of the words "as outlined in Annex A of this Report" at the end of Paragraph 5 to cover the Pakistan amendment. This suggestion was accepted by Pakistan.
- 16.25 The U.K. proposal was accepted in the secret ballot by 12 votes to 11 with 5 abstentions, and the U.S.S.R. proposal was rejected by 14 votes to 8 with 6 abstentions.

17. The delegate of the U.S.S.R. said he reserved the right, in view of the very narrow majority for the U.K. amendment, to reopen the question at the Plenary Assembly.

18. The delegate of Roumania submitted the following statement in writing.

"The Delegation of the Roumanian People's Republic and the Delegation of the Federal People's Republic of Yugoslavia express the following opinion on the adoption of the protection ratio against atmospheric noise at the meeting of 3 January 1949 of Committee 4.

1. The value 34 db for the ratio of a steady state carrier to the average value of atmospheric noise, as adopted by Working Group 4 A, represents a technical minimum sufficient to ensure satisfactory reception.
2. An additional 8 db at most must also be allowed to cover the influence of short and long term fading.
3. On the basis of these two considerations we consider that a protection ratio of 42 db against the average value of atmospheric noise is consistent with the standards of satisfactory reception. An increase of this ratio is not only useless, but harmful, inasmuch as it tends to an unnecessary increase in the value of the requisite electro-magnetic field, which implies

an increase in the power of the transmitters. The consequences of such an increase in power are very inconvenient for all the small countries, and especially for our two countries, because all our efforts are concentrated on reconstruction, and we cannot therefore afford the cost of putting into operation new transmitting stations with exaggerated power.

The Reporter

P.N. Parker

The Chairman

M. L. Sastry

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

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U.S.A.

EXPLANATORY NOTES
DRAFT PLAN FOR THE ASSIGNMENT OF FREQUENCIES FOR
HIGH FREQUENCY BROADCASTING, PREPARED AND SUBMITTED BY THE
DELEGATION OF THE UNITED STATES OF AMERICA

The Delegations of the many countries members of the ITU are assembled here at Mexico City to bring order out of chaos in the field of high frequency broadcasting. In the opinion of the Delegation of the United States of America, other basic purposes must be kept in mind; particularly to implement the Atlantic City Frequency table, to make successful the work of the Provisional Frequency board, and to benefit the other services in the 3 to 26 megacycle range.

With these aims in mind the Delegation of the United States of America presents to the Conference and for the particular consideration of Committee 6 a draft assignment plan for high frequency broadcasting.

The United States Delegation offers the accompanying plan in the hope that it will serve as a useful basis for discussion and will facilitate the Conference reaching agreement on a frequency assignment plan for the high frequency broadcasting bands.

We wish strongly to emphasize that it is not the intention of the Delegation of the United States of America that the consideration of this draft plan by the Conference shall necessarily exclude from further consideration any draft plan previously submitted or any draft plan which may be submitted hereafter.

In view of the great difference between the total of the frequency-hour requirements and the frequency-time in the available bands, few, if any, countries can expect to have all their requirements fully satisfied regardless of how meritorious they may be. Therefore, the final step before reaching agreement on any plan must be for each country to determine for itself (1) whether or not it is being accorded reasonably equitable treatment and (2) whether or not a reduced quantity of broadcasting with improved efficiency under planned use is preferable to the chaotic conditions which would occur when the present and projected transmissions are put into the Atlantic City High Frequency Broadcasting bands.

The United States Delegation has not attempted the impossible task of formulating a plan which might be the final answer, but rather it offers this draft plan as additional useful working material for the negotiation and modification which are inevitable preludes to final agreement on a plan.

It is considered that any set of principles, if rigidly applied, would result in inequities against the various countries. (Each specific requirement has its own peculiar set of variables and no formula nor set of principles can, nor has, taken all these variables into account.) Therefore, the United States has been guided by engineering principles but their application has been tempered by a recognition of the specialized needs of the various countries. Obviously this recognition has not always been correct. In such instances modifications will necessarily have to be made by the Conference.

Bearing in mind that the final goal of the Conference is to evolve a plan for the orderly and economical use of the high frequency broadcasting bands to which virtually all of the countries can subscribe, and bearing in mind that the consideration of any plan may easily be diverted into fruitless and nonproductive discussion it is urged that the following stipulations be recognized if the plan which is submitted herewith is used as a basis for discussion:

1. All expressions of agreement with individual items are understood to be purely tentative until the plan is in form for final adoption or rejection.
2. No proposal for a change in the plan will be considered unless it is complete, that is, unless it lists all the changes involved when a single change is proposed. For example, if a country proposes a change which would increase its frequency-hours it must show specifically what other changes must be made in the plan in order to provide for this increase.
3. In order to avoid theoretical discussions and limit consideration to the very practical problem of whether or not it is possible to evolve a plan to which the countries can agree, general discussions of principles will not be entered into in connection with consideration of the plan. The question is whether or not its terms are acceptable to the countries and if not acceptable what changes are essential in order to make it acceptable.

The Delegation of the United States of America herewith presents a draft plan for June sunspot number 70 and will immediately present another for December sunspot number 5, as it believes this will show the restricted condition to be met (December sunspot number 5) and the condition (June sunspot number 70) that is likely to exist near the time that any plan may go into effect.

The Delegation of the United States of America will, within a short time, submit related draft plans for the intervening four seasons, namely (1) equinox sunspot 70, (2) December sunspot 70, (3) June sunspot 5, and (4) equinox sunspot 5.

The Delegation of the United States of America believes that in constructing a frequency assignment plan the listener should be given first consideration. The listener requires sufficient signal for satisfactory reception and at the same time desires a choice of programs. The United States has therefore attempted to include in its draft plan the maximum number of station assignments possible that is consistent with good service to the listener with a receiver of average sensitivity and selectivity. No effort has been made to assign frequency hours for the sole purpose of increasing the total hours for a given country but rather assignments have been made which are believed to be useful to the countries. The total number of frequency hours assigned to a country is of little significance unless the assignments are useful in terms of the country's requirements.

In constructing a plan, the United States has incorporated simultaneous operation on the same channel in the 6, 7, 9, and 11 Mc/s bands. The number of frequency hours per country may be made to show a relatively high figure by including as many daytime hours as possible for each country since simultaneous operation may be accomplished with relatively close geographical spacing on the 6 and 7 Mc/s bands during the daylight hours. However, when this principle is carried to an extreme the result produced is not practical because many countries would have a relatively large number of transmitters operating during the daylight hours in the 6 and 7 Mc/s bands and only a few in these bands during the evening hours. This is not a desirable condition from the point of view of practical operation as most countries desire to broadcast in the evening hours at the point of reception. It is also evident that the number of daytime hours of simultaneous operation that may be incorporated into a plan varies considerably between June sunspot number 70 and December sunspot number 5.

In the construction of a frequency assignment plan the physical facts of geography, propagation, technical factors and available channels are limiting factors in a large number of cases and make the application of rigid criteria impossible. For example, the total number of countries wishing to broadcast into the Americas between 0 and 5 GMT exceeds the total number of channels technically available during December sunspot number 5. On the other hand, during the period between 5 and 8 GMT, the demand for frequencies is relatively light because the evening hours occur over the Pacific Ocean.

It has not always been practicable to make assignments in the High Frequency Broadcast band immediately below the curve of optimum working frequency (OWF), particularly because of competition for certain bands and certain hours. Therefore, some assignments have been made in the second, and in the third High Frequency Broadcast band below the OWF curve, when the delivered signal will not suffer materially thereby, but in general such assignments have only been made for short and medium distance circuits and for long distance night time circuits. In every case the delivered signal has been calculated as adequate. In some cases frequencies in the second or third Frequency Broadcasting bands below the OWF were assigned because the country had indicated a specific desire for a channel in that band.

No assignments were made which will provide a field intensity of less than approximately 100 microvolts per meter (not including fading), except in some cases where the country had; (a) small requirements, (b) would be left without a service to the area requested, and (c) could be expected to increase the field strength of its signal in the target area to at least 100 microvolts per meter by a reasonable increase in the power of the transmitter. In such cases the required power is indicated on the draft plan.

While the Delegation of the United States believes that 100 microvolts per meter leaves much to be desired from the listeners' standpoint, it is expected that the application of good engineering and increased power will make it possible to increase the field intensity in the area of reception above 100 microvolts per meter and that such countries will desire to take all practical measures to this end.

In general, simultaneous operation on the same channel has been so arranged that a protection ratio of 40 db in the service area can be expected. In every case a ratio of wanted to unwanted signals of 40 db has been provided within a circle of 1000 kilometer diameter. In some cases where the service area was exceptionally large or where it was of irregular configuration the ratio of wanted to unwanted signal will be more than 40 db in some parts of the area and less than 40 db in other parts of the area.

It has not been possible to adhere to a rigid standard of protection between adjacent channels for the following reasons: First, there is a tendency for a large number of countries to want to broadcast to the same area of reception during the same peak listening hours in that area, thus necessitating a number of essentially parallel circuits. Second, the program requirements tend to vary considerably in length running all the way from one hour to as many as 12 hours without the necessity of changing frequency because of propagation limitations. In order to provide complete adjacent channel protection it would be necessary to break up the programming into blocks of equal length such as one or two hours and to consider each block separately from the stand-

point of adjacent channel protection. However, following this procedure would require a country to shift from one channel to another in the same band a number of times during the same program period in order to maintain the proper relationships for adjacent channel protection. This, of course, is undesirable to most countries, both from the standpoint of operating problems and from the standpoint of the effect upon the listening audience in having to follow a station from one channel to another in the same band at frequent intervals. It is believed that a sacrifice in the adjacent channel relationships is to be preferred to the alternative of frequent changes in channels in the same band.

In so far as possible, each country has been provided the same channel in a given band for several requirements in that band. This is believed desirable since it will simplify the problem of antenna design and construction and would also simplify the day-to-day transmitter operations of the country.

The principal problems encountered in the drafting of a frequency assignment plan do not apply to the 26 megacycle band because there are so few requests for assignments in this band. This is probably due to the lack of sufficient numbers of receivers capable of tuning to the 26 megacycle band and to the relatively few desires for long distance circuits during the daylight hours at the point of reception.

It is proposed that the 26 Mc/s band not be included in the frequency assignment plan in the usual way but that the 26 megacycle band might be regarded generally available without reference to other assignments for those who desire to use it. For instance, a country having a circuit in the 21 Mc/s band might also use the 26 Mc band for dual frequency operation on the same circuit. In the distribution of frequency hours to the various countries, the hours assigned in the 26 Mc band are not included in the totals but are shown in the lists of assignments made to the various countries.

Because of the conditions peculiar to the use of this band notifications based on usage would be valid for one year and would be renewed only upon showing that the frequency is regularly used in full accordance with the basic notification.

Walter Thurston
American Ambassador
Chairman, U.S. Delegation

EXPLANATION OF DOCUMENTS, DRAFT FREQUENCY
ASSIGNMENT PLAN SUBMITTED BY THE DELEGATION
OF THE UNITED STATES OF AMERICA

Band Charts

The large charts show the proposed usage of each channel in each band, except the 26 megacycle band, throughout the twenty-four hours of the day.

Generally the country in which a transmitter is located has been indicated, rather than a specific city within the country. Specific transmitter locations have been shown in cases of large countries where this is necessary to identify the circuit for purposes of calculating propagation conditions and simultaneous sharing relationships.

In general the "Area of Reception" is the same as indicated on Forms 4 but in some cases where a country had several requirements to adjacent areas and where the indicated frequency was the same, the "Area of Reception" has been indicated in a more general way to include both adjacent areas in order that the country might decide to which part of the general area it wished to broadcast or in what way it might wish to divide the time of broadcasting to the several parts of the same general area for which propagation conditions were the same. In other instances where a group of contiguous countries has been given as the "Area of Reception" it has been listed in the plan in general geographic terms such as "Western Europe".

Country Analysis Charts

There is a chart composed of one or more sheets which shows the frequency hours assigned to that country in the draft plan. The first column shows the transmitter location and the second column shows the intended Area of Reception. These correspond to the labels on the Band Charts.

The third part of the Country Analysis Charts is divided into the twenty-four hours of the day, Greenwich Mean Time. The solid horizontal lines opposite the "Area of Reception" indicate the hours of the assignment.

The first number on or above the horizontal solid line is the megacycle band in which the assignment is located. The second number, in parenthesis (), on or below the line is the channel number in the indicated band.

The right-hand column is the transmitter power indicated for the particular assignment. In general, this is the same figure shown for the particular requirement in Forms 4, but there are a few exceptions. Where the power of the transmitter indicated on Forms 4, was not sufficient to deliver a usable signal, the power of some other transmitter shown in the country's requirements has been substituted. In a very few cases where the forms 4 did not show a transmitter of sufficient power, the figure indicates the minimum power required to deliver an adequate signal to the Area of Reception.

FREQUENCY HOUR ANALYSIS BY BANDS

COUNTRY	6 Mc/s	7 Mc/s	9 Mc/s	11 Mc/s	15 Mc/s	17 Mc/s	21 Mc/s	TOTAL
Afghanistan	5	-	4	-	7	-	-	16
Albania	6	-	3	4	5	3	-	21
Andorra	3	-	-	-	-	-	-	3
Argentina	54	-	26	21	18	17	11	147
Australia	57	33	33	39	23	6	11	202
Austria	16	4	10	2	-	8	-	40
Belgium	-	3	4	4	16	10	-	37
Belgian Congo	27	20	15	14	-	7	-	83
Bielorussian SSR	-	6	7	2	10	-	-	25
Bolivia	39	-	21	-	-	3	3	66
Brazil	57	-	21	19	21	11	-	129
Bulgaria	-	18	9	5	2	3	-	37
Burma	17	-	13	-	20	-	-	50
Canada	78	-	16	22	31	13	-	160
Ceylon	15	-	-	11	16	4	13	59
Chile	54	-	21	28	-	-	-	103
China	15	30	30	37	45	11	4	172
Colombia	24	-	20	-	6	10	-	60
Costa Rica	26	-	10	-	-	-	-	36
Cuba	30	-	17	4	8	15	8	82
Czechoslovakia	7	-	19	3	1	12	-	42
Denmark and Greenland	3	-	6	5	3	6	-	23
Dominican Republic	28	-	15	-	-	-	-	43
Ecuador	16	-	6	-	6	12	7	47
Egypt	-	16	8	9	6	-	4	43
El Salvador	20	-	10	-	-	-	-	30
Ethiopia	-	13	10	6	4	-	2	35
Finland	12	-	8	6	3	1	-	30
France	33	6	19	20	28	23	15	144
French Colonies	95	58	2	32	10	7	12	216
Germany	17	9	7	-	-	-	-	33
Greece	-	13	-	2	1	1	-	17
Guatemala	26	-	12	-	7	-	-	45
Haiti	10	-	2	7	10	6	2	37
Honduras	24	-	-	-	-	-	-	24
Hungary	-	5	14	4	-	-	-	23
Iceland	-	-	-	2	2	-	-	4
India	15	27	23	34	29	24	25	177
Indonesia	46	43	24	21	21	7	-	162
Iran	11	6	5	13	-	-	-	35
Iraq	11	10	1	5	8	3	2	40
Ireland	13	-	-	-	6	-	-	19
Israel	5	5	-	3	-	1	-	14
Italy	18	-	16	12	15	6	3	70
Japan	29	25	-	2	5	5	2	68
Korea	15	-	-	-	-	-	-	15
Lebanon	-	10	5	2	3	2	-	22
Liberia	-	7	-	-	10	-	-	17

[illegible]

C.I.R.A.F.
MEXICO, 19 48/ 49.

Annex A to Document No. 465
Annexe A au Document No. 465
Анехо A al Documento N° 465
Приложение к Документу N° 465

— U S A —

DRAFT ASSIGNMENT PLAN

June - 70 Spots

PROJET DE PLAN D'ASSIGNATION

Juin - Activité Solaire: 70 taches

PROYECTO DE PLAN DE ASIGNACION

Junio - Actividad Solar: 70 manchas

ПРОЕКТ ПЛАНА ПРИСВОЕНИЯ ЧАСТОТ

Июни - 70 солн. пятен

1. Analysis by Countries

1. Analyse par Pays

1 Análisis por Países

1. Анализ, произв. каждой страной

SUNSPOT & SEASON
ACTIVITÉ SOLAIRE & SAISON
ACTIVIDAD SOLAR & ESTACION
СОЛНЕЧН. АКТИВН. И СЕЗОН

COUNTRY
PAYS
PAIS
СТРАНА

TRANSMITTER LOCATION EMPLACEMENT DE L'ÉMETTEUR UBICACION DEL EMISOR МЕСТОПОЛ. ПЕРЕДАТЧИКА	AREA OF RECEPTION REGION DE RECEPTION AREA DE RECERCIION ЗОНА ОБСЛУЖИВАНИЯ	HOURS OF TRANSMISSION - GMT HEURES D'ÉMISSION — TMG HORAS DE EMISION — TMG ЧАСЫ ПЕРЕДАЧ — ГСВ 00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	KW

70-JUNE

COUNTRY AFGHANISTAN

1

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY ALBANIA

2

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ALBANIA	SO. AMERICA	11 (22)												17 (20)											11 (22)	60
"	NO. AMERICA		11 (22)																							60
"	UNION SOVIET SOCIALIST REPUBLICS					17 (3)											15 (24)									60
"	MOSCOW							11 (20)							15 (24)											60
"	BALKAN							6 (2)																		60
"	UNITED KINGDOM									15 (24)																60
"	ITALY									9 (27)																60
"	NORTH AMERICA															15 (24)										60
"	TURKEY																		9 (3)							60

SUNSPOT & SEASON 70-June

COUNTRY ALBANIA

3

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ALBANIA	EUROPE																									60
	AUSTRALIA																									60
		<div> <div>6 (12)</div> <div>9 (10)</div> </div>																								
		TOTAL HOURS - 21																								

SUNSPOT & SEASON 70-June

COUNTRY **ANDORRA**

4

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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SUNSPOT & SEASON 70-June

COUNTRY

ARGENTINA

5

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY ARGENTINA

6

[illegible]

70-June

AUSTRALIA

7

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY AUSTRALIA

4

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY AUSTRALIA

9

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
SHEPPARTON "	W. NO. AMERICA						17(11)											11 (27)									50-100
	SO. AMERICA		15(4)																								50-100
																										TOTAL HOURS - 202	

70-June

AUSTRIA

10

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
AUSTRIA	EUROPE							6 (14)					6 (14)														50
"	AMERICAS							9 (24)																	9 (24)		50
"	FAR EAST											17 (19)															50
"	NEAR EAST																17 (19)										50
"	SO. AFRICA																		11 (2)								50
"	EUROPE							9 (23)				7 (13)								9 (19)							10
																										TOTAL HOURS - 40	

SUNSPOT & SEASON 70-June

COUNTRY BELGIUM

11

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
BELGIUM	CONGO																										100
"	SO. AMERICA	15 (10)																								15 (10)	100
"	NO. AMERICA																										100
"	BELGIAN CONGO																										100
"	FAR EAST & CONGO																										100
"	MIDDLE EAST																										100
"	NO. EUROPE																										10
																										TOTAL HOURS - 37	

SUNSPOT & SEASON

70-June

COUNTRY

BELGIAN CONGO

12

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
BELGIAN CONGO	SO. AMERICA	<div><div>11 (4)</div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></d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70-June

BELGIAN CONGO

13

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
BELGIAN CONGO	CONGO												↔ 7(9) ↔														1
" "	"												↔ 7 (18) ↔												.		1
" "	"												↔ 6(5) ↔														1
" "	"												↔ 6 (13) ↔														1
" "	"												↔ 6 (17) ↔														1
		TOTAL HOURS - 22																									

70-5000

BIELO-RUSSIA

15

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW		
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	
BIELO-RUSSIA	GEORGIAN SSR																											100
" "	UNION SOVIET SOCIALIST REPUBLICS																											100
" "	W. EUROPE																											100
" "	FAR EAST																											100
" "	BALKANS																											100
" "	UZBEK SSR																											100
" "	UNION SOVIET SOCIALIST REPUBLICS																											100
		TOTAL HOURS = 25																										

COUNTRY BOLIVIA

TOTAL HOURS	- 66
-------------	------

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS. MITTER POWER KW
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
BOLIVIA	BOLIVIA	6 (23)																								1
"	"							6 (23)																		1
"	"							6 (3)																		1
"	"							6 (19)																		1
"	"							9 (24)																		1
"	"							9 (8)																		1
"	SO. AMERICA	9 (8)																								25
"	NO. AMERICA																									25
"	EUROPE							2 (1)																		25
								17 (15)																		25
		TOTAL HOURS - 66																								

70-June

16

[illegible]

SUNSPOT & SEASON

70-June

COUNTRY

BRAZIL

17

[illegible]

70-June

BULGARIA

18

[illegible]

70-JUNE

COUNTRY **EUR-2**

19

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
WUHA 	BURMA							6 (4)																			7
								9 (1)																			7
	FAR EAST	9 (1)																						9 (1)			100
	FAR EAST & INDIA							15 (15)																			100
	NEAR EAST																		15 (15)								100
	EUROPE																				15 (15)						100
																										TOTAL HOURS - 50	

SUNSPOT & SEASON 70-June

COUNTRY CANADA

20

TRANSMITTER LOCATION		AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW										
			00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
CANADA		BRAZIL	17 (14)																											21 (28)		50					
□		MEXICO				11 (23)																												50			
□		AUSTRALIA							11 (6)																					50							
□		EUROPE										17 (14)												17 (14)						50							
□		SOUTH AFRICA & SO.PACIFIC																						17 (14)						50							
□		CENTRAL AMERICA	15 (8)																												50						
□		WEST INDIES				15 (8)																												50			
□		WEST EUROPE										15 (8)																		50							
□		SO. AMERICA	14 (33)																												50						
□		NEW ZEALAND & SO.PACIFIC				15 (8)			9 (8)																												50
□		C. EUROPE										15 (33)																		50							
VERCHERES		U. CANADA	11 (6)									11 (6)												11 (6)						7.5							
VANCOUVER		YUKON				9 (8)																		9 (12)						20							
CANADA		CANADA	6 (2)																											6 (2)		20					
□		"										6 (4)																		20							

SUNSPOT & SEASON 70-June

COUNTRY CANADA

21

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW.	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
CANADA	CANADA																		6 (16)								10
□	CANADA																		6 (15)								10
□	CANADA																		6 (17)								10
□	CANADA																		6 (18)								10
NEWFOUNDLAND	NEWFOUNDLAND & LABRADOR																		6 (11)								10
																										TOTAL HOURS - 160	


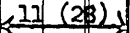
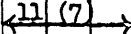
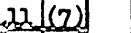

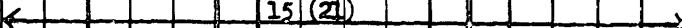
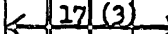

SUNSPOT & SEASON 70-June

70-June

COUNTRY CEYLON

CEYLON

22

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
CEYLON	CEYLON & INDIA																									7.5
"	INDIA																									7.5
"	AFRICA																									100
"	EUROPE																									100
"	SO. AMERICA																									100
"	MIDDLE & FAR EAST																									100
"	INDIA																									7.5
"	MIDDLE & FAR EAST																									7.5
		TOTAL HOURS - 59																								

70-June

COUNTRY CHILE

23

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
CHILE	CHILE				5 (25)															6 (22)							5
"	SO. CHILE																			6 (11)							5
"	CHILE																			6 (11)							5
"	CHILE																			6 (12)							5
"	CHILE				9 (11)																9 (11)						5
"	CHILE																			9 (9)							5
"	CHILE				11 (8)															1 (8)							5
"	CHILE																			11 (11)							5
"	CHILE																			11 (22)							5
		TOTAL HOURS - 103																									

70-June

CHINA

24

[illegible]

70-June

COUNTRY CHINA

25

[illegible]

70-June

70-June

CHINA

CHINA

26

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
CHINA	CHINA																										20
"	"																										20
"	"																										20
"	"																										20
"	"																										20
"	"																										20
"	"																										20
"	"																										20
"	"																										20
																											20
		TOTAL HOURS - 172																									

70-JUN

COLOMBIA

27

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
COLOMBIA □ □ □ □ □ □ □ □ □	LATIN AMERICA	<div>← 6 (7) →</div>																								10
	COLOMBIA	<div>← 6 (7) →</div>																								10
	COLOMBIA	<div>← 6 (15) →</div>																								10
	LATIN AMERICA	<div>← 9 (7) →</div>																								25
	COLOMBIA & VICINITY	<div>← 9 (7) →</div>																								25
	□ □ □	<div>← 9 (3) →</div>																								10
	SOUTH AMERICA	<div>← 15 (24) →</div>																								25
	NORTH AMERICA	<div>← 17 (4) →</div>																								25
	EUROPE	<div>← 17 (4) →</div>																								25
		TOTAL HOURS - 60																								

70-June

COSTA RICA

28

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
COSTA RICA	LATIN AMERICA																									1
" "	CENTRAL AMERICA																									1
" "	CENTRAL AMERICA																									1
" "	CENTRAL AMERICA																									2
		TOTAL HOURS - 36																								

70-June

COUNTRY CUBA

29

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
CUBA	LATIN AMERICA	← 6(24) →																								5
□	CUBA	← 6(24) →																								5
□	□	← 6(6) →																								5
□	WEST INDIES	← 11(4) →																								5
□	AMERICAS	← 9(23) →																								5
□	WEST INDIES	← 9(23) →																								5
□	□ □	← 9(10) →																								5
□	NORTH AMERICA	← 15(34) →																								5
□	SOUTH AMERICA	← 17(16) →																								25
□	EUROPE	← 17(17) →																								25
□	MEXICO	← 17(13) →																								5
□	NORTH AMERICA	← 21(7) →																								5
		TOTAL HOURS = 62																								

SUNSPOT & SEASON 70-June

COUNTRY

CZECHOSLOVAKIA

30

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
CZECHOSLOVAKIA	AMERICAS			9(21)																					9(21)	100
"	EUROPE									9(21)									9(21)							100
"	W. AUSTRALIA															11(13)										100
"	EUROPE									11(17)																30
"	E. EUROPE																		6(21)							30
"	INDIA			17(6)																						100
"	F. EAST				17(6)							17(11)														100
"	MIDDLE EAST					17(6)																				100
"	AMERICAS														17(11)											100
"	N. AMERICA															15(17)				17(11)						30
		TOTAL HOURS - 42																								

SUNSPOT & SEASON 70-June

COUNTRY DENMARK & GREENLAND

31

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
DENMARK	AMERICAS	15 15			11 (16)																			15 (15)		50
"	FAR EAST										17 (5)															50
"	EUROPE																		9 (10)							
GREENLAND	GREENLAND																						6 (22)			1
																										TOTAL HOURS - 25

LUNINI, ...

32

[illegible]

SUNSPOT & SEASON 70-June

70-June

COUNTRY

ECUADOR

33

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
ECUADOR	LATIN AMERICA			6(11)																							10
"	" "			9(16)																							20
"	ECUADOR																			6 (11)							10
"	EUROPE																				17(13)						20
"	NO. AMERICA																							17(1)			20
"	" "																										20
"	AMERICAS																				21(20)						20
																									15		
																									23		
		TOTAL HOURS - 47																									

70-June

COUNTRY

EGM-2

34

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
EGYPT	NEAR & MIDDLE EAST														7	(4)											50
"	SO. AMERICA			9	(20)													21	(6)								100
"	NO. AMERICA					9	(20)											15	(23)								100
"	MIDDLE EAST									15	(16)																100
"	INDIA													21	(6)												100
"	EUROPE																				11	(22)					100
"	NEAR EAST									11	(20)																50
"	MIDDLE EAST													9	(5)			11	(22)								50
																										TOTAL HOURS - 43	

70-June

EL SALVADOR

35

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
EL SALVADOR	LATIN AMERICA	<div><div></div><div>6 (8)</div><div></div></div>																								5
"	CENTRAL AMERICA	<div><div></div><div>6 (8)</div><div></div></div>																								5
"	" "	<div><div></div><div>6 (3.0)</div><div></div></div>																								5
"	AMERICAS	<div><div></div><div>2 (3.7)</div><div></div></div>																								5
"	CENTRAL AMERICA	<div><div></div><div>9 (11)</div><div></div></div>																								5
"	" "	<div><div></div><div>9 (5)</div><div></div></div>																								4
		TOTAL HOURS - 30																								

SUNSPOT & SEASON 70-June

70-June

COUNTRY

ETHIOPIA

36

[illegible]

70-June

FINLAND

37

TOTAL HOURS - 36

SUNSPOT & SEASON

70-June

COUNTRY

FRANCE

38

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
FRANCE	EUROPE								6 (2)											6(9)							100
"	"								7 (10)											9(3)	7(3)						100
"	NO. AFRICA								7(3)													9(3)					100
"	"								11(15)				11(15)														100
"	ALGERIA												11 (6)														100
"	EGYPT								17 (1)				17 (12)														100
"	E. AFRICA						11 (3)					17 (12)								21(2)							100
"	CENTRAL AFRICA								15 17 (1)(1)				21 (18)							21(18)							100
"	W. AFRICA								15(1)					21(2)									11(15)				100
"	"								17(12)					26(-)								15(1)					100
"	MADAGASCAR	15 (1)					15(1)					15 (1)								11(15)							100

70-June

FRANCE

349

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY FRANCE

40

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
ALGERIA	FRANCE								6 (9)																7 (4)	25
"	MOROCCO								6 (5)					6 (5)												25
"	MIDDLE EAST							15 (34)																		25
MARTINIQUE	WEST INDIES															9 (11)										20
"	CARRIBBEAN	9 18																								20
"	"	6 (9)																								20
"	FRENCH WEST INDIES										6 (9)							6 (9)								20
GUADELOUPE	" " "														6 (9)								6 (9)			1
FRENCH GUIANA	FRENCH GUIANA												6 (9)							6 (9)						1
REUNION ISLAND	DEPENDENCIES								6 (9)																	1
		TOTAL HOURS - 144																								

SUNSPOT & SEASON 70-June

70-June

COUNTRY FRENCH COLONIES

FRENCH COLONIES

41

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY FRENCH COLONIES

42

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY FRENCH COLONIES

43

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY FRENCH COLONIES

44

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
TAHITI NEW CALEDONIA NEW HEBRIDES	SOCIETY ISLANDS																										1
	NEW CALEDONIA																										1
	NEW HEBRIDES																										1
		<div style="display: flex; justify-content: space-between; padding: 5px;">← 6 (9) →← 6 (18) →← 6 (9) →</div> <div style="display: flex; justify-content: space-between; padding: 5px;">← 6 (13) →</div> <div style="display: flex; justify-content: space-between; padding: 5px;">← 6 (20) →</div>																									
		TOTAL HOURS - 216																									

70-June

GERMANY

45

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
MUNICH	E. EUROPE																										100
□	□ □																										100
OSTERLOOG	□ □																										50
GERMANY	GERMANY																										50
		<div style="display: flex; justify-content: space-between; padding: 0 10px;">← 6 (11) →</div> <div style="display: flex; justify-content: space-between; padding: 0 10px;">← 7 (8) →</div> <div style="display: flex; justify-content: space-between; padding: 0 10px;">← 9 (22) →</div> <div style="display: flex; justify-content: space-between; padding: 0 10px;">← 7 (8) →</div> <div style="display: flex; justify-content: space-between; padding: 0 10px;">← 6 (11) →</div>																									
		TOTAL HOURS - 33																									

70-June

GREECE

46

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS. MITT. POWER KW	
		(0)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
GREECE	EUROPE & NEAR EAST																										7
"	NO. AMERICA																										10
"	EUROPE																										10
"	FAR EAST																										10
		TOTAL HOURS - 17																									

70-100-2

STATES

47

TOTAL HOURS - 45

SUNSPOT & SEASON 70-June

COUNTRY HAITI

48

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
HAITI □ □ □ □ □ □ □ □ □	WEST INDIES	6 (20)																								1	
	HAITI															6 (24)						6 (00)				1	
	LATIN AMERICA	11 (11)																								100	
	SOUTH AFRICA																			21 (6)						50	
	CENTRAL AMERICA																		11 (25)							50	
	W. CO. AMERICA						15 (22)																			100	
	AUSTRALIA											26 (1)														100	
	EUROPE																		17 (18)							100	
	E. CO. AMERICA	13 (22)																								15 (22)	
		TOTAL HOURS - 37																									

70-June

HONDURAS

49

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
HONDURAS	CENTRAL AMERICA	<div><div></div><div>6 (19)</div><div></div></div>																								1
"	HONDURAS	<div><div></div><div>6 (19)</div><div></div></div>																								1
"	"	<div><div></div><div>6 (2)</div><div></div></div>																								1
		TOTAL HOURS - 24																								

70-June

HUNGARY

50

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
HUNGARY " " "	NORTH AMERICA	9(12)																							9 (12)	100
	SOUTH AMERICA	9 (12)																								100
	EUROPE	9 (12)																								100
	EUROPE	11 (4) 7 (11)																								100
		TOTAL HOURS - 23																								

SUNSPOT & SEASON 70-June

COUNTRY ICELAND

51

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS. MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
ICELAND □	NORTH AMERICA	75 (21)																								75 (21)	7
	EUROPE																				11(21)						7
		TOTAL HOURS - 4																									

SUNSPOT & SEASON 70-June

COUNTRY INDIA

52

[illegible]

SUNSPOT & SEASON 70-JUNE

COUNTRY INDIA

53

[illegible]

SUNSPOT & SEASON 70-June

70-June

COUNTRY INDONESIA

INDONESIA

54

[illegible]

70-June

INDONESIA

55

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
INDONESIA " " " " "	INDONESIA " " " " "	7 (11)					7 (11)					11 (16)															5
			9 (27)										15 (22)														5
				9 (15)						9 (19)																	5
								15 (30)																			5
							15 (10)																				5
									17 (14)																		
		TOTAL HOURS - 162																									

70-June

IRAN

56

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
IRAN	INDIA															11 (8)											20
"	PAKISTAN & AFGHANISTAN															11 (8)											20
"	MIDDLE EAST																	11 (8)								20	
"	UNION SOVIET SOCIALIST REPUBLICS																		11 (8)							20	
"	NEAR EAST																			11 (8)						20	
"	NO. AFRICA																				11 (8)					20	
"	WEST EUROPE																					11 (8)				20	
"	IRAN			6 (13)							6 (13)						6 (13)									20	
"	"			7 (4)							11 (8)						9 (1)									20	
"	"			7 (15)							7 (14)															10	
		TOTAL HOURS - 35																									

70-June

COUNTRY

IRAQ

57

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW		
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	
IRAQ	IRAQ																											10
	IRAQ																											10
	IRAN																											25
	MIDDLE EAST																											25
	FAR EAST																											25
	INDIA																											25
	NEAR & MIDDLE EAST																											25
	W. EUROPE																											25
		TOTAL HOURS - 40																										

70-June

58

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
IRELAND	AMERICAS	<div><div></div><div>9 (11)</div><div></div></div>																								100
	AUSTRALIA & NEW ZEALAND	<div><div></div><div>15 (17)</div><div></div></div>																								100
	EUROPE	<div><div></div><div>9 (11)</div><div></div></div>																								100
	SO. AFRICA	<div><div></div><div>15 (24)</div><div></div></div>																								100
		TOTAL HOURS - 19																								

SUNSPOT & SEASON

70-June

COUNTRY

ISRAEL

59

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
ISRAEL	NO. AMERICA			11 (21)																							50
"	NEAR EAST					6(1)					8(1)										7(13)						50
"	MIDDLE EAST																		11 (11)								50
"	EUROPE																							11 (13)			50
"	"							17 (10)																			50
																										TOTAL HOURS - 14	

SUNSPOT & SEASON

70-June

COUNTRY

ITALY

60

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
ITALY	E. AFRICA										17 (3)								15(35)								50
"	" "										21 (12)																50
"	FAR EAST												17(5)														50
"	NEAR EAST																	15(17)		15(35)							50
"	MIDDLE EAST										15(35)						15(35)										50
"	NO. AFRICA											15(35)															50
"	SO. AFRICA													15(35)													50
"	EUROPE														6(17)												50
"	"												9(7)							9(7)							50
"	"																										50
"	AMERICAS																			11 (28)				11(27)			50
"	E. EUROPE																									11 (13)	50

SUNSPOT & SEASON 70-June

COUNTRY ITALY

61

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
ITALY	SO. AMERICA											17 (3)					17 (5)										50
	" "											15 (3)					21 (12)									50	
	CENTRAL AMERICA																15 (5)									50	
																										TOTAL HOURS - 70	

SUNSPOT & SEASON 70-June

COUNTRY JAPAN

62

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS-MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
JAPAN	SO. AMERICA	17 (11)																								50
"	E. ASIA				17 (10)										15 23)											50
"	W. NO. AMERICA					17 (10)																				50
"	HAWAII							17 (10)																		50
"	AUSTRALIA & NEW ZEALAND											15 (23)														50
"	INDIA																	17 (12)								50
"	CHINA & KOREA											11 (22)														50
"	PHILIPPINES & INDONESIA														21 (1)											50
"	JAPAN							6 (5)																6 (5)		5
"	"					6 (16)																	6 (16)			5
"	"							7 (1)																7 (1)		5
"	"							7 (8)																	7 (8)	5

TOTAL HOURS - 68

70-June

63

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
KOREA	KOREA AND VICINITY							6 (8)																	6 (8)		1
		TOTAL HOURS 8 15																									

70-June

LEBANON

64

[illegible]

70-June

65

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW		
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	
LIBERIA " "	EUROPE																											100
	EUROPE																											100
	NEAR & MIDDLE EAST																											100
		<div>← 15 (22) →</div> <div>← 11 (12) →</div> <div>← 15 (22) →</div>																										
		TOTAL HOURS - 17																										

70-June

LUXEMBOURG

66

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
LUXEMBOURG	EUROPE																										6
"	NO. AMERICA																										6
"	MIDDLE EAST																										6
"	NO. AFRICA																										6
"	AFRICA																										6
"	SO. AFRICA																										6
"	SO. AMERICA																										6
																										TOTAL HOURS - 23	

SUNSPOT & SEASON

70-June

COUNTRY

MEXICO

67

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW							
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24						
MEXICO	MEXICO & LATIN AMERICA	← 6 (21) →																								10							
"	MEXICO & CENTRAL AMERICA																			← 9 (19) →						10							
"	MEXICO							← 6 (25) →						← 6 (21) →												10							
"	"																			← 6 (23) →						10							
"	" & C. AMERICA													← 11 (1) →												10							
"	"																			← 9 (27) →						10							
"	CENTRAL AMERICA													← 11 (9) →												10							
"	LATIN AMERICA	← 9 (19) →																								50							
"	SOUTH AMERICA	← 17 (8) →																								← 21 (1) →						17 (8)	50
"	NORTH AMERICA	← 15 (7) →																								← 15 (7) →						100	
"	W. NO. AMERICA							← 11 (14) →																								50	
"	AUSTRALIA													← 11 (4) →						← 9 (19) →						100							
"	FAR EAST													← 11 (4) →						← 9 (19) →						100							

SUNSPOT & SEASON 70-June

COUNTRY MEXICO

68

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
MEXICO	EUROPE																										100
"	SPAIN & PORTUGAL																										50
"	NO. AFRICA																										50
"	NORTH AMERICA																										10

70-June

MONACO

69

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
MONACO	NO. AMERICA	9 (26)																									25
"	SO. AMERICA				11 (28)																						25
"	EUROPE																										25
"	"																										25
"	W. AFRICA																										25
																										TOTAL HOURS - 23	

70-June

COUNTRY MONGOLIA

70

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS-MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
MONGOLIA	MONGOLIA						6(3)																				10
"	"								6(11)																6(11)		10
"	"								7(13)																		10
"	"																										25
"	INNER MONGOLIA																										25
		TOTAL HOURS - 56																									

SUNSPOT & SEASON 70-June
COUNTRY Morocco & Tunisia
71

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
<u>MOROCCO & TUNISIA</u>																											
MOROCCO	NORTH AFRICA																										25
"	FRANCE																										25
TUNISIA	NEAR EAST																										50
"	EGYPT																										50
"	FRANCE																										50
"	MIDDLE EAST																										50
"	MADAGASCAR																										50
"	NORTH AFRICA																										50
"	WEST AFRICA																										50

70-JUNE

Morocco & Tunisia

72

TRANSMITTER- LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
<u>MOROCO & ALGERIA</u> TANGER	NORTH AMERICA			11 (21)																							100
	EUROPE								15 (8)						17 (3)												100
	W. EUROPE															15 (4)						15 (4)				100	
	NEAR EAST																			11 (13)						100	
	SOUTH AMERICA																								15 (20)	100	
		TOTAL HOURS - 27																									

SUNSPOT & SEASON 70-June

COUNTRY NETHERLANDS, SURINAM & CURACAO

73

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW					
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24				
NETHERLANDS	AMERICAS	9 (10)																								100					
	FAR EAST									17 (4)																100					
	SO. AFRICA																	11 (11)										100			
	NETHERLANDS WEST INDIES																						11 (11)			100					
	SO. AMERICA	15 (25)																					15 (25)			100					
	FAR EAST									15 (25)																100					
	CENTRAL AFRICA																	15 (25)										100			
	FAR EAST									21 (14)																100					
	EUROPE																		6 (15)									40			
SURINAM	SURINAM	6 (12)																					6 (12)								1
CURACAO	NETHERLANDS WEST INDIES	6 (12)																						6 (12)				3			
	NETHERLANDS																						15 (35)			3					
	CARIBBEAN																								9 (16)		3				

TOTAL HOURS = 73

SUNSPOT & SEASON 70-Jun

COUNTRY NEW ZEALAND

74

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
H2F ZLALAD	MID-PACIFIC																									7
	□																									7
	EAST PACIFIC																									7
	WEST PACIFIC																									7
		TOTAL HOURS - 29																								

70-June

NT CARAGUA

75

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
NICARAGUA	LATIN AMERICA	<div><div></div><div>6 (14)</div><div></div></div>																								1
"	" "	<div><div></div><div>11 (19)</div><div></div></div>																								5
"	CENTRAL AMERICA	<div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div></div><div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SUNSPOT & SEASON 70-June

COUNTRY NORWAY

76

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW		
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	
NORWAY	SOUTH AMERICA	15 (17)																							15 (17)	100		
"	FAR EAST							15(17)																		15 (17)	100	
"	ANTARCTIC							15(17)						15(17)												15 (17)	100	
"	NORTH AMERICA													15(17)						15 (17)			15 (17)			15 (17)	100	
"	ANTARCTIC & SO. AMERICA																			15(17)						15 (17)	100	
"	SOUTH ATLANTIC	11 (28)																							11 (28)	10		
"	NORTH AMERICA		11(28)																							11 (28)	10	
"	AUSTRALIA							17(20)																			17 (20)	10
"	EAST AFRICA							17(20)																			17 (20)	10
"	SO. AFRICA-SO. ATLANTIC													17(20)													17 (20)	10
"	AFRICA																									11(2)	10	
"	SVALBARD & NO. NORWAY										9 (15)										6 (16)						9 (15)	10
"	SO. NORWAY, EUROPE & ATLANTIC										9 (6)																9 (6)	10
"	SO. NORWAY, W. EUROPE &																					7(19)					7(19)	10

SUNSPOT & SEASON 70-June

COUNTRY PAKISTAN

77

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PAKISTAN	INDIA			7 (6)					11 (7)			11 (7)					11 (12)	9 (27)								50
	AFGHANISTAN					11 (20)				9 (22)																10
	CHINA											15 (8)														50
												17 (8)														50
	PACIFIC											21 (39)														50
	CEYLON					15 (25)												11 (14)								50
	BURMA							15 (23)																		50
	AUSTRALIA																									50
	MIDDLE EAST									17 (15)										11 (14)						50
	NO. AFRICA																		11 (3)			11 (14)				50

70-June

PAKISTAN

78

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
PAKISTAN	E. AFRICA							21 (30)																			50
"	SO. AFRICA							21 (30)																11 (14)			50
"	W. EUROPE																								11 (14)		50
"	PAKISTAN							6 (23)								6 (23)											10
"	"							6 (18)								6 (18)											10
"	"							7 (14)								7 (14)											10
"	"							7 (9)					7 (9)														10
"	"							9 (4)					9 (10)			9 (16)											10
"	"							9 (15)					11 (3)														10
"	"												6 (2)														10
PAKISTAN	E. PAKISTAN							17 (15)																			50
WEST PAKISTAN	E. PAKISTAN												15 (7)			15 (34)											50
EAST PAKISTAN	W. PAKISTAN												15 (14)														10
		TOTAL HOURS - 105																									

70-June

79

[illegible]

70-June

PANAMA

80

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
PANAMA	LATIN AMERICA	<div><div></div><div></div></div>																								2
	□																									2
	□																									2
	□																									2
	□																									2
	□																									2
	□																									2
	□																									2
	□																									2
	□																									2
	CENTRAL AMERICA	<div><div></div><div></div></div>																								2
	□																									2
	□																									2
	□																									2
	□																									2
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	NO. AMERICA	<div><div></div><div></div></div>																								7.5

SUNSPOT & SEASON 70-June

70-June

COUNTRY PARAGUAY

81

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS-MITTER POWER KW		
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	
Paraguay	LATIN AMERICA	← 6 (16) →																									3	
"	PARAGUAY													← 6 (16) →														3
"	PARAGUAY												← 6 (2) →															1
"	PARAGUAY & VICINITY													← 9 (21) →														1
"	NORTH AMERICA	← 11 (5) →																							11 (5)	2.5		
"	PARAGUAY & VICINITY													← 11 (5) →														2.5
"	" " "													← 11 (26) →														1
		TOTAL HOURS - 51																										

70-June

82

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
PERU " " " " " "	LATIN AMERICA	← 6 (6) →																									15
	PERU															← 6 (6) →											15
	"															← 6 (20) →											1
	"															← 6 (24) →											1
	SOUTH AMERICA	← 9 (14) →																								10	
	PERU																← 9 (14) →										10
	"	"															← 9 (15) →										1
		TOTAL HOURS = 50																									

SUNSPOT & SEASON

70-June

COUNTRY

PHILIPPINES

83

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS. MITTER POWER KW		
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24	
PHILIPPINES	CHINA	← 17 (15) →												← 15 (14) →												50		
	BURMA															← 15 (14) →												50
	INDIA & PAKISTAN															← 15 (14) →												50
	PHILIPPINES	←						6 (14)						→						← 6 (14) →						1		
	"	←						6 (19)						→						← 6 (19) →						1		
	"	←						7 (16)						→						← 7 (16) →						1		
	FAR EAST	← 17 (8)		✕		9 (20)										→								10				
		TOTAL HOURS - 71																										

70-June

POLAND

84

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
POLAND	AMERICAS	11 (25) →																						11 (25)	100		
"	NO. AMERICA																		15 (21)	← 15 (21) →						15 (21)	100
"	UNION SOVIET SOCIALIST REPUBLICS												11 (5)												11 (5)	50	
"	SO. AMERICA																		17 (8)	← 17 (4) →						17 (8)	50
"	EUROPE												← 9 (25) →											9 (25)	10		
"	EUROPE												← 6 (24) →											6 (24)	10		
"	PALESTINE												← 17 (14) →												11 (21)	25	
"	UNION SOVIET SOCIALIST REPUBLICS												← 15 (24) →												15 (24)	25	
																										TOTAL HOURS - 54	

SUNSPOT & SEASON

70-June

COUNTRY

PORTUGAL

85

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY PORTUGAL

86

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
PORTUGAL * AZORES	AZORES-MADRIRA																										10
	WEST EUROPE																										50
	PORTUGAL																										5
		<div>← 9 (23) →</div> <div>← 7 (10) →</div> <div>15 (17)</div>																									
		TOTAL HOURS - 56																									

SUNSPOT & SEASON

70-June

COUNTRY

PORTUGUESE COLONIES

87

[illegible]

70-JUNE

COUNTRY PORTUGUESE COLONIES

88

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
MOZAMBIQUE	SOUTH AFRICA										9 (10)																10
ANGOLA	SAO TOME																		9 (26)								10
"	PORTUGAL																				17 (6)						10
"	MOZAMBIQUE																					15 (5)					10
"	ANGOLA									7 (5)			7 (5)									7 (5)					1
"	"											7 (2)															1
"	"									6 (5)			7 (16)														1
"	"											6 (2)															1
"	"											6 (20)															1
		TOTAL HOURS - 65																									

70-June

ROMANIA

89

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
ROMANIA	UNION SOVIET SOCIALIST REPUBLIC					7(13)				11(15)								9(26)									100
"	EUROPE									7(14)						9(25)				7(14)							100
"	"															11(11)				9(26)						100	
"	AMERICAS																									100	
"	NEAR EAST																									100	
"	FAR EAST																									100	
"	AUSTRALIA																									100	
"	MIDDLE EAST																									100	
"	SO. AMERICA																									100	
		TOTAL HOURS - 37																									

SUNSPOT & SEASON 70-June

COUNTRY SAUDI ARABIA

90

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
SAUDI ARABIA	ARABIA																	7(2)									1
		TOTAL HOURS - 2																									

SUNSPOT & SEASON 70-June

COUNTRY SIAM

91

[illegible]

SUNSPOT & SEASON 70-June

COUNTRY SOUTHERN RHODESIA

92

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
SOUTHERN RHODESIA	NO. & SO. RHODESIA																										15
																										TOTAL HOURS - 4	

SUNSPOT & SEASON 70-June

70-June

COUNTRY **SPAIN**

SPAIN

93

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
SPAIN "	LATIN AMERICA	← 11 (18) →																									40
	EUROPE																			← 11 (18) →							
																										TOTAL HOURS - 11	

SUNSPOT & SEASON 70-June

COUNTRY SUDAN

94

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS. MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
SUDAN	SUDAN					7 (16)			9(19)											7(12)							25
																										TOTAL HOURS - 5	

SUNSPOT & SEASON 70-June

COUNTRY

SWEDEN

95

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
SWEDEN	NEW ZEALAND					15 (6)																				100
"	EUROPE							9 (27)															9 (27)			100
"	EUROPE & NO. ATLANTIC																11 (1)									100
"	NORTH AMERICA		11 (1)			11 (1)													15 (6)			15 (6)				100
"	FAR EAST				11 (1)							15 (6)														100
"	AUSTRALIA						15 (6)																			100
"	W. ASIA							15 (6)																		100
"	INDIA												15 (6)													100
"	AFRICA													15 (6)												100
"	W. AFRICA														17 (12)						15 (6)					100
"	E. AFRICA																15 (6)									100
"	SOUTH AMERICA																							11 (1)		100

TOTAL HOURS - 40

SUNSPOT & SEASON

70-June

COUNTRY SYRIA

97

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
SYRIA	NEAR EAST						6(3)					6(3)							6(3)								7.5
"	" "						7(18)																				7.5
"	NEAR & MIDDLE EAST											9(10)							9(2)		7(18)						20
"	BRAZIL																										20
"	MIDDLE EAST											15(34)															20
"	INDIA														15(31)												20
"	UNITED KINGDOM																										20
"	NORTH AMERICA																										20

SUNSPOT & SEASON 70-June

COUNTRY TANGIER (USA)

98

[illegible]

70-June

TURKEY

99

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
TURKEY	FAR EAST	11 (16)				17(15)					17 (15)																100
"	NO. AMERICA		9 (26)										15 (34)					17(15)									100
"	INDIA							17 (15)								17(15)											100
"	AUSTRALIA								17(15)															9 (16)			100
"	SO. AMERICA										17 (15)							17 (15)									100
"	WEST EUROPE																					15(34)		11 (16)			100
"	EUROPE & NEAR EAST									9 (26)						*		6 (5)									20
																										TOTAL HOURS - 39	

70-June

UKRAINE

100

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
UKRAINE	GEORGIAN S.S.R.							7(17)																			100
"	CARPATHO-UKRAINE								7(17)																		100
"	BLACK SEASHORE									7(17)																	100
"	CENTRAL EUROPE																	7(1)									100
"	W. EUROPE																							7(2)			240
"	NEAR EAST																							7(2)			240
"	BALKANS								7(3)																		100
"	NO. AMERICA	9(17)																				15(2)		9(17)			240
"	U.S.S.R.											11(14)															100
"	"												15(22)														100
"	SO. AMERICA																	21(15)									240
"	MONGOLIA																						15(2)		15(17)		240
																										TOTAL HOURS - 36	

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
0 UNION OF SO. AFRICA	EAST NO. AMERICA	11 (3)																								25
"	WEST NO. AMERICA				11 (3)																					25
"	NEW ZEALAND								17 (7)																	25
"	AUSTRALIA										17 (7)															25
"	EAST INDIES													17 (15)												25
"	INDIA														17 (15)											25
"	CENTRAL AFRICA																		15 (31)							25
"	EUROPE																				11 (3)					25
"	UNITED KINGDOM																					11 (3)				25
"	SO. AMERICA																							9 (16)		25

SUNSPOT & SEASON 70-June

COUNTRY UNION OF SOUTH AFRICA.

102.

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
UNION OF SO. AFRICA	SO. AFRICA												← 7 (6) →														5
"	"												← 7 (14) →														5
"	"												← 7 (8) →														5
"	"												← 7 (17) →														5
"	"												← 6 (4) →														5
"	"												← 6 (11) →														5
"	"												← 6 (16) →														5
"	"												← 6 (21) →														5
SO. W. AFRICA	SO. W. AFRICA												← 7 (11) →														1
																										TOTAL HOURS - 67	

[illegible]

70-June

COUNTRY USSR

104

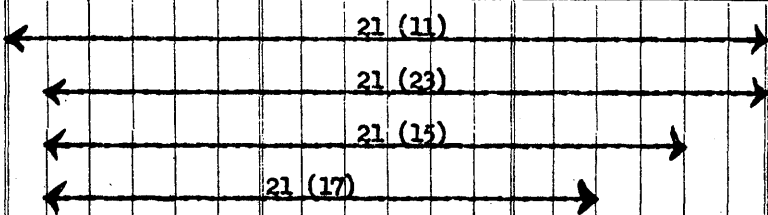
[illegible]

SUNSPOT & SEASON 70-June

COUNTRY

USSR

105

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
USSR	USSR																									50-120
"	"																									50-120
"	"																									50-120
"	"																									50-120
		TOTAL HOURS - 294																								

70-June

UNITED KINGDOM

106

[illegible]

SUNSPOT & SEASON

70-June

COUNTRY

UNITED KINGDOM

107

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
UNITED KINGDOM	AMERICAS	<div><div>9 (9)</div><div>11 (24)</div></div>																								100
" "	"	<div><div>11 (24)</div></div>																								100
" "	SO. AMERICA	<div><div>21 (8)</div><div>15 (9)</div></div>																								100
" "	" "	<div><div>21 (5)</div><div>11 (19)</div></div>																								100
" "	CENTRAL AMERICA	<div><div>21 (21)</div></div>																								100
" "	W. INDIES & CENTRAL AMERICA	<div><div>17 (2)</div></div>																								100
" "	EUROPE	<div><div>6 (10)</div><div>6 (10)</div></div>																								100
" "	"	<div><div>7 (15)</div></div>																								100
" "	"	<div><div>7 (20)</div></div>																								100
" "	"	<div><div>9 (9)</div><div>9 (9)</div></div>																								100
" "	"	<div><div>9 (24)</div></div>																								100
" "	"	<div><div>11 (19)</div><div>11 (19)</div></div>																								100
" "	"	<div><div>11 (24)</div></div>																								100
		TOTAL HOURS - 251																								

70-June

COUNTRY UNITED KINGDOM COLONIES

109

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT	TRANS-MITTER POWER KW
		00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	
BRITISH GUIANA	NO. AMERICA	← 15(13) →	100
"	MEXICO	← 17(2) →	100
"	AUSTRALIA	← 9(5) →	100
"	NEW ZEALAND	← 11(21) * 6(2) →	100
"	EUROPE	← 17(16) →	100
"	BRITISH GUIANA & BRITISH W. INDIES	← 6(10) →	20
"	BRITISH W. INDIES	9 (20)	5
FALKLAND ISLANDS	FALKLAND ISLANDS & DEPENDENCIES	← 6(10) →	1
HONGKONG	CHINA	← 7(9) →	2
"	SOUTHEAST ASIA	9 (26)	2
FALKLAND ISLANDS	FALKLAND ISLANDS	6 (10)	1

70-June

UNITED KINGDOM COLONIES

110

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
MALAYA	MALAYA					6(6)																					10
"	"					6(24)																					10
"	"					7(20)																					50
"	"					7(3)																					10
"	"							7(15)																			10
"	EAST INDIES							15(13)																			10
SINGAPORE	E. INDIES	6(10)										6(10)				6(16)											100
"	SO. E. ASIA	7(15)										9(9)															100
"	FAR EAST	9(19)										15(13)															100
"	INDIA	15(20)										21(21)				11(21)											100
FIJI ISLANDS	FIJI ISLANDS	7(6)									6(22)											6(22)					1
"	PACIFIC										9(4)																2
NO. BORNEO	BORNEO							6(23)				6(23)															1
EO. BORNEO	EO. BORNEO																								6(23)		
		TOTAL HOURS - 252																									

SUNSPOT & SEASON 70-June

COUNTRY UNITED NATIONS

///

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW		
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
<u>UNITED NATIONS</u> <u>NEW YORK, USA</u>	LATIN AMERICA																											50-100
" " "	" "																											50-100
" " "	AFRICA																											50-100
" " "	EUROPE																											50-100
" " "	E. SO. AMERICA																											50-100
<u>GENEVA,</u> <u>SWITZERLAND</u>	EUROPE																											50-100
"	"																											50-100
"	MIDDLE EAST																											50-100
"	U.S.S.R																											50-100
"	NO. AFRICA																											50-100
		TOTAL HOURS - 52																										

SUNSPOT & SEASON

70-June

COUNTRY

UNITED STATES OF AMERICA.

112

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
EAST USA	W. EUROPE										9(14)				15(26)					17(7)							50-200
" "	E. EUROPE										11(12)																50-200
" "	CENTRAL EUROPE										11(3)								15(18)								50-200
" "	CENTRAL & E. EUROPE																			15(26)							50-200
" "	BALKANS													15(11)						15(11)							50-200
" "	W. EUROPE																			17(3)							50-200
" "	SO. W. EUROPE																							15(30)			50-200
" "	NEAR & MIDDLE EAST																			15(30)							50-200
" "	SO. AFRICA																			17(12)							50-200
" "	W. AFRICA																							17(12)			50-200

70-June

13

TRANSMITTER
POWER
KW

70-June

UNITED STATES OF AMERICA

114

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS. MITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
WEST USA	AUSTRALIA												9(14)												21(3)	50-200
" "	PHILIPPINES & E. INDIES												11(9)													50-200
" "	E. ASIA												11(3)													50-200
" "	NEW ZEALAND												9(22)													50-200
" "	E. ASIA													9(22)												50-200
" "	E. INDIES & PHILIPPINES(FOR UNITED NATIONS)												15(11)													50-200
" "	E. INDIES & PHILIPPINES													11(12)												50-200
" "	ALASKA												15(11)													50-200
" "	JAPAN													9(3)												50-200
" "	CENTRAL PACIFIC												11(26)													50-200
" "	W. PACIFIC													11(26)												50-200
" "	SO. PACIFIC												15(18)													50-200
		TOTAL HOURS - 197																								

SUNSPOT & SEASON 70-June

COUNTRY UNITED STATES OF AMERICA
TERRITORIES

115

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
<u>USA TERRITORIES</u> HAWAII	PHILIPPINES & INDONESIA	← 21(3) →																								100
"	AUSTRALIA (FOR UNITED NATIONS)	← 15(7) →																								100
"	E. INDIES-PHILIPPINES	← 15(7) →																								100
"	E. ASIA	← 11(28) →																								100
"	E. ASIA (FOR UNITED NATIONS)	← 11(29) →																								100
PUERTO RICO	SO. AMERICA	← 17(10) →																								100
" "	NEAR & MIDDLE EAST	← 17(10) →																								100
" "	SCANDINAVIA	← 17(10) →																								100
" "	SO. AMERICA	← 15(14) →																								100
" "	CENTRAL & EAST EUROPE	← 15(14) →																								100
		TOTAL HOURS - 40																								

SUNSPOT & SEASON 70-June

COUNTRY URUGUAY

116

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS. MITTER POWER KW						
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24					
URUGUAY	SOUTH AMERICA	← 6 (1) →																									10					
"	URUGUAY													← 6 (1) →																		10
"	"													← 6 (5) →																		10
"	"													← 6 (9) →																		5
"	SOUTH AMERICA	← 9 (13) →													← 9 (13) →																	10
"	" "	← 11 (14) →																								← 11 (14) →		10				
"	NORTH AMERICA	← 15 (35) →																								← 15 (35) →		25				
"	EUROPE																				← 17 (11) →								25			
"	NORTH AMERICA	← 17 (11) →																								← 17 (11) →		15				
"	CENTRAL AMERICA			← 15 (20) →																							15					
"	SOUTH AMERICA															← 11 (14) →												15				
		TOTAL HOURS - 77																														

SUNSPOT & SEASON 70-June

COUNTRY VATICAN CITY

117

TRANSMITTER LOCATION		AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT	TRANS-MITTER POWER KW
			00 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	
VATICAN CITY	" "	EUROPE	←————— 6 (6) ———→	50
" "	" "	"	9(20) ←————— 9(20) ———→ ←————— 11 (20)———→	50
" "	" "	AMERICAS	←————— 11 (20) (20) ←————— 15 (23)	50
" "	" "	AUSTRALIA & NEW ZEALAND	←————— 11 (20)	50
" "	" "	CENTRAL & SO. AFRICA		50
" "	" "	SO. AMERICA		50
" "	" "	CENTRAL AFRICA	←————— 15 (23)	50
" "	" "	FAR EAST	←————— 15 (23) ←————— 17 (7)	50
" "	" "	MIDDLE EAST		50
" "	" "	SO. AFRICA	←————— 15 (23) ←————— 17(7)	50

SUNSPOT & SEASON 70-June

70-June

COUNTRY **VATICAN CITY**

VATICAN CITY

118

[illegible]

SUNSPOT & SEASON 70-June

70-June

COUNTRY VENEZUELA

119

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANSMITTER POWER KW							
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24						
VENEZUELA	VENEZUELA	6 (13) →												← 6 (13)											10								
"	" "											← 6 (22) →										2.5											
"	" "											← 9 (25) →										5											
"	" "											← 9 (16) →										5											
"	SOUTH AMERICA	9 (25) →														←										50							
"	E. NO. AMERICA	15 (12)																					←										50
"	MEXICO	← 15 (12)																								50							
"	W. NO. AMERICA					15 (12)																								50			
"	EUROPE																					← 17 (6) →										50	
																										TOTAL HOURS - 54							

SUNSPOT & SEASON 70-June

COUNTRY **YEMEN**

120

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
YEMEN	YEMEN																	6(1)									1
		TOTAL HOURS - 2																									

TRANSMITTER LOCATION	AREA OF RECEPTION	HOURS OF TRANSMISSION - GMT																								TRANS- MITTER POWER KW	
		00	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		24
YUGOSLAVIA	EUROPE							6 (4)										9 (5)						50-100			
"	"																		6 (4)						50-100		
"	NO. AMERICA			11 (22)	11 (22)															15 (4)						50-100	
"	SO. AMERICA			11 (22)				17 (10)						17 (12)				17 (19)									50-100
"	UNION SOVIET SOCIALIST REPUBLICS					11 (22)				15 (8)																	50-100
"	MEDITERRANEAN						11 (22)											11 (12)									50-100
"	NEAR EAST									17 (10)					15 (34)												50-100
"	INDIA													17 (12)													50-100
"	SO. AFRICA																						11 (13)				50-100
		TOTAL HOURS - 40																									



Documents of the International High Frequency Broadcasting Conference (Mexico City, 1948-1949)

Annex B to Document No. 465

Not available

Pas disponible

No disponible

C.I.R.A.F.

Mexico, 1948-49

Annex C to Document No. 465
Annexe C au Document No. 465
Anexo C al Documento No. 465
Приложение С к документу № 465

U. S. A.

GLOSSARY OF THE TERMS USED IN THE PLAN

GLOSSAIRE DES TERMES EMPLOYES DANS LE PLAN

GLOSARIO DE LOS TERMINOS EMPLEADOS EN EL PLAN

ГЛОССАРИЙ ТЕРМИНОВ, ПРИМЕНЯЕМЫХ В ПЛАНЕ

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>ESPAÑOL</u>	<u>RUSSIAN</u>
Adelaide (Australia)	Adelaide (Australie)	Adelaida (Australia)	Аделаида (Австралия)
Afghanistan	Afghanistan	Afganistán	Афганистан
Africa	Afrique	Africa	Африка
Alaska	Alaska	Alaska	Аляска
Albania	Albanie	Albania	Албания (Нар.Респ.)
Algeria	Algérie	Argelia	Алжир
Americas	Amériques	Américas	Америки
Andorra	Andorre	Andorra	Андора
Angola	Angola	Angola	Ангола
Antarctic	Antarctique	Antártico	Антарктика
Arabia	Arabie	Arabia	Аравия
Argentine	Argentine	Argentina	Аргентина
Armenian SSR	RSS d'Arménie	RSS de Armenia	Армянская ССР
Atlantic	Atlantique	Atlántico	Атлантический Океан
Australia	Australie	Australia	Австралия
Austria	Autriche	Austria	Австрия
Azerbaijan SSR	RSS d'Azerbaïdjan	RSS de Azerbaïdjan	Азербайджанская ССР
Azores	Açores	Azores	Азорские острова

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>ESPAÑOL</u>	<u>RUSSIAN</u>
Balkans	Balkans	Balcanes	Балканы
Belgian Congo	Congo Belge	Congo Belga	Бельгийское Конго
Belgium	Belgique	Bélgica	Бельгия
Bielorussia	Biélorussie	Bielorusia	Белорусская ССР
Black Sea Shore	Littoral de la Mer noire	Litoral del Mar Negro	Побережье Черного моря
Bolivia	Bolivie	Bolivia	Боливия
Borneo	Bornéo	Borneo	Борнео
Brazzaville	Brazzaville	Brazzaville	Браззавиль
Brazil	Brésil	Brasil	Бразилия
Brisbane (Australia)	Brisbane (Australie)	Brisbane (Australia)	Брисбен (Австралия)
British Guiana	Guyane britannique	Guayana Británica	Британская Гвиана
Br. Somaliland	Somalie britannique	Somalia Británica	Британский Сомали
British West Indies	Indes occ. britanniques	Indias Occidentales Británicas	Британская Вест-Индия
Bulgaria	Bulgarie	Bulgaria	Болгария (Нар.Респ.)
Burma	Birmanie	Birmania	Бирма

ENGLISHFRANCAISESPAÑOLRUSSIAN

C. Africa	Afrique centrale	Africa Central	Центральная Африка
Cameroons	Cameroun	Camerún	Камерун
Canada	Canada	Canadá	Канада
Carib.	Caraïbes	Caribe	Караибские острова
C. America	Amérique centrale	América Central	Центральная Америка
Caribbean Area -	Région des Caraïbes	Zona del Caribe	Караибская Зона
Cape Verde Is	Iles du Cap Vert	Islas del Cabo Verde	О-ва Зеленого Мыса
Central Africa	Afrique centrale	Africa Central	Центральная Африка
Central America	Amérique centrale	América Central	Центральная Америка
Central Europe	Europe centrale	Europa Central	Центральная Европа
C. Europe	Europe centrale	Europa Central	Центральная Европа,
C. & E. Europe	Europe centrale & Orientale	Europa Central y Oriental	Центр.и Вост.Европа
Ceylon	Ceylan	Ceylán	Цейлон
Chile	Chili	Chile	Чили
China	Chine	China	Китай
Colombia	Colombie	Colombia	Колумбия
Congo	Congo	Congo	Конго
Costa Rica	Costa Rica	Costa Rica	Коста-Рика
Central Siberia	Sibérie centrale	Siberia Central	Центральная Сибирь
Czechoslovakia	Tchécoslovaquie	Checo-slovaquia	Чехословакия
Cuba	Cuba	Cuba	Куба
Curacao	Curaçao	Curacao	Кюрасо

ENGLISHFRANCAISESPAÑOLRUSSIAN

Darwin (Australia)

Darwin (Australie)

Darwin (Australia)

Дарвин (Австралия)

Denmark

Denemark

Dinamarca

Дания

Dominican Republic

République Dominicaine

República Dominicana

Доминиканская Респ.

ENGLISHFRANCAISESPAÑOLRUSSIAN

E. Africa	Afrique orientale	Africa Oriental	Восточная Африка
East Africa	Afrique orientale	Africa Oriental	" "
E. Asia	Asie orientale	Asia Oriental	Восточная Азия
East Australia	Australie orientale	Australia Oriental	Восточная Австралия
E. Brazil	Brésil oriental	Brasil Oriental	Восточная Бразилия
East Europe	Europe orientale	Europa Oriental	Восточная Европа
E. Europe	Europe orientale	Europa Oriental	" "
E. Indies	Indes orientales	Indias Orientales	Ост-Индия
East Indies	Indes orientales	Indias Orientales	" "
E. Med.	Méditerranée orientale	Mediterráneo Oriental	Вост. Побер. Средиз. моря
E. Med.	Méditerranée orientale	Mediterráneo Oriental	" " " "
East North America	Partie Est de l'Amérique du Nord	América del Norte Oriental	Восток Сев. Америки
E. No. America	Partie-Est de l'Amérique du Nord	América del Norte Oriental	" " "
East Pakistan	Pakistan orientale	Pakistán Oriental	Восточный Пакистан
E. Pacific	Pacifique oriental	Pacífico Oriental	Восток Тихого Океана
East South America	Partie Est de l'Amérique du Sud	América del Sudeste	Восток Южной Америки
E. So. America	Partie Est de l'Amérique du Sud	América del Sudeste	" " "
East Liberia	Libéria orientale	Liberia Oriental	Восточная Либерия
Ecuador	Equateur	Ecuador	Эквадор
Egypt	Egypte	Egipto	Египет
El Salvador	El Salvador	El Salvador	Эль Сальвадор
Ethiopia	Ethiopie	Etiopía	Эфиопия
Europe	Europe	Europa	Европа
E. USSR	URSS orientale	URSS Oriental	Восток СССР

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>ESPAÑOL</u>	<u>RUSSIAN</u>
Falkland Islands	Iles Falkland	Islas Falkland	Фальклендские О-ва
F. East	Extrême Orient	Extremo Oriente	Дальний Восток
Far East	Extrême Orient	Extremo Oriente	" "
Fiji Islands	Iles Fidji	Islas Fidji	О-ва Фиджи.
Finland	Finlande	Finlandia	Финляндия
France	France	Francia	Франция
Fr. Guiana	Guyane française	Guayana Francesa	Франц. Гвиана
Fr. Eq. Africa	Afrique équatoriale française	Africa Ecuatorial Fr.	Франц. Экват. Африка
Fr. Somaliland	Somalie française	Somalia Francesa	Франц. Сомали
French West Africa	Afrique occidentale française	Africa Occidental Fr.	Франц. Зап. Африка
Fr. W. Africa	Afrique occidentale française	Africa Occidental Fr.	" " "
Fr. W. Indies	Antilles	Indias Occidentales Frs.	Франц. Ост-Индия

ENGLISHFRANCAISESPAÑOLRUSSIAN

Gambia	Gambie	Gambia	Гамбия
Georgetown (UK)	Georgetown (R.U.)	Georgetown (Reino Unido)	Джорджтоун (СК)
Geneva (UN)	Geneve (N.U.)	Ginebra (Naciones Unidas)	Женева (ООН)
Georgian SSR	RSS de Georgie	RSS de Georgia	Грузинская ССР
Germany	Allemagne	Alemania	Германия
Greece	Grèce	Grecia	Греция
Greenland	Grönland	Grönlandia	Гренландия
Gold Coast	Cotê de l'Or	Costa de Oro	Золотой берег
Guadeloupe	Guadeloupe	Guadalupe	Гвадалупе
Guatemala	Guatemala	Guatemala	Гватемала

ENGLISHFRANCAISESPAÑOLRUSSIAN

Haiti

Haïti

Haití

Гаити

Hawaii

Hawaï

Hawai

Гавай

Hawaii (UN)

Hawaï (NU)

Hawai (Naciones Unidas)

Гавай (ООН)

Hongkong

Hongkong

Hongkong

Гонг-Конг

Hungary

Hongrie

Hungría

Венгрия (Нар.Респ.)

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>ESPAÑOL</u>	<u>RUSSIAN</u>
Iceland	Islande	Islandia	Исландия
India	Inde	India	Индия
Indochina	Indochine	Indochina	Индокитай
Indonesia	Indonésie	Indonesia	Индонезия
Inner Mongolia	Mongolie intérieure	Mongolia Interior	Внутр.Монголия
Iran	Iran	Irán	Иран
Iraq	Irak	Iraq	Ирак
Ireland	Irlande	Irlanda	Ирландия
Israel	Israël	Israel	Израиль
Italy	Italie	Italia	Италия

ENGLISH

Japan

FRANCAIS

Japon

J

ESPAÑOL

Japón

RUSSIAN

Япония

ENGLISHFRANCAISESPAÑOLRUSSIAN

Latin America	Amérique Latine	América Latina	Латинская Америка
Lebanon	Liban	Líbano	Ливан
Liberia	Liberia	Liberia	Либерия
Luxembourg	Luxembourg	Luxemburgo	Люксембург
Lyndhurst	Lyndhurst (Australie)	Lyndhurst (Australia)	Линдхерст (Австралия).

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>M</u> <u>ESPAÑOL</u>	<u>RUSSIAN</u>
Macao-Timor	Macau-Timor	Macao-Timor	Макао-Тимур
Madagascar	Madagascar	Madagascar	Мадагаскар
Madeira	Madère	Madeira	Мадейра
Malaya and India	Malaisie et Inde	Malaya e India	Малайские О-ва и Индия
Malta	Malte	Malta	Мальта
Mauritius and dependencies	Ile Maurice et dépendances	Isla Mauricio y dependencias	Остров Мавриция и Зависи- мые территории
Martinique	Martinique	Martinica	О-ва Мартиника
Mexico	Mexique	México	Мексико
Middle East	Moyen Orient	Medio Oriente	Средний Восток
Mid. East	Moyen Orient	Medio Oriente	" "
Mid. Pacific	Pacifique central	Pacífico Central	Центр.Зона Тихого Океана
Mongolia	Mongolie	Mongolia	Монголия (Нар. Респ.)
Monaco	Monaco	Monaco	Монако
Morocco	Maroc	Marruecos	Марокко
Mozambique	Mozambique	Mozambique	Мозамбик
Munich	Munich	Munich	Мюнхен

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>ESPAÑOL</u>	<u>RUSSIAN</u>
North Australia	Australie du Nord	Australia del Norte	Сев. Австралия
Near East	Proche Orient	Próximo Oriente	Ближний Восток
• Netherlands	Pays-Bas	Países Bajos	Нидерланды
Nicaragua	Nicaragua	Nicaragua	Никарагуа
Nigeria	Nigéria	Nigeria	Нигерия
New Caledonia	Nouvelle Calédonie	Nueva Caledonia	Новая Каледония
New Zealand	Nouvelle Zélande	Nueva Zelandia	Новая Зеландия
North Africa	Afrique du Nord	Africa del Norte	Северная Африка
North East Australia	Australie du Nord Est	Australia del Nordeste	Сев.-вост. Австралия
North America	Amérique du Nord	América del Norte	Северная Америка
No. Australia	Australie du Nord	Australia del Norte	Северная Австралия
No. Atlantic	Atlantique Nord	Atlántico Norte	Север. Зона Атлантич. Океана
North Borneo	Borneo du Nord	Borneo del Norte	Север. Борнео
North East Asia	Asie du Nord Est	Asia del Nordeste	Северо-вост. Азия
North of South America	Nord de l'Amérique du Sud	Norte de la América del Sur	Север. Южной Америки
Norway	Norvège	Noruega	Норвегия

C

ENGLISH

FRANCAIS

ESPAÑOL

RUSSIAN

Osterloog (Germany)

Osterloog (Allemagne)

Osterloog (Alemania)

Остерлог (Германия)

P

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>ESPAÑOL</u>	<u>RUSSIAN</u>
Pakistan	Pakistan	Pakistan	Пакистан
Palestine	Palestine	Palestina	Палестина
Panama	Panama	Panamá	Панама
Paraguay	Paraguay	Paraguay	Парагвай
Paraguay and Vicinity	Paraguay et environs	Paraguay y alrededores	Парагвай и сосед. терр.
Peru	Perou	Perú	Перу
Perth	Perth	Perth	Перт
Philippine Islands	Iles Philipoines	Islas Filipinas	Филиппинские О-
Poland	Pologne	Polonia	Польша
Portugal	Portugal	Portugal	Португалия
Portuguese Guinea	Guinée portugaise	Guinea Portuguesa	Португальская Г.
Portuguese Indies	Indes portugaises	Indias Portuguesas	Португальская И.
Puerto Rico	Porto Rico	Puerto Rico	Порто-Рико

ENGLISH

Queensland

FRANCAIS

Queensland

ESPAÑOL

Queensland

RUSSIAN

Квинсленд

ENGLISH

Reunion Is.

Rhodesia

Roumania

FRANCAIS

La Réunion

Rhodésie

Roumanie

ESPAÑOL

Isla Reunión

Rodesia

Rumania

RUSSIAN

Реюньон

Родезия

Румыния (Нар. Респ.)

<u>ENGLISH</u>	<u>FRANCAIS</u>	<u>ESPAÑOL</u>	<u>RUSSIAN</u>
Sao Tome	Saint Thomas et Príncipe	Santo Tomás y Principe	О-ва Св. Томы и Принцев
Scandinavia	Scandinavie	Escandinavia	Скандинавия
St. Pierre	St. Pierre et Miguelon	St. Pierre y Miguelon	О-ва Св. Петра
St. Pierre & Vicinity	St. Pierre et environs	St. Pierre y alrededores	Остров Св. Петра и соседняя терр.
Siam	Siam	Siam	Сиам
Singapore	Singapour	Singapur	Сингапур
Society Is.	Iles de la Société	Islas Society	О-ва Товарищества
Somaliland	Somalie	Somalia	Самалия
South Africa	Afrique du Sud	Africa del Sur	Южная Африка
South America	Amérique du Sud	América del Sur	Южная Америка
So. Australia	Australie du Sud	Australia del Sur	Южная Австралия
South Atlantic	Atlantique Sud	Atlántico Sur	Южн. Зона Атлант. Океана
South China Sea	Mer de Chine du Sud	Mar del Sur de China	Южно-Китайское Море
South East Asia	Asie du Sud Est	Asia del Sudeste	Юго-восточ. Азия
South Pacific	Pacifique Sud	Pacífico Sur	Южная Зона Тихого Океана
South Rhodesia	Rhodésie du Sud	Rodesia del Sur	Южная Родезия
Southern Rhodesia	Rhodésie du Sud	Rodesia del Sur	" "
South West Africa	Afrique du Sud Ouest	Africa del Sudoeste	Юго-зап. Африка
South West Europe	Europe du Sud Ouest	Sudoeste de Europa	Юго-зап. Европа
Spain	Espagne	España	Испания
Sudan	Soudan	Sudan	Судан
Svalbard	Svalbard	Svalbard	Свальбард
Svalbard & No. Norway	Svalbard & Norvège du Nord	Svalbard y Noruega del Nte.	Свальбард и Сев. Норвегия
Sweden	Suède	Suecia	Швеция
Surinam	Surinam	Surinam	Суринам
Switzerland	Suisse	Suiza	Швейцария
Syria	Syrie	Siria	Сирия

ENGLISHFRANCAISTESPAÑOLRUSSIAN

Tahiti

Tahiti

Tahití

Таити

Tangier (Fr)

Tanger (Fr)

Tánger (Fr)

Танжир (Фр.)

Tangier (Mor)

Tanger (Maroc)

Tánger (Marr.)

Танжир (Мар.)

Tangier (USA)

Tanger (USA)

Tánger (E.U.A.)

Танжир (США)

Tunisia

Tunisie

Túnez

Тунис

Turkey

Turquie

Turquía

Турция

U

ENGLISH

FRANCOIS

ESPAÑOL

RUSSIAN

U.K.	Royaume Uni	Reino Unido	Соедин.Королевство
Ukraine	Ukraine	Ucrania	Украинская ССР
U.N. (Geneva)	NU (Genève)	Naciones Unidas	ООН (Женева)
UN (NY)	Nations Unies	(Ginebra	ООН (Нью Йорк)
Uruguay	(NY)	Naciones Unidas (NY)	
U.S.A.	Uruguay	Uruguay	Уругвай
U.S.S.R. (Vladivostok)	Etats Unis	Estados Unidos de	США
U.S.S.R.	d'Amérique	Amérique	
U.S.S.R. (Khab)	U.R.S.S.	U.R.S.S.	СССР (Владивосток)
U.S.S.R. (Riazan)	(Vladivostok)	(Vladivostok)	
Uzbek S.S.R.	U.R.S.S.	U.R.S.S.	СССР
	U.R.S.S. (Khab)	U.R.S.S. (Khab)	СССР (Хабаровск)
	U.R.S.S. (Riazan)	U.R.S.S. (Riazan)	СССР (Рязань)
	R.S.S. de Uzbek	R.S.S. de Uzbek	Узбекистанская ССР

V

ENGLISH

FRANCAIS

ESPAÑOL

RUSSIAN

Vatican City

Cité du Vatican

Ciudad del Vaticano

Ватикан

Venezuela

Venezuela

Venezuela

Венесуэла

ENGLISHFRANCAISESPAÑOLRUSSIAN

West Africa	Afrique occidentale	Africa Occidental	Западная Африка
West Asia	Asie occidentale	Asia Occidental	Западная Азия
West Atlantic	Atlantique occidentale	Atlántico Occidental	Зап. Зона Атлант. Океана
West Australia	Australie occidentale	Australia Occidental	Западная Австралия
West Brazil	Brésil occidental	Occidente del Brasil	Западная Бразилия
West Canada	Canada occidental	Canadá Occidental	Западная Канада
West China	Chine occidentale	China Occidental	Западный Китай
West Europe	Europe occidentale	Europa Occidental	Западная Европа
West Indies	Indes occidentales	Indias Occidentales	Вест-Индия
West No. America	Partie ouest de l'Amérique du Nord	Parte occidental de América del Norte	Запад Сев. Америки
West Pacific	Pacifique occidental	Pacífico Occidental	Зап. Зона Тихого Океана
West S. Africa	Partie ouest de l'Afrique du Sud	Parte Occidental de la Union Sudafricana	Запад Южной Африки
West So. America	Partie ouest de l'Amérique du Sud	Parte Occidental de América del Sur	Запад Южной Америки
West U.S.A.	Ouest des Etats Unis d'Amérique	Oeste de los Estados Unidos	Запад США
West U.S.A. (UN)	Ouest des Etats Unis d'Amérique (NU)	Oeste de los Estados Unidos (N. Unidas)	Запад США (ООН)
West U.S.S.R.	U.R.S.S. occidentale	Occidente de la U.R.S.S.	Запад СССР

ENGLISHFRANCAISESPAÑOLRUSSIAN

Yemen

Yemen

Yemen

Йемен

Yugoslavia

Yougoslavie

Yugoslavia

Югославия (Нар.Респ.)

Yukon

Yukon

Yukon

Юкон

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 466-E

12 January 1949

Original: FRENCH

Committee 1

REPORT OF THE COORDINATING COMMITTEE

Meeting of 23 December 1948

In the absence of the Chairman, Dr. Metzler (Switzerland) acted as Chairman.

In the absence of the reporter, Mr. L. E. Dostert, Secretary of the Conference, was charged with making out the report.

- 1.1 The Chairman explained that the items on the Agenda were: 1st: Present state of the Committees' work; 2nd: The question of determining to what extent the Conference would hold meetings during the week of the 27th to the 30th of December; and 3rd: Various subjects. Item 2 was a question of determining whether full Committee meetings would be held or merely meetings of Working Groups, and of making the appropriate recommendation to the Plenary Assembly.
- 1.2 At the request of the Chairman, Mr. Pedersen (Denmark) stated that Committee 6 did not wish to hold plenary meetings but proposed to call meetings of Working Groups only.
- 1.3 Mr. Faulkner (U.K.) also stated that Committee 5 did not intend to hold a full Committee meeting but proposed to have meetings of Working Groups only.
- 1.4 Mr. van den Broek (Netherlands), Chairman of Committee 3, stated that personally he would suggest that meetings of Committee 3 be held, but of course he was ready to follow the wish of the majority if meetings of Working Groups were thought to be sufficient.
- 1.5 Mr. Lalić (Yugoslavia), Chairman of Committee 7, stated that his Committee did not intend to hold full meetings but would hold meetings of Working Groups only.
- 1.6 Mr. Sastry (India), Chairman of Committee 4, made a statement to the same effect.

- 1.7 Mr. Jacques Meyer (France) said that during the last Plenary Assembly when the subject of the program for the week of Christmas and New Year's was discussed, he had abstained from voting. He would continue to abstain from voting on the matter even in Committee meetings because he felt that the discussion, which was, by the way, tied up with the subject of deadlines, was useless.
- 3.1 Mr. Bokhari (Pakistan), Chairman of Working Group C of Committee 3, stated that his Group would need at least two additional working days in order to finish its Report.
- 4.1 Mr. Green (New Zealand) thought that the Conference should have a little rest during the week of December 27, not only for the benefit of the Delegates, but especially for the members of the Secretariat, who had been overworked of late because of the increased demands made upon them. A few days' rest would allow the Secretariat to finish all the outstanding documents and give the entire staff a breathing spell. Beneficial results would certainly be felt upon resumption of the work in January.
- 4.2 Mr. Sterling (U.S.A.) felt that the work of the Conference should be organized on a rational basis which would permit real progress. Everyone was aware of the overload of work. That was particularly true of the smaller Delegations, which would need a few days' respite in order to consider the voluminous documents lately published. He was of the opinion that it would be a real saving in effort if no Committee meetings or Plenary Assemblies were planned. Moreover, the personnel of the Secretariat, by reason of the efficient service performed up to date, richly deserved two or three days' rest.
- 4.3 Mr. Arkadiev (U.S.S.R.) recognized that it was difficult to fix hard-and-fast deadlines. He noted, nevertheless, that time was passing, and passing very quickly. He would like the Conference to use its time profitably. Those who did not have the luck to be able to return home for the holiday season could devote themselves to the work of the Conference. The least that should be required was the meetings of Working Groups, according to the decision already taken in the Plenary Assembly.
- 5.1 The Chairman recalled the decision taken in the Plenary Assembly on the question of deadlines, which, unfortunately, had not been maintained. He recognized that the Secretariat had worked hard, but in any case a normal program would accord the personnel several days' rest. If there was to be no work at all during the week of the 27th, the dates fixed by the Plenary Assembly would be endangered and the whole fixed program would be

retarded. On the other hand, he recalled the heavy expenses of the Conference and said that during other Conferences of the Union, vacations had never been contemplated. In short, if we were in our respective countries, no one would dream of considering the week in question as anything but a working week. Accordingly, he favored at least some meetings of the Working Groups in order not to prevent those who wished to work from doing so. The Swiss Delegation could not, of its own will, agree to a week's holiday which would inevitably prolong the Conference and incur additional expenses.

5.2 Mr. Sastry (India) said that he himself was just as anxious as his colleague to end the Conference as soon as possible. He recalled, furthermore, that the Delegates had not had as much time as they wished to study carefully the voluminous documents published to date. He also shared the point of view of those who thought that a few days' respite would permit the Secretariat to finish all the work of translation and publication of documents and would grant the personnel a little rest. Lastly, he thought that his Committee had reached the point where important decisions should be taken, which would be of value only if a strong majority participated in the deliberations. If a number of Delegates were absent at the time decisions were taken in the Committee, prolonged discussions would result in the Plenary Assembly and in the end we would not have saved any time. Accordingly, the Delegation of India shared the point of view of those who thought no Committee meetings should be held during the week of the 27th.

5.3 Mr. Egorov (Bielorussia) made the following statement:

"The Delegation of the Bielorussian S.S.R. notes that on two occasions the Conference, in Plenary Assembly, has taken up the question of continuation of the work during the Christmas holidays and that by a large majority it twice decided that the Committees and Groups should continue their activity during this period. At that time it was emphasized that it was absolutely necessary to take every measure possible to accelerate the work of the Conference, since each day of delay was extremely costly to our Administrations. There is no reason not to work, since 85% of the Delegations are remaining at the Conference during the holidays. A great deal of work is in progress or in preparation in the Groups and Committees. For this reason our Delegation insists that the Groups and Committees continue their work and scrupulously abide by the instructions given."

6.1 Mr. Lalić (Yugoslavia) pointed out that Mr. McKay (Australia), appointed as Vice-Chairman of Committee 7, found himself obliged to resign. Mr. Lalić said he had no information as to the decision taken in the matter. He requested Committee 1 to consider his statement as official notification of Mr. McKay's resignation. The Chairman thought the Plenary Assembly should be advised of the fact; it would then decide on the steps to be taken in regard thereto.

7.1 The Chairman then put to the vote the question of whether the Conference should hold any meetings during the week of the 27th.

The following was the result of the vote taken:

For the elimination of all meetings:	8
Against:	8
Abstentions:	2

7.2 Because of the tie vote, the Chairman declared the proposal rejected and the Committee recommended to the Plenary Assembly that Working Groups should meet during the week of the 27th. A discussion took place as to the validity of the vote which had just been taken. After an exchange of views, it was decided to put the question to a roll call vote, it being understood that Chairmen and Vice-Chairmen of Committees had the right to vote. The following was the result:

In favor of meetings of Working Groups:	13
Against:	5
Abstentions:	4

The Chairman stated that the second vote confirmed the validity of the first one and that the Committee recommended to the Plenary Assembly that the Working Groups should meet from the 27th to the 30th of December, inclusive.

8.1 The question of the validity of the terms of reference of Working Group 2 (Chairman, Mr. Meyer) having been raised by Mr. Lalić, the Committee confirmed by vote the terms of reference previously conferred upon the Group.

9.1 The Committee then fixed the working program contained in Document No. 392.

The meeting was adjourned at 1:45 p.m.

The Reporter, p.t.,

L. E. Dostert

Secretary of the Conference

The Chairman, p.t.,

Dr. Metzler

First Vice-Chairman
of Committee 1

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No 467-F

13 January 1949

Original: ENGLISH

Committee 4.

Report of the Technical Principles Committee.

29th Meeting

3 January 1949

Afternoon Meeting.

1. The start of the meeting was delayed until 16.30 because the necessary quorum was not present at 16.00 when the meeting was due to start.
2. The Chairman said that paragraph 6 of document 300 was open for discussion.
3. The delegate for the USSR said that in paragraph 6 mention was made of the protection ratio in regard to industrial interference. By a majority of 8 to 4 the Working Group had adopted a protection ratio of signal/peak industrial noise of 34 db. The delegations for the USSR, Romania and Bielorussia had submitted their reservations on this question in writing, together with a proposed amendment to reduce the figure of 34 db to 30 db, because it was thought that the influence of fading could be covered by a figure of 10 db.
4. The delegate of Roumania said that the reservations made by his delegation were contained in pages 7 and 8 of document 300.
5. The delegate for the UK said that as regards the proposal to reduce the allowance for fading, in the case of industrial noise, from 14 db to 10 db, he would like to appeal to the Committee to be consistent in this matter. At the morning meeting, starting from a 38 db ratio for steady state signal to atmospheric noise the meeting had finally arrived at a ratio, allowing for fading, of 46 db and thus the committee accepted, by implication at any rate, the method of allowing for fading as outlined in Annex A. Continuing, Mr. Fryer said the USSR had pointed out quite clearly that in the case of industrial noise it was not necessary to make any allowance for fading of the noise itself. To be consistent with earlier decisions it was fairly obvious that it was necessary to make an allowance of 8.2 db for fading within the hour, and then to make a further allowance of 6 db for day to day fading. This made a total of 14 db bringing the final figure up to 34 db. Mr. Fryer pointed out that both these figures of 8.2 and 6 db rested on a very firm basis indeed; the figure of 8.2 db followed directly from the very excellent work on the fading of signals which Professor Siforov had placed before Working Group A at an

earlier stage, while the 6 db followed directly from the extensive work which had been carried out by the USA.

6. The delegate for India said that he thought the figure of 34 db for industrial noise should be retained because the interference of fading warrants the figure of 14 db on a scientific basis.
7. The delegate for the USSR said that the delegate for the UK had referred to the work of Professor Siforov in order to confirm the figure of 8.2 db but the delegation of the USSR were of the opinion that this figure was too high, if the fading on only one signal was to be considered. If all types of fading were to be taken into account then the figure of 30 db was quite sufficient for the protection ratio of signal to peak industrial interference.
8. The delegate for Egypt said there was another consideration to be taken into account, namely, that the industrial noise was greatest during the day while the atmospheric noise was greatest at night.
9. The Chairman said that the amendment proposed by the USSR was to reduce the figure of 34 db to 30 db on the grounds that additional allowance need not be as high as 14 db but that it should be 10 db for both types of fading.
10. The delegates for the USSR Ukraine, Roumania, Bulgaria and Bielorussia then asked for a secret vote.
11. The result of the secret ballot was:-

12 delegates for
16 " against
4 abstentions

The proposal, therefore, failed and the recommendation of the Working Group, namely, 34 db, was approved.

12. The delegates of USSR and Roumania said that in view of the result of the vote their delegations would submit reservations in writing. (See annexes).
13. The Chairman said the meeting would now proceed to discuss annex A with its associated graph.
14. The delegate for Argentine said he would like to see the Spanish version of this document redrafted because, as it stood at the moment, nobody could understand the text. He said that he and the Mexican delegate would offer their services so that the draft of the annex could be made as clear as the graph.

15. The delegate for the USSR said he now realised that at the morning meeting the majority of the delegates had voted on a text which was not understood. Not only the Spanish version but also the Russian text was not clear, and this illustrated the grounds on which the votes had taken place both during the morning meeting and in the Working group. Continuing, the delegate of the USSR recalled that the UK delegate had said that this document had formed the basis on which the majority decision had been taken in working Group A.
16. The Chairman said there were two points to consider:-
- (a) whether the points contained in the annex A have been understood, or
 - (b) whether it requires complete modification and redrafting in a better form.
- Mr. Sastry then suggested that the annex A be re-examined in the Working Group.
17. Dr. Metzler said that if he had understood correctly, this was a question only of redrafting and not of modifying the inclusions or the manner of arriving at them.
18. The delegate for the UK said the English text was perfectly clear and he agreed with Dr. Metzler that it was only a question of bringing the other texts into line.
19. The delegate for Mexico said it was impossible to state whether they had any objection to the substance of the document since the Spanish draft was so bad. It seemed that the English text was the only acceptable one.
20. The delegate of the USSR said the document as presented could not be considered by his delegation because it was not clear. The fact that members had voted on a document which was not clear in substance was a most abnormal occurrence and he felt that this was ridiculous and undermined the authority of the Committee.
21. The Chairman asked if it was the wish of the majority of delegates to refer the document for a detailed discussion to the Working Group.
22. The delegate of the USSR speaking for Albania, said that at the morning meeting he had stressed the fact that Committee 4 had approved, by means of a vote, the wrong initiative taken by Working Group 4 A to include annex A in the main report. It was now obvious that annex A had been compiled inaccurately since as pointed out by the delegates of Mexico and Argentine, it was quite impossible to determine its content. Out of the four working languages adopted by this Conference, members could not approve a

text which was accurate in one language only, and in the opinion of the Albanian delegate it was necessary to reconsider this document after it had been redrafted. Only after it had been redrafted could it be discussed and a decision taken upon its contents.

23. The delegate for Bulgaria said he thought that this was not a question of redrafting the document but a question of the lack of clarity in the document.

At the morning meeting of Committee 4 many delegates had obviously not understood the document and in the opinion of the Bulgarian delegate it should be submitted to the Working Group for reconsideration. After reconsideration in the Working Group the document should then come to the committee for approval and paragraphs 4 and 5 should also be reconsidered.

24. The Chairman said if there was a proposal for reopening discussion on paragraphs 4 and 5 and it was the wish of the majority, it could be done, but that the present moment was not appropriate.

25. The delegate of the USSR said that, as he had stated before, in its present form annex A was no good; it should be redrafted by the Working Group and only after that had been done could it be voted on. He agreed with the proposal made by the delegate of Bulgaria that the Committee should invalidate the votes taken on points 4 and 5 because that vote was taken on a document which was not understood by the majority. If the document was redrafted, members would be able to judge the substance of the document and so he proposed that annex A should be referred to Working Group 4 A for reconsideration and that the vote taken during the morning meeting on paragraphs 4 and 5 should be cancelled.

26. The Chairman asked the assembly to decide whether annex A should be referred to the Working Group or be considered at the present meeting and he said he would be grateful if delegates would restrict their comments to this point.

27. The delegate for the UK said that if annex A was referred back to Working Group 4 A, he thought that in fairness to Mr. Richardson, the members should be very careful to get the terms of reference for referring back quite clear. The matter contained in the annex which delegates were now saying was not clear, had been available for at least a month to the members of the Working Group and nobody had raised this question before. The English text as it stood at the moment was perfectly clear and he would like to make a formal proposal that the terms of reference for Working Group 4 A should confine themselves purely to bringing the translations in French, Spanish and Russian into line with the English text in a form that would be understandable to

the French; Spanish and Russian speaking delegations. When this had been done, the report should be returned to the main committee and the substance should then be discussed in the full committee. He felt quite sure that this procedure would be more expeditious than trying to introduce changes to the substance of the text in the Working Group.

28. The Chairman said he thought that this was an excellent suggestion and if it was acceptable to the members of the Committee, the document would be referred to the Working Group in order to bring the Spanish, French and Russian texts into line with the English text. After that it could be returned to the main committee.
29. Dr. Metzler said he was in complete agreement with this proposal. A considerable time had been spent, during the morning meeting, on a discussion of paragraphs 4 and 5; various questions had been raised and these had been answered finally and when it had been agreed to proceed to vote on these two paragraphs, there were no objections in principle to the voting or to the way in which it had been carried out. Dr. Metzler said he concluded that in sending the Annex back to the Working Group it was just a question of changes in drafting. He was also in agreement with the delegates of Mexico and USSR that the translations of the text into their languages were not good and confirmed that the French text was also not good.
30. The delegate for the USSR said he would like to remind delegates that at the morning meeting he had pointed out several times that the document was not clear and that it had been compiled incorrectly and could not serve as a basis for the work of Committee 4. He, therefore, proposed that this document be returned to Group 4 A, not only for correction in translation, but in order to confirm the substance of the document. It should then be returned to the main committee so that a vote can be taken on points 4 and 5.
31. The delegate for France said that at the morning meeting it was agreed by members of the committee that there was a lack of clarity in Annex A. This was undoubtedly the reason for the delegate of the USA providing the graphs. His delegation had voted in the morning using the graph as the basis for clarification and he suggested that when Annex A was redrafted a brief explanation of the graph should form the text of Annex A.
32. The delegate for Roumania said that Annex A had never been discussed in Working Group 4 A and therefore, it was absolutely necessary to submit Annex A to Group 4 A, not only to redraft but to discuss substance of the same.
33. The delegate of the USSR representing Albania, said he would like to support the proposal made by the delegate for Bulgaria

that Annex A, should be reconsidered from the point of view of its drafting and also of its contents, as only then could the necessary decisions be taken on it. He said he could not agree with the statement by Mr. Mercier when he stated that at the morning meeting all members agreed with the contents of the document. The votes taken showed very clearly, the contrary, namely, that not all delegates were in agreement.

34. The Chairman said there were three proposals with regard to Annex A:-
- (a) The UK proposal to refer Annex A of Document 300 to Working Group 4 A in order to line up the translations in the other three languages, French, Spanish and Russian with the English version so that a final decision could be taken in the main committee.
 - (b) The first part of the USSR proposal that Annex A should not only be checked as regards translation but that the substance of the annex should also be discussed.
 - (c) The French proposal to revise the drafting of Annex A in order to obtain a short and clear text which would confine itself to a brief comment on the graph submitted by the USA delegation.
35. The delegate for the UK asked if the vote on the three proposals could be done separately instead of simultaneously.
36. The delegates of the USSR, Bielorussia, Ukraine, Roumania and Bulgaria requested a secret vote.
37. The results of the secret vote on the three proposals were as follows:-
- (a) 9 delegates in favour
25 " against
 - (b) 9 delegates in favour
25 " against
 - (c) 24 delegates in favour
10 " against
38. The Chairman said that the French proposal to revise the draft had, therefore, been adopted.
39. The delegate for the USSR said he would like the second part of his proposal put to the vote, namely, that the earlier votes

taken on paragraphs 4 and 5 of the 5th report of Working Group 4 A should be cancelled and these paragraphs should be voted upon again after the revised text of Annex A had been received from Working Group 4 A.

40. The Chairman asked the delegate for the USSR if he insisted that the proposal should be put to vote right away, or whether he was agreeable to postponing a decision on this point until the document had been returned from the Working Group.
41. The delegate of Mexico said he thought that after reconsideration of Annex A by Working Group 4 A, and after it had been resubmitted to Committee 4, the members should decide whether paragraphs 4 and 5 should be revoted upon.
42. The delegate for Bulgaria said he thought that the Committee need not continue discussions on the subject. There were two proposals before the members:-
- (a) The USSR proposal to cancel the votes taken in regard to paragraphs 4 and 5 of the report, and
 - (b) The Mexican proposal that after consideration of Annex A by the Working Group and after it had been resubmitted to Committee 4, the members should put to vote the question of reconsidering the votes taken at this morning's meeting.
43. The Chairman pointed out that there was only one proposal, that of the USSR.
44. The delegates for the USSR, Bielorussia, Ukraine, Bulgaria, Hungary and Roumania asked that the voting should be secret.
45. The result of the secret ballot was:-
- | | |
|------------------------|-----------|
| 11 delegates in favour | |
| 21 | " against |
- The Chairman said that the committee, therefore, stood by the vote taken at the morning meeting.
46. The delegate for the USSR said his delegation reserved the right to raise the subject again after the document had been resubmitted in its new form to Committee 4 in accordance with the suggestion made by the delegate of Mexico. Continuing, the delegate of the USSR said he considered that the whole of this voting had seemed humorous.
47. The Chairman in reply said he did not think that there was any element of humour. The vote had been taken in secret, which

was the most serious form of voting, and he did not think that the majority of the delegates had considered the voting humorous.

48. The delegate for the USSR said he did not see how a vote could be serious if the majority of the members did not understand the document.
49. The Chairman said he did not think discussion on the point need continue because the voting taken at the morning meeting had just been confirmed by the present voting and the earlier decision would, therefore, stand.
50. The Chairman said that at the next meeting the 6th Report of Working Group 4 A, document 335, would be discussed.

The Reporter

The Chairman

P.N. Parker

M.L. Sastry

ANNEX A

Reservations of the Delegation of the Roumanian People's Republic and of the Federal People's Republic of Yugoslavia on the subject of the adoption of the Protection Ratio against Industrial Noise at the afternoon meeting of
3 January 1949.

"Taking as our basis a value of 20 db for the ratio of the steady state average signal to the peak value of industrial noise, as adopted after hearing the recordings, and considering in the light of our own experience and of the theoretical and practical researches submitted to the Conference by Professor Siforov that a margin of 10 db is amply sufficient to allow for long and short period fading, our Delegations are of the opinion that an overall protection of 30 db against industrial noise (peak value) should be considered as a standard affording wholly satisfactory reception".

Special opinion of the Delegations of the USSR, the Ukrainian SSR, and the Bielorussian SSR concerning the decisions taken at the 28th and 29th meetings of Committee 4.

1. The above mentioned Delegations wish to express their categorical protest against a number of decisions taken by Committee 4 while discussing document No 300. (Fifth Report of Group 4 A).

2. The first of these decisions consists in the following approval by a majority vote of paragraph 4 of document No 300 which was wrongly included in the document.

Paragraph 4, document No 300 contains reference to Annex A, as a document on the basis of shat Group 4 A made apparently definite recommendations on the method of calculation of the standard protection ratios of signal to atmospheric noise.

Actually Annex A, containing only the private opinion of the USA delegation, was never put to the vote at any meetings of Group 4 A, preceding the preparation of the fifth report of the Group and no decisions were taken on this document.

Our Delegations consider that the inclusion of the opinion of the USA delegation expressed in Annex A in the text of document No 300 is wholly unlawful and violates the rules of procedure in accordance with which, each report should reflect the true course of all discussions and of all decisions taken.

Our Delegations, therefore, consider that the only correct procedure is to eliminate that paragraph of document 300 from the original text and attach it as an opinion of the USA Delegation.

3. The second decision taken by Committee 4 by an insignifiant majority of one vote consists of the following - in paragraph 5, document No 300 the protection ratio for the median value of the signal to the average level of atmospheric noise was increased from 42 db to 46 db despite the unanimous decision of Working Group 4 A.

Our Delegations consider that the decision taken by Group 4A concerning the protection ratio of 42 db is in accordance with the recommendations approved by the Atlantic City Conference, by the Planning Committee in Geneva and by all the technical

experience which is to be had in this field.

Therefore an increase in this standard serves no useful purpose; on the contrary it leads to inconvenient consequences such as increases in the standards of field intensity and increases in the power of the broadcasting transmitters, which latter is obviously not to the advantage of small countries, serving only the egoistical interests of some large countries.

4. Our Delegations consider that the text of Annex A, on the basis of which Committee has taken its decisions concerning points 4 and 5, document No 300 is not clear, is incomprehensible and was very negligently prepared and can therefore in no way serve as a basis for important recommendations.

This opinion of our Delegations has found clear confirmation in the fact that at the 29th meeting of Committee 4 a number of Delegations declared that Annex A was written obscurely and incomprehensibly in the Russian, French and particularly the Spanish texts (Delegations of Argentina, Mexico, France, Bulgaria, USSR, and others).

Our Delegations therefore consider that Annex A, document No 300 should be passed to Group 4 A for detailed discussions on this question.

Concerning decisions taken by Committee 4 on paragraphs 4 and 5 document No 300, in the opinion of our Delegations these decisions should be revoked as they were taken mechanically on the basis of Annex A which was unintelligible to many delegations.

The paragraphs 4 and 5, document No 300, which were mentioned above, should be discussed again and put to the vote after Annex A has been examined by Group 4 A.

5. Our Delegations consider that the standard protection ratio of the median value of the signal to the peak value of industrial noise of 34 db, which was accepted by the Committee, is too high and that it should be replaced by a standard of 30 db, and for taking fading into account this case does not require an additional protection ratio greater than 10 db.

On behalf of the USSR Delegation
(signed) Prof Siforov

Head of the Ukrainian SSR Delegation
(signed) G. Ouspenski

Head of the Bielorussian SSR Delegation
(signed) G. Egorov

3 january 1949

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE,

Mexico City, 1948/49

Document No. 468-E

13 January 1949

Original: FRENCH

Committee 2

ROUMANIAN PEOPLE'S REPUBLIC

Delegation of powers

The Delegation of the Roumanian People's Republic gives full powers to the Delegation of the Federal People's Republic of Yugoslavia to represent it at the meetings of all Committees and Working Groups of which it is a member.

The Delegation of the Federal People's Republic of Yugoslavia is thus qualified to represent the interests of the Roumanian People's Republic, and to vote in the latter's name.

INTERNATIONAL
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Mexico City, 1948/49

Document No. 469-E

22 December 1948

This document supersedes
Document No. 194-E

Original: ENGLISH

Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

4th Meeting

16/17 November 1948

The meeting opened at 3.30 p.m. with Mr. Faulkner in the Chair.

The Chairman first asked the Committee if the Agenda as published in Document No. 125 met with the approval of the delegates.

There were no objections to the Agenda.

1. Minutes of Previous meetings

Since Documents No. 121 and No. 124 containing the Minutes of previous meetings had been placed in the hands of delegates shortly before the opening of this session, it was felt preferable to postpone approval until some future meeting of the Committee.

2. Examination of the letter from the Chairman of Committee 6 (Annex to Doc. No. 125).

After a short discussion, it was decided that the Chairman should reply to this letter stating that it was found that the work of Committee 5 would be delayed if preference were to be given to particular bands of frequencies and suggesting that it might be possible for Committee 6 to commence this work by extracting the information direct from Forms 4.

3. Reports of the Chairmen of Working Groups

A. Working Group A

Mr. Aurini reported as follows:

Working Group 5A has the honor to submit to the Assembly the following Report:

In accordance with the instructions of Committee 5, the Working Group held 16 meetings on November 2, 3, 4, 9, 10, 11, 12 and 15.

In the course of these meetings the Group consulted the representatives of 53 countries, 42 of which plus one international organization (Albania, Argentine, Australia, Austria, Belgium, Bielorussian S.S.R., Brazil, Canada, China, Vatican City, Colonies, Protectorates, Oversea Territories and Territories under Mandate of the United Kingdom, Oversea Territories of the French Republic and Territories administered as such, Cuba, Denmark, El Salvador, Egypt, United States of America, Finland, France, Guatemala, India, Indonesia, Iceland, Italy, Monaco, Nicaragua, Norway, New Zealand, Pakistan, Netherlands, Portugal, Roumania, United Kingdom, Siam, Sweden, Switzerland, Czechoslovakia, Territories of the United States, Morocco and Tunisia, Ukrainian S.S.R., U.S.S.R., Uruguay and UNO), have submitted complete information. Eight countries (Bolivia, Chile, Colombia, Hungary, Indonesia, Iran, Mexico and the Dominican Republic) have stated that they are awaiting supplementary information. Two countries (South Africa and the Portuguese Colonies) have indicated that they have only just arrived. Five countries (Ecuador, Luxemburg, Ireland, Panama and Peru) have not replied to the request for information. On the basis of the data submitted by representatives of the above mentioned countries, Working Group 5 A set up a file for each country containing three copies of Form A duly filled in together with any comments on the Report of the Planning Committee, Geneva Session, and the Information concerning Chapter VII of the Report submitted by the countries in question.

The above with the object of assembling all facts calculated to facilitate and expedite the work of Working Groups 5B and 5C.

Up to the present time, seven files relating to the following countries have been submitted to Working Group 5 B: Australia, Vatican City, U.S.A., France, Indonesia, Tangier, Territories of the U.S.A.

A number of Delegations, though regularly invited on repeated occasions, have not appeared before Group 5 A.

Delegations which had not already done so (See Document No. 97) were requested to submit or complete their information as soon as possible. Unfortunately in some cases these requests produced no result.

I accordingly request the Chairman to be kind enough to call the attention of the Delegations in question to the serious consequences which these delays are causing, not only to the comple-

tion of the work of Group 5 A, but also to the work of the whole Conference, inasmuch as Form A, together with Forms B and C, are to be used as a base by a number of Committees and Working Groups.

Before continuing my work, I take the liberty, on behalf of Working Group 5 A, of requesting directives on the following points:

1. Should Working Group 5 A establish statistics of program-hours by countries?
2. Should each country be given a copy of Form A duly filled in for its approval?
3. Should the work of Group 5 A be ended next Friday?

I further take the liberty of pointing out that several countries have submitted Form 4 with a number of frequencies higher than that which figures in the official documents. A smaller number of other countries have submitted reductions in time-tables, while others have reduced the number of their programs.

I take this occasion, Mr. Chairman and Delegates, to emphasize the keen interest and great zeal which all members of the Working Group have brought to our work (especially Mr. Axon, of the U.K., and Mr. Lerognon, Delegate of the French Overseas Territories) and I thank them accordingly.

Note has been taken of the modifications and additions in the files of the countries concerned.

The Argentine delegate brought to the attention of the Committee the fact that appropriate data were presented to Working Group 5 A this very morning by his delegation and requested that the report of Mr. Aurini be amended accordingly.

The delegate of Belgium then inquired as to whether it would be possible for him to present informally to the Committee the requirements of Belgian Congo, since the arrival of the delegate from Belgian Congo had been delayed somewhat, owing to illness. In his mind, this would expedite the work of the Committee, it being understood, of course, that the requirements of Belgian Congo would be confirmed by the delegate upon his arrival.

The Committee agreed.

The Committee then discussed the four points raised by Mr. Aurini in his report:

Point No. 1. Should Working Group 5 A prepare a statistical

survey of the channel-hours requested by each country?

There followed a discussion on this topic in which the delegations of the U.K., USSR, French Overseas Territories and India participated. It was decided that the Chairmen of Working Groups 5 A and 5 C should get together in order to discuss the compilation of the statistical data available; to determine which Working Group should make the survey; to specify the data which this survey should include (number of transmitters, plants already in operation or projected); the source material from which these data should be obtained; and finally the manner in which the survey should be presented.

Point No. 2. Should each country be given a copy of Form A for approval?

After a brief discussion, the Committee agreed to give each country a copy of Form A for approval.

Point No. 3. Should the work of Group 5 A be terminated on November 19th?

The Chairman pointed out that this was a matter which was within the competence of the Chairman of the Working Group to decide, as he was in the best position to know when the work was finished. Cooperation between Groups should be as close as possible, and if after next Friday, Working Group A could release some of its members, such action would undoubtedly be welcomed by Groups B and C and serve to expedite their work.

The Committee approved this suggestion.

Point No. 4. What must be done about those countries which have submitted new Form 4's with frequency requirements additional to those appearing in the official documents, or others which have reduced their time-tables or their programs?

In this connection, the Chairman explained that the November 5th deadline, set by the Plenary Session, applied to: 1st, submission of Form 4 by countries which had not already done so; and 2nd, information, comments and corrections concerning Form 4.

The Delegate of Cuba then made the following statement:

The Delegate of the Bielorussian S.S.R. felt that the deadline of 5 November applied to: 1) presentation of requirements on Forms 4 for the 9 periods of solar activity by countries which had not yet done so; 2) presentation of detailed reports and observations concerning the preceding questions. He believe that the future work of Committee 5 should be guided by these considerations.

The Committee then discussed the possibility of making available to Committee 6 copies of Forms A and B as soon as completed. The delegate of the French Oversea Territories, supported by the UK and Italy proposed that these documents be made available to all Committees, and it was agreed that the Chairman should notify the Coordinating Committee accordingly, as well as of the fact that these documents are now virtually complete.

B. Working Group B

Mr. Walker, Acting Chairman of Working Group B, reported as follows:

(See Document No. 160-E)

There followed a general discussion of this report, the main points of which were:

1. Organization of the work of Group B.

Mr. Walker mentioned that since present working methods allow the Group to analyse per day the requirements for one season, of only three small countries, the Group would take until April 1949 to complete its work, unless the conditions were improved.

It was then suggested that the number of members in the Group be increased, by transferring to this Group

members of Working Groups A and C who might be available. At this juncture, the delegates of the UK and the French Overseas Territories offered their services. It was also proposed to perfect the working methods of the Group by creating parallel groups who make use of a new assembly line technique proposed by Mr. Mather (Canada) and presented to the Committee by Mr. Walker, and who would have at their disposal a sufficient number of copies of the propagation curves prepared by the US delegation. It was also mentioned by several delegates that the work of Group B had been greatly impeded by a lack of fundamental information from Committee 4, including such key definitions as "difficult circuit" and "service area". The Chairman of Committee 4 explained that this Committee would be meeting on November 18, and that the information should be available at the beginning of the following week.

2. Differences between frequencies requested and frequencies allocated.

Working Group 5B had remarked, during the course of its analyses, that several countries had requested frequencies which differed from the frequencies as indicated by the US propagation curves. These differences would seem to arise from the fact that many transmitters cannot operate on the 26 Mc/s Broadcast Band. However, since the main task of Group B is to standardize frequency requirements, it was felt that the curves should apply either to all or to none of them. A proposal was then made to the effect that frequencies requested should be placed in one column and frequencies proposed in another, so that Form B could then be given to the countries concerned to permit them to explain why they had chosen other frequencies. The Committee agreed to this proposal.

3. Meaning of the term "substantial difference".

The work of Group B had also been slowed down considerably owing to a lack of a clear-cut definition for this term. There followed a lengthy discussion in which the UK, USA, USSR and Pakistan participated. It was suggested that the difference between the field strength indicated by the frequency requested and the field strength indicated by the frequency proposed be expressed in terms of "x" db. This procedure would

apply only to frequencies in different bands, and not within the same band. It was felt that the need for making such a calculation would occur only infrequently, and it was decided that the countries concerned should make the necessary calculations themselves. It was pointed out that a difference of one band in the lower frequencies would be substantial, whereas in the higher frequency ranges such a difference might be unimportant. It is difficult, however, to establish a fixed norm in this regard, and it was decided that the matter should be left in the hands of Group B.

4. Statistical survey

Since the Committee had decided to have both frequencies requested and frequencies proposed indicated in separate columns on Form B2, the Chairman proposed that the Chairmen of Groups B and C confer on this point in order to determine the final form in which the statistical survey should be presented, it being understood, of course, that the statistical report prepared by Working Group 5C should include only those frequencies finally recommended by Group B, after consultation with the countries concerned. The Committee agreed. The question of the definition of a difficult circuit was again raised.

The Chairman suggested that it would be necessary to await additional information from Committee 4 in regard to the definition of the term "difficult circuit". After a suitable definition is received, Working Group B can continue its work in accordance with the rulings of Atlantic City. Moreover we must await the directives of Committee 6 which will permit us to indicate the circuits which must be considered as difficult.

Concerning the protection ratios necessary for each frequency, the countries themselves could do the required monitoring.

The Delegate of Roumania then made the following statement: "In order to calculate field intensities and, thereby, protection ratios, it is necessary to have a common technical basis, officially adopted by the Conference, to avoid the danger of allowing the various countries to use different bases and so obtaining differing results. As far as he knew, no such technical document had yet been officially adopted.

The Delegate of the U.S.A., supported by the Chairman, pointed out that the only official basis for field strength calculations would be the document CL 462 of the U.S.A. Delegation.

C. Working Group C

Mr. Smirnov made the following report:

1. Working Group 5C was set up at the Plenary Session of Committee 5, on 29 October 1948. The following 14 Delegations present at that meeting gave their consent to participate in its work: U.S.S.R., Cuba, Venezuela, Guatemala, Uruguay, Mexico, Italy, Portugal, U.K., Indonesia, Chile, U.S.A., Vatican, Dominican Republic.
2. Up to 16 November, the Working Group held three meetings on the following dates: November 3, 10 and 15. At the first meeting, were present 7 members as follows: U.S.S.R.-1, Mexico-3, Portugal-1, Cuba-1, and Guatemala-1.

At the second meeting were present 7 members as follows: U.S.S.R.-1, Czechoslovakia-1, Mexico-3, Cuba-1, and Portugal-1.

At the third meeting were present 6 members as follows: U.S.S.R.-1, Mexico-2, Portugal-1, Uruguay-1, and Cuba-1.
3. At the first two meetings were considered questions of an organizational and technical nature pertaining to the work of the Conference.
 - a) Consideration of the layout of the forms to be filled in.
 - b) Consideration of standardized methods for filling in the forms.
 - c) Election of a Vice-Chairman for the Group.
 - d) Miscellaneous additional questions.
4. As a result of the consideration of these questions it was found necessary:
 - a) To change the layout of the form, by combining two separate forms into one for the hours 0-12 and 12-24 of the entire day from 0-24. Previously several other improvements were proposed for the layout of the forms.
 - b) A motion was carried necessitating the filling in of the forms in a standardized method, writing in the names of the countries, location of transmitters, reception area, etc. Standards were established for naming and designating.

- c) Mr. Caha, Delegate of Czechoslovakia, was elected as Vice-Chairman of Working Group 5C.

5. At the meeting held on 15 November the Group started its practical work in so far as materials from Group B were being received. The Forms for Denmark were filled in (June, median sun spot activity) and Finland (December, median sun spot activity). Data for other countries has not yet been received from the Chairman of Working Group 5B.
6. It is considered possible to complete the work speedily, but it is dependent on how soon the materials from Working Group 5B are received, and also when the representatives of the countries who gave their consent to help at the last meeting of the Committee begin to work in Working Group 5C.

After reading his report, Mr. Smirnov made an appeal for additional help, since five countries only had participated in the work of Group C. The delegates of Mexico and Argentina offered their services which were gladly accepted and the Chairman also pointed out that as Group 5A terminated its work it had been agreed its members would be available to assist the other groups. Whenever help was needed by one of the Working Groups, an appropriate indication should be placed on the bulletin board.

4. New time-limits

The Chairman of Group 5A mentioned that he expected the work of his Group to end in about one week.

As far as the work of Group B is concerned, no deadline could be set, and the Chairman proposed to leave this question to the next meeting of the Committee. The deadline would depend on the one hand, upon the availability of sufficient copies of the propagation curves, and on the other upon the technical standards to be provided by Committee 4.

5. Miscellaneous

The acting Chairman of Group 5B requested that Argentina until now an Observer, be made a full member of his Working Group.

The Committee Agreed.

The meeting adjourned at 12:30 p.m., 17 November, 1948.

The Rapporteurs:

A.H.Wolf
A. Blanchette

The Chairman:

H. Faulkner

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 470-E (Revised)

27 January 1949

Original: ENGLISH &
RUSSIAN

Committee 6

DRAFT REPORT OF WORKING GROUP 6-A

REFERRING TO THE GENERAL TERMS OF REFERENCE GIVEN TO SAID GROUP

I.

Working Group 6-A, after having studied in the course of its meetings the questions concerning the future work of Committee 6 and of its Working Groups, with reference to carrying out in practice the decisions of the Committee, wishes to call the attention of the full Committee to the following matter:

In accordance with Document No. 36, Working Group 6-A has been given the following terms of reference:

" To make recommendations to the main committee, as to which frequency assignment plan should be worked out by Working Group B, and on what basis they should be worked out. To be in contact with the work of Committees 3 and 4, to ensure that the plans worked out by Working Group B will be modified according to the general technical principles and standards as they become formulated by these Committees."

According to the general terms of reference, the Committee was instructed:

- "1. To proceed at the earliest possible date to draft a preliminary Frequency Assignment Plan or Plans, first on the basis of the available data resulting from the work of the Planning Committee.
2. To submit frequent reports to the Conference on the progress of its work and bearing in mind the projected duration of the Conference.
3. To modify the results of its work from time to time according to the general and technical principles and standards as they become formulated by the other related committees."

Working Group 6-A believes that it is indispensable urgently to remind Committee 6 of the importance of adhering to the original terms of reference and of formulating practical conclusions for the Plenary Assembly of the Conference. This opinion is based upon the following considerations:

- a) A superficial analysis of all previous activities leads to the conclusion that Committee 6 is still awaiting the requirements rectified by Committee 5. According to information in the possession of this Working Group, Committee 5 has examined only the requirements presented for the June sunspot median period and even this has not been done for all countries. Therefore, it will still require some time to finish the work referring to that season. However, Committee 5 has submitted to Committee 6 the requirements already studied, as well as the forms A (programme hours) for all countries.
- b) Committee 4 will present its final report on the 21st January, 1949; it will be very important for the work of Committee 6 that this report includes recommendations concerning:
 - Difficult circuits.
 - Determination of zones where the use of two frequencies is indispensable.
 - Determination of frequencies suitable for short distances.
 - Possibilities of frequency sharing in the 6 and 7 Mc/s bands.

Since every endeavour should be made to conclude the work of the Conference by the 1st February, 1949, the Working Group proposes to Committee 6 the strictest adherence to the terms of reference, with the object of:

- a) undertaking without delay the establishment of a plan;
- b) bringing up before the Plenary Assembly the question concerning the date of establishment of the plan;
- c) coordinating its work with the work of the other Committees.

II.

Texts approved by Committee 6, which Working Group 6-A proposes should be applied effectively:

1. "The first plan or plans must be worked out for the June median of the sunspot cycle (70 spots)." (Point 2 of Brief Report of Working Group A of the Plan Committee, 2 November 1948, Document No. 59, adopted by Committee 6, 10 November 1948, Document No. 113).
2. "Group B should interview each of the delegations in the same way and in the same order as Working Group 5-B has done, so as to:
 - a) Consider in a cooperative spirit all the reductions of requests compatible with the essential needs of each country;
 - b) Compare these requests with the material possibilities of their realization:
 - 1) in the present stage of transmitters;
 - 2) taking into consideration the reparation of war damages, and
 - 3) taking into consideration the future development of broadcasting stations during a period to be determined by the Conference."

(Point 2 of Report No. 2 of Working Group A, Document No. 67, adopted by Committee 6, 10 November 1948, Document No. 113).

3. "...has decided to ask...all Delegations...as to the extent to which the practical results of the draft plan submitted by the Soviet Delegation for the period of June sunspot median, satisfy the different countries in aspect of:
 - a) Directional broadcasting, or reception area;
 - b) Allocated frequencies and time for broadcasting;
 - c) The total number of channel-hours per band assigned to the several countries;
 - d) Simultaneous frequency sharing."

(Point 1 of Document No. 217, Approved by Committee 6, 26 November 1948, Document No. 227).

This latter text should be applied in the same manner to the draft plan of the Delegation of the U.S.A.

III.

In order to put in force the general provisions adopted by Committee 6, cited above, Working Group 6-A proposes that the following practical measures should be adopted by Committee 6:

1. Working Group 6-B shall interview the various delegations:
 - (a) On the subject of global numbers of channel-hours allotted, taking into account the available document concerning this number of channel-hours (point II-2 of this report).
 - (b) On the subject of suggestions for improvement of the detailed draft of allotment of frequencies in the form of channel-hours (Point II-3 of this report) concerning the draft plans presented by the U.S.S.R. and the U.S.A. For the analysis of this latter plan, it is recommended that the delegations use the Form "Working Group 6-C, Form 1".
2. In the course of these interviews, Forms A and B2, established by Committee 5, should be used, and each delegation should be asked especially what, in the opinion of the particular delegation, would constitute the most adequate procedures for the reduction of the requirements, in cases where supplementary reductions seemed necessary, in the order of their importance.

These consultations are to be merely indicative, and should be limited to planning a program of reductions other than those proposed voluntarily, as indicated in the preceding paragraph.
3. The Delegations shall first be interviewed by Working Group 6-B concerning the total of their requirements, from a general viewpoint (especially point III-1a).
4. After Working Group 6-D has at its disposal the first results of this study, it shall in turn proceed to interview each interested delegation regarding the special problem of assignments within the 6 and 7 Mc/s bands, for local or short distance transmissions.

The difference in timing between these two series of interviews will permit Working Group 6-B to hand over, in due time, and with the appropriate comments, the dossiers of each delegation to Working Group 6-D.

5. . It would be desirable that the Chairman of Working Group 6-B create, for the purpose of these interviews, three sub-groups, each composed of four members who should, as far as possible, represent the 4 regions A, B, C and D, defined at Atlantic City (Radio Conference Doc. No. 1003).

It is further recommended that experts of the Delegations submitting plans, and methods of approach for the total distribution of channel-hours, for consideration, be placed at the disposal of the interviewing groups to clarify points and answer questions regarding the Delegations' plan or method of approach.

6. Following the above recommendations, Working Group 6B, after meeting, proposed to the Committee:

- (a) The interviews commence on the 25th January 1949.
- (b) The target date for the completion of these interviews be 31st January 1949.
- (c) The sequence of the interviews be decided by drawing lots. This task should be carried out by the Secretariat at the meeting of Committee scheduled for 19th January 1949.
- (d) That the composition of the three sub-groups entrusted with the task of carrying out these interviews will be as follows:

<u>Atlantic City Region</u> <u>(Doc. 1003)</u>	<u>Sub-Group I</u>	<u>Sub-Group II</u>	<u>Sub-Group III</u>
A	Brazil	Uruguay	U.S.A.
B	U.K.	Belgium	France
C	Ukrainian S.S.R.	Czechoslovakia	Roumania (P.R.)
D	Pakistan	Egypt	N.Zealand

7. Committee 6 recommends strongly that all delegates should forego their right to send observers to the interviewing groups. The report of the interviews will be published after the conclusion of these interviews.

Chairman of Working Group 6-A:

D. ARKADIEV

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 470-E

14 January 1949

Original: RUSSIAN AND
FRENCH

Committee 6

DRAFT REPORT OF WORKING GROUP 6-A

REFERRING TO THE GENERAL TERMS OF REFERENCE GIVEN TO SAID GROUP

I.

Working Group 6-A, after having studied in the course of its meetings the questions concerning the future work of Committee 6 and of its Working Groups, with reference to carrying out in practice the decisions of the Committee, wishes to call the attention of the full Committee to the following matter:

In accordance with Document No. 36, Working Group 6-A has been given the following terms of reference:

"To make recommendations to the Committee as to how a frequency assignment plan should be worked out by Working Group B, and on the basis of what fundamental principles it should be worked out.

"To remain in contact with Committees 3 and 4, to ensure that the plans worked out by Working Group B will be modified according to the general technical principles and standards as they become formulated by these Committees."

According to the general terms of reference, the Committee was instructed:

- "1. To proceed at the earliest possible date to draft a preliminary Frequency Assignment Plan or Plans, first on the basis of the available data resulting from the work of the Planning Committee.
2. To submit frequent reports to the Conference on the progress of its work and bearing in mind the projected duration of the Conference.

3. To modify the results of its work from time to time according to the general and technical principles and standards as they become formulated by the other related committees."

Working Group 6-A believes that it is indispensable urgently to remind Committee 6 of the importance of adhering to the original terms of reference and of formulating practical conclusions for the Plenary Assembly of the Conference. This opinion is based upon the following considerations:

- a) A superficial analysis of all previous activities leads to the conclusion that Committee 6 is still studying the requirements rectified by Committee 5. According to information in the possession of this Working Group, Committee 5 has examined only the requirements presented for the June sunspot median. And even this has not been done for all countries. Therefore, it will still require some time to finish the work referring to that season. However, Committee 5 has submitted to Committee 6 the requirements already studied, as well as the formulas A (transmission hours) for all countries.
- b) Committee 4 will finish its work within a very short time; nevertheless, it has not yet defined the text of the recommendations concerning:

Difficult circuits.

Determination of zones where the use of two frequencies is indispensable.

Determination of frequencies suitable for short distances.

Possibilities of frequency sharing in the 6 and 7 Mc/s bands.

Since the work of the Conference must be accomplished by February 1st, the Working Group proposes to Committee 6 the strictest adherence to the terms of reference, with the object of:

- a) undertaking without delay the establishment of a plan;
- b) bringing up before the Plenary Assembly the question concerning the date of establishment of the plan;
- c) coordinating its work with the work of the other Committees.

II.

Texts approved by Committee 6, which Working Group 6-A proposes should be applied effectively:

1. "The first plan or plans must be worked out for the June median of the sunspot cycle (70 spots)." (Point 2 of Brief Report of Working Group A of the Plan Committee, 2 November 1948, Document No. 59, adopted by Committee 6, 12 November 1948, Document No. 113).
2. "Group B should interview each of the delegations in the same way and in the same order as Working Group 5-B has done, so as to:
 - a) Consider in a cooperative spirit all the reductions of requests compatible with the essential needs of each country;
 - b) Compare these requests with the material possibilities of their realization:
 - 1) in the present stage of transmitters;
 - 2) taking into consideration the reparation of war damages, and
 - 3) taking into consideration the future development of broadcasting stations during a period to be determined by the Conference."

(Point 2 of Report No. 2 of Working Group A, Document No. 67, adopted by Committee 6, 12 November 1948, Document No. 113).

3. "...has decided to ask...all Delegations..as to the extent to which the practical results of the draft plan submitted by the Soviet Delegation for the period of June sunspot median, satisfy the different countries in aspect of:
 - a) Directional broadcasting, or reception area;
 - b) Allocated frequencies and time for broadcasting;
 - c) The total number of channel-hours per band assigned to the several countries;
 - d) Simultaneous frequency sharing."

(Point 1 of Document No. 217, Approved by Committee 6, 29 November 1948, Document No. 227).

This latter text can be applied in the same manner to the draft plan of the Delegation of the U.S.A.

III.

In order to put in force the general provisions adopted by Committee 6, cited above, Working Group 6-A proposes that the following practical measures should be adopted by Committee 6:

1. From the ___th of January, 1949, Working Group 6-B shall proceed to interview the various delegations:
 - a) on the subject of global numbers of channel-hours allotted, taking into account especially the Portuguese Document. (Point II-2 of this report).
 - b) on the subject of suggestions for improvement of the detailed draft of allotment of frequencies in the form of channel-hours (Point II-3 of this report) concerning the draft plans presented by the U.S.S.R. and the U.S.A. For the analysis of this latter plan, it is recommended that the delegations use the Form "Working Group 6-C, Form 1".
2. In the course of these interviews, Forms A and B2, established by Committee 5, should be used, and each delegation should be asked especially what, in the opinion of the particular delegation, would constitute the most adequate procedures for the reduction of the requirements, in cases where supplementary reductions seemed necessary, in the order of their importance.

These consultations are to be merely indicative, and should be limited to planning a program of reductions other than those accepted voluntarily, as indicated in the preceding paragraph.
3. The Delegations shall first be interviewed by Working Group 6-B concerning the total of their requirements, from a general viewpoint (especially point III-1a).
4. After Working Group 6-D has at its disposal the first results of this study, it shall in turn proceed to interview each interested delegation regarding the special problem of assignments within the 6 and 7 Mc/s bands, for local or short distance transmissions.

The difference in timing between these two series of interviews will permit Working Group 6-B to hand over, in due time, and with the appropriate comments, the dossiers of each delegation to Working Group 6-D.

5. It would be desirable that the Chairman of Working Group 6-B create, for the purpose of these interviews, three sub-groups, each composed of four members who should, as far as possible, represent the 4 regions A, B, C and D, defined at Atlantic City.

It is also suggested that the members of Group C cooperate with the Chairmen of Groups B and D, for the constitution of these sub-groups.

6. After a preliminary meeting of the sub-groups, intended to establish their membership and to standardize their working methods, the interviews should begin in the course of the coming week, 48 hours after the delegations are in possession of the draft plan of the U.S.A. Delegation.

These interviews should take about a week. At any rate, the total of interviews to be made by Working Groups B and D should be finished by the end of January.

Chairman of Working Group 6-A:

D. ARKADIEV

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City 1948/49

Document No. 471-E

14 January 1949

Original: ENGLISH

Committee 6

PLAN COMMITTEE

Agenda for the 16th Meeting

to be held at 10:00 a.m. 15th January, 1949

1. Continuation of general discussion on the
future work of the Committee (Report of Working
Group A Doc. No. 470).
2. Miscellaneous.

Gunnar Pedersen

Chairman of Plan Committee



INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 472-E

14 January 1949

México City, 1948-49

Schedule of meetings from 17 - 22 January 1949

Morning)

Comm.or W.Group	Monday 17 Jan	Tuesday 18 Jan.	Wednesday 19 Jan.	Thursday 20 Jan.	Friday 21 Jan.	Saturday 22 Jan.	REMARKS
Comm.1W.G.1#			Chairman's Office				
Comm.1W.G.2			1		Plenary Assembly	Plenary Assembly	
Comm. 3	PL.	PL.	PL.	PL.			
Comm. 4#	2	2	2	2			#or W.Group
Comm. 5	1	1		1			
Comm. 5a, b, c			3, 4, 6, 7				
Comm. 6c	5	5	5	5			
Sub.Gr.1 of							
Comm. 6d	3	3	3	3			
Sub.Gr.2 of	Ref.	Ref.	Ref.	Ref.			
(Ann. 6d	Section	Section	Section	Section			

Comm.1 W.G.1, Wednesday from 9.30 to 10.15 to confirm agenda of Pl. Assembly
Afternoon) of Jan. 21 and 22

Comm. 3	PL.	PL.	PL	PL			
Comm. 4	2	2			Plenary Assembly	Plenary Assembly	
Comm. 5			2	2			
Comm. 5a, b, c	3, 4, 6, 7	3, 4, 6, 7					
Comm. 6#	1	1	1	1			#or W.Group
Comm. 6c	5	5	5	5			

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 473-E

14 January 1949

Mexico City, 1948/49

NOTICE TO DELEGATES

Publication of Documents

We regret that flimsy paper for mimeographing cannot be obtained, and it will be impossible to print main Committee reports, final reports of Working Groups and Plenary Minutes on thin paper as requested.

However, these reports will be printed on two sides of the regular mimeograph paper in an effort to keep airmail fees at a minimum for those delegations forwarding such documents to their home countries.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 474-E

13 January 1949

Original: FRENCH

Committees 3, 5 & 6

M O N A C O

OBSERVATIONS ON THE SUBJECTS OF DOCUMENTS NOS. 98 & 382
(USSR Draft Plan)

A. Owing doubtless to a mistake, Document No. 382 states that Monaco has asked for 136 channel hours, whereas the Reports of the preliminary Committees of Geneva and of Mexico indicate 52 and 56 channel-hours, respectively.

Working Group 5A as well as Working Group 6C both show the correct figure of 56 channel hours.

We herewith wish to confirm again the figure of 56 channel-hours, which is very different from the 136 channel-hours of Document No. 382.

B. Why do our requirements amount to 56 channel-hours?

Six programs, two 25 kW transmitters in service at present, a third already ordered, and a fourth which will be ordered in 1949.

For each transmitter, 14 hours of daily use have been anticipated. This seems logical and reasonable.

C. A comparative table of similar countries gives us very different figures, the evaluation of which we have been unable to understand:

COUNTRY	NUMBER OF CHANNEL HOURS REQUIRED	3	USSR PLAN	INCREASE DUE TO VARIOUS FACTORS
		FORMULA USSR		
TANGIER	20	2	8	6
LUXEMBOURG	99	2	9	7
MONACO	56	1	2	1

This comparison is not intended as a criticism of the allotments made to Tangier and Luxembourg, but merely as an indication of an anomaly particularly prejudicial to Monaco's claims.

No formula with a mathematical basis seems applicable to these three countries, since the complementary correction is so much greater than the basic value. In these three cases, as in the case of the Vatican City, there is no basic value. These evidently are special cases or, in mathematical language, isolated points not located on the general fundamental curve. This should be clearly stated, in an explicit and not in an implicit manner.

D. We have been unable to fathom why, in the USSR plan, there should have been added to the misleading results of the mathematical formula, 7 channel-hours to Luxemburg, 6 channel-hours to Tangier, and only one channel-hour to Monaco.

We believe however that the complementary factors taken into consideration by the authors of the plan are in the main the following:

- the importance of existing installations, in accordance with the rule of Atlantic City to disturb present services as little as possible;
- the attitude observed by the particular country during the war, and the damages suffered;
- the intellectual, scientific and artistic activities of the country;
- its contribution towards Peace;
- its economic activities, etc.

We have tried to examine these factors with scrupulous care and complete objectivity; but the reasons for the wholly arbitrary figures of the above-mentioned table remain to us obscure; and we are under the impression that the authors of this in other respects remarkable plan have been misinformed in the particular case of Monaco.

1. Importance of the Installations.

Two very modern and high quality transmitters are at present in operation, using frequencies of:

6035 kc/s, 9490 kc/s, 11 810 kc/s and 17 780 kc/s according to the following schedule:

26 December 1948 -

From 00.00 to 09.30 GMT - 11 810 kc/s)
6 035 kc/s) simultaneously

from 09.30 to 17.00 GMT - 17 780 kc/s)
 9 490 kc/s) simultaneously

from 17.00 to 24.00 GMT - 9 490 kc/s)
 6 035 kc/s) simultaneously

TOTAL: 48 channel-hours.

4 January 1949 -

From 00.07 to 09.00 GMT - 9 490 kc/s)
 6 035 kc/s) simultaneously

from 00.00 to 17.00 GMT - 17 780 kc/s)
 9 490 kc/s) simultaneously

from 17.00 to 01.00 GMT - 9 490 kc/s)
 6 035 kc/s) simultaneously

TOTAL: 36 channel-hours.

Impartial and precise control measurements taken during the past months of May and June by the I.B.O. at Brussels, show that these two transmitters are among the best in existence, with good reception at the technical center of the I.B.O., and that their stability is excellent (frequency variations of less than 25 cycles).

This first complementary factor cannot therefore be unfavourable for Monaco.

2. War Damages.

Monaco's territory was occupied by the Germans until September 1944, date of its liberation by the glorious U.S. Army.

During that time, many citizens were arrested and deported, Some of them were assassinated by the Nazis.

The material damages amount to over 3 million dollars more than twice the budget expenditures for 1948.

This second factor also therefore cannot be unfavourable for Monaco.

3. Attitude during the last War.

Since 1939, in spite of the constant menace of total evacuation, for which the French General Staff pressed considerable relief, exceeding several million dollars in value was given by Monaco to assist the devastated towns, the evacuated population, the wounded, the prisoners, the French

and Allied deportees. In spite of the occupation, the democratic institutions of the country were maintained; more than 400 Jewish families hunted by the Nazis were sheltered and effectively protected until the liberation.

How explain, then, that all that material aid can be represented as a complementary factor relatively unfavorable to Monaco? Certainly, there has been an error and a lack of information.

4. Other factors.

The comments in Document No. 36 on the work of the Geneva Committee have already called to mind the intellectual, scientific and artistic activity of Monaco, the seat of the International Hydrographic Bureau and a member of UNESCO. Is it known that in 1900, before the Hague Peace Conferences, Prince Albert I founded the first International Institute for Peace, and that ten years later Prince Louis II held the first International Conference for the Humanization of War at his palace?

We wish to be brief, and to avoid a too lengthy enumeration of the universally known activity of Monaco in these various fields; but we must say that here again we have failed to find any reasons that can explain the number of channel-hours given in the comparative table at the beginning of this Document.

What, then, can be the additional considerations which led the authors of the Plan to treat Monaco so badly, since all the considerations which come to mind, on the contrary, are favorable?

We know well that the importance of Monaco in the world is very slight, and that in the eyes of some countries it does not merit much attention. But that does not in any way justify unfair treatment of Monaco. We have not heard any one in Mexico City advocate Justice for the great powers only and the Devil take the small ones! No! It must simply have been a case of error and a lack of information.

Monaco does not ask for a great deal in absolute figures. A few dozen channel-hours would be sufficient. But this country, which has a good HF broadcasting station, intends to make use of it and in this way do good service to international broadcasting.

Monaco, like Luxemburg, Tangier and The Vatican City, is a special case which deserves the careful and benevolent consideration of the Conference, and as its corollary a more equitable assignment than that appearing in the present unrevised draft No. 98 (USSR).

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 475-E

14 January, 1949

Original: ENGLISH

Committee 4

REPORT OF THE TECHNICAL COMMITTEE

30th Meeting

4 January 1949.

(Morning Session)

1. After ascertaining that the necessary quorum was present the Chairman opened the meeting at 10.15.

2. The Chairman said that before studying the 6th report of Working Group 4A, as given in Document 335, there was a letter from the Chairman of Committee 6, which read as follows:

The Chairman of Committee 4

3rd January 1949

Dear Mr. Chairman,

At the 14th Meeting of Committee 6, held on 22nd December 1948, a discussion took place regarding the possibility of increasing the liaison between Committees 4 and 6. It was felt that the necessity for closer liaison was becoming more apparent, particularly in view of the formation of the new Working Group 6D, which will have to deal with a certain number of technical problems. My proposal, which was accepted by the Committee, was that Committee 4 be asked to nominate certain delegates, who would act in the capacity of co-ordinators between Committee 4 and Working Groups 6B and 6D.

If this is agreeable to your Committee, I would be grateful if you could let me have the names of those delegates who will be able to give this valuable assistance to the work of my Committee.

Gunnar Pedersen

Chairman of the Plan Committee

3. It was decided to postpone any decision with regard to this letter until the afternoon session of the Committee.

4. The delegate of Roumania said he wished to know the exact terms of reference of Working Group 6D.
5. The delegate of Argentine said he would try to clarify the doubt in the mind of the delegate of Roumania. The work of Working Group 6D was to try to arrive at a formula for the best allocation of frequencies in the lower frequency bands but not to discuss any technical points that were being covered by Committee 4. Working Group 6D was going to formulate concrete questions for Committee 4.
6. The Chairman said that the next item on the Agenda was the discussion and approval of Document 335 and he suggested that the document be considered paragraph by paragraph.
7. Paragraph 1 was approved unanimously.
8. Referring to Paragraph 2 the delegate of Argentine pointed out that the Spanish text was not very clear starting from "The records were made....." and asked if this could be read in English. Continuing, the delegate of Argentine said that since a tolerance of ± 100 c.p.s. had been agreed he did not understand why the figures had been taken from the mean curves for 20 and 100 c.p.s.
9. The delegate of Mexico stated that there was the possibility of a variation of 100 c.p.s. but this would only happen in extreme conditions and so figures corresponding to 40 to 50 c.p.s. had been taken.
10. The delegate of Pakistan asked to what percentage of satisfied listeners the 8 db figure referred.
11. The delegate of the U.K. said he felt that something was omitted from paragraph 2, possibly in duplication (1), because as it read at the moment it was not very clear. Reference was made to 20 c.p.s. and 100 c.p.s. curves without saying what those curves represented. He suggested that a slight addition in the second sentence of paragraph 2 be made. Starting with the sentence "The records were made, etc....." insert a comma after "100 c.p.s." and then add "curves were plotted showing the relationship between the protection ratio and the percentage of satisfied listeners". This would clarify the nature of the two curves referred to.
12. The delegate of the U.S.A. said he agreed with the suggested proposal of the delegate for U.K. Continuing Mr. Veatch said that to satisfy 50% of listeners, 7 db was necessary while to satisfy 80% of listeners, 8 db was necessary. Actually the figure was not constant but was 8 db approximately between percentages of 50-90.

(1) Note by the Secretariat: One typographical error exists. On line 5, read "of" for "ob"

13. The Chairman asked if there were any comments on this point.
14. The delegate for Pakistan suggested 100 c.p.s. as being more practical and not to take the mean curve as approved by the Working Group.
15. The delegate for U.S.A. pointed out that a tolerance of 100 c.p.s. did not hold for 100% of the time. The mean curve might be a little high but it would not be correct to use the curve for 100 c.p.s. since this extreme tolerance would only occur for a small percentage of time. Continuing, Mr. Veatch said that the measurements made with the first setting of the receiver were more important than the day to day variation.
16. The Chairman said that two points emerged out of the statement of the U.S.A.:
- (I) The frequency remains constant after setting.
 - (II) Whether a more lenient tolerance than 50 c.p.s. should be adopted.
17. The delegate of the Argentine said that if curves were drawn and added to the report of Committee 4 this would clarify paragraph 2 and he suggested that this should be done.
18. The delegate of Mexico suggested that the new curves should include an intermediate curve and this intermediate curve could then take the place of the 8 db quoted in the report.
19. The Chairman said this should be added as an Annex to Document 335.
20. The delegates of the U.K. and the U.S.A. supported this proposal.
21. The Chairman said that in the absence of any further information he would leave it to Working Group 4A to provide the curves.
22. Following a request from Mr. Richardson, the delegate for Mexico said that his delegation would be pleased to make the curves available.
23. The Chairman wished to know how this curve would be designated, i.e. mean curve, average curve or a curve which represented so many cycles deviation.
24. Following a suggestion of the delegate of Mexico it was decided that the curve be designated as an intermediate curve of average deviation.

25. The delegate of India said he did not agree with the majority decision of Working Group 4A when they had recommended the protection ratio of 23 db for the wanted to unwanted signal for co-channel interference in the absence of fading. The objections of the Indian Delegation were based upon the following facts. Firstly, from the experience of the Indian Delegation collected over a number of years they had come to the conclusion that under practical conditions the protection ratio required against co-channel interference should be at least equal to that provided for protection against atmospheric noise. Secondly, the results of the listenening tests were not conclusive because they did not simulate actual listening conditions. Thirdly, in the setting up of the necessary standards the Committee should not lose sight of the frequency deviation and frequency tolerance figures that had been recommended.

Bearing in mind these factors the delegation of India proposed the adoption of the figures recommended at the Mexico City Session of the Planning Committee. The delegate of India then quoted the following recommendation from the report of the Mexico Planning Committee:

"To establish 40 db as the standard ratio of the field intensity of wanted to unwanted signal on the same frequency for steady field not subject to fading."

26. The delegate of Pakistan strongly supported the view expressed by the delegate for India and said he wished to point out that in Document 61 Rhf of the Atlantic City H.F.B.C. Dr. Van der Pol had stated that in the case of wanted and unwanted signal the ratio should be 0.003, or even less than this. This meant a figure greater than 40 db and therefore the figure of 23 db was too low. He strongly supported a ratio of 40 db.

27. The delegate of the U.S.S.R. said that the proposal made by the delegate of India and supported by the delegate of Pakistan was not based on technical considerations. If the curves prepared by the delegate of Mexico were consulted, it would be seen that 40 db corresponded to approximately 97% or 98% satisfied listeners and it was not rational to take such a high percentage. The figures adopted by the Planning Committee in the Mexico City Session and quoted by the delegate of India were not based on technical data but had been adopted by a majority vote and were unsound. As to the Atlantic City H.F.B.C. Conference, very clear recommendations had been given there and he wished to make the following quotation from Chapter 5, Part A, paragraph 9(a) of that report:

"The ratio of wanted to unwanted signals (median to median values) for shared-channel transmissions if possible shall be 100".

Therefore the Atlantic City H.F.B.C. Conference recommended for a fading field, a ratio of 40 db and this figure would be less for steady fields, much lower than the figure proposed by the delegates of India and Pakistan. The U.S.S.R. delegation thought that the proposal of the delegate for India was based on unrealistic conditions. The ratio of 40 db was quite unnecessary and such a high standard was harmful from the point of view of the sharing possibilities.

28. The delegate of the U.S.A. said he thought that the figure of 23 db was somewhat low but pointed out that there were great dangers if it was made too high. He said he would like to point out, as he had already pointed out to this Committee, that as a result of tests, the average listener had accepted a figure of 26 db and he was willing to accept this figure instead of 23 db. Continuing, Mr. Veatch pointed out that industrial noise, atmospheric noise and adjacent channel interference would actually be the limiting factors.

In conclusion Mr. Veatch said 'it was necessary to decide if a 50 c.p.s. tolerance were going to be adopted because this was an important point and one which was constantly being raised in this Committee.

29. The delegate of the U.K. said he had considerable sympathy with the delegates of India and Pakistan because they felt that 23 db was too low. He thought it was too low because it corresponded only to a percentage of satisfied listeners of no higher than 60%. He also felt exactly the same with regard to the ratios for signal to atmospheric noise ratio and signal to industrial noise ratio which corresponded to a percentage of satisfied listeners of something of the order of 60. However, the most important thing for this Committee at the moment was to try to be consistent in arriving at the various ratios. There was no need to worry if the figures were slightly too high or too low because in the case of signal to noise ratio it had been agreed to incorporate the relevant curves, and the Planning Committee could decide those matters on the recommendations and curves given to them. In conclusion Mr. Fryer suggested in paragraph 2(a) that the words "corresponding to about 60% satisfied listeners" be added after the word "signal".

30. The delegate of France said he had listened with great interest to the suggestion made by delegates and he had followed the work done by Group 4A but he was surprised that the Committee had not taken into account the work done by the P.F.B. in Geneva. The P.F.B. had worked for many months and had recommended a protection ratio for the wanted to unwanted signal, taking into account fading, of 40 db.

Mr. Mercier said he would like to speak on the methods adopted in the 6th report where a great effort had been made to reach a

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final figure taking the following three factors into account:

- (1) Without fading.
- (2) Hour to hour fading.
- (3) Long term fading.

The figure for (1), namely 23 db, was not a happy one and might have to be increased. With regard to the second and third figures he wondered if it was correct to add them arithmetically. The P.F.B. had started with a figure of 15 db as the allowance for all types of fading but they had subsequently reduced that figure to 10 db. In conclusion Mr. Mercier said that based on the recommendations of the P.F.B. he supported the figure of 40 db, taking into account all types of fading.

31. The delegate of Mexico stated that at the meeting of Working Group 4A he had abstained from voting on the question of co-channel interference. Other delegations had voted but had submitted reservations to bring the matter up again in Committee 4, while others had only voted on the total protection ratio figure. Now the question was being discussed further. When industrial and atmospheric noise protection ratios had been discussed the Mexican delegation had thought that the figure appropriate to 60% of satisfied listeners was low, but tolerable, but for co-channel interference the Mexican delegation felt that the protection ratio corresponding to 80% satisfied listeners had to be accepted. This was necessary because, to a large extent, measures could be taken to overcome industrial and atmospheric interference but this was not possible when co-channel interference was present. The Mexican delegation therefore proposed a figure of 28 db in paragraph 2(a).

32. The delegate for the U.S.S.R. said he could not agree with Prof. Buchanan that there should be discrimination between industrial and atmospheric interference on the one hand and co-channel interference on the other. He agreed with the delegate for the U.K. that the Committee must be consistent and adopt the same percentage for all types of interference, especially as the figure of 23 db proposed by the delegate for the U.S.A. was a minimum figure which would of course be unsatisfactory. The delegate of the U.S.S.R. said he had listened with interest to the delegate of Mexico because the final figure of 40 db was the exact figure adopted by the U.S.S.R. delegation. The figure of 8 db for short term fading had been taken from the work of Prof. Siforov and was an extreme figure while the figure of 9 db for long term fading was too high. In conclusion the delegate of the U.S.S.R. said he proposed that a figure of 23 db minimum be adopted in paragraph 2(a) and a combined figure of 10 db in paragraphs 2(b) and 2(c).

33. The delegate of Mexico said he wished to make some observations on the comments made by the delegates for the U.S.S.R. The U.S.S.R. delegate had mentioned that figures should be adopted for the same percentage of satisfied listeners for all types of interference. The delegation of Mexico had presented reasons to indicate that the atmospheric noise was not constant, and if protection was given at noisy hours then at less noisy hours there would be greater protection. Industrial noise was also not constant and since industrial noise was usually at its minimum during peak listening hours, a rather lower value for protection against industrial noise had been adopted. It was possible to suppress industrial noise but nothing could be done to suppress co-channel interference. The delegate for the U.S.S.R. supported the adoption of only one value for fading - 10 db - and since the U.S.S.R. supported 40 db for the total protection ratio taking into account fading, then this meant that for steady state condition the U.S.S.R. agreed to a figure of 30 db which corresponded to about 90% satisfied listeners and not 60%. In conclusion the delegation of Mexico felt that the acceptance of a figure a few db above the 23 db recommended in paragraph 2(a) would not seriously decrease the possibility of sharing.

34. The delegate for the U.S.A. said he would like to try to summarise the work which had been done at this Conference with respect to this particular point. This Committee was in a better position than any other Group to obtain final figures because work done by the other Groups, including the P.F.B., was available to this Committee, while experimental evidence had been produced at this Committee which had never been available before. This Committee should therefore not go back to the P.F.B. recommendations because the P.F.B. had not had all the information available when they had made their recommendations.

With regard to the figures of 9 and 8 db which had to be added to take into account fading; the 9 db came from Prof. Siforov's work with an equal signals in random phase and if protection was required for 90% of time then this 9 db must be added. The figure of 8 db had been arrived at from statistical analysis carried out over a period of 15 years. The 17 db (9 + 8) was therefore more accurate than the 23 db figure since it was based on more detailed study and analysis. If the protection ratio of 23 db was adopted it would give a better protection ratio than 40 db for the greater percentage of the time.

35. The delegate for Argentine suggested that the meeting should not take a decision on point (a) but should first try to adopt figures for points (b) and (c).

36. The delegates for Egypt and Mexico supported the Argentine proposal.

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37. The Chairman then opened the discussion on points (b) and (c).

38. The delegate for the U.S.S.R. said that he had pointed out on several occasions that figures quoted for fading, in this and similar reports, had not sufficient theoretical basis. Long term fading was determined by absorption and was not as a rule due to local conditions. By covering a considerable area both the wanted and unwanted signal were affected simultaneously. Conditions where one of the signals was affected more than the other only occurred when there were abnormal ionospheric conditions, but this condition occurred very rarely. For this reason the U.S.S.R. delegation did not understand why an allowance of 9 db had to be made for long term fading. On the basis of work carried out by Prof. Siforov the delegation of the U.S.S.R. proposed a figure of 10 db to cover both short and long term fading.

39. The Chairman said that discussion on this point had now proceeded for a considerable time and he suggested that a vote should be taken on this subject.

40. The delegate of U.S.S.R. said he wished to know if the delegate of France had made a definite proposal.

41. The delegate of France replied that he had not made a concrete proposal but had merely sought clarification on whether the 8 and 9 db as given in paragraphs 2(b) and 2(c) should be added arithmetically. If he had made a concrete proposal he would have suggested a combined figure of 12 db to cover both types of fading.

42. The delegates of the U.S.S.R., Bielorussia, Bulgaria, Hungary and Roumania requested a secret ballot.

43. The delegate for Switzerland said that in order to be consistent with the procedure adopted yesterday he would request the delegate of the U.S.S.R. to modify his proposal to 12 db, which was the root sum square of the two figures given in paragraph 2(b) and 2(c).

44. The delegate of the U.S.S.R. said that in order to obtain unanimity his delegation was prepared to accept the amendment suggested by Dr. Metzler.

45. The delegate for Egypt said if the meeting was going to vote on this amended proposal it should be discussed first.

46. The delegate for the U.S.A. stated that he felt that after having worked on this type of problem for 12 years he was completely lost. He was not sure what had happened yesterday but 8.2 db was

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the figure for one signal for 90% of the hour while the 9 db was for two signals for 90% of the hour. It was not possible to add this 9 db to the day to day values any more than it was possible to add it to a barrel of apples.

47. The delegate for Belgium and the Belgian Congo said that he was perturbed by the figure of 23 db. There were cases in tropical broadcasting when this ratio seemed a little low but on the other hand the figure of 40 db was also rather doubtful. The delegation of Belgium and the Belgian Congo considered that a figure of approximately 26 db would be satisfactory because tropical broadcasting deserved a figure corresponding to a greater percentage of satisfied listeners.

48. The delegate of Roumania said he agreed to the figure of 12 db if it meant unanimity.

49. The delegate of the U.S.S.R. said that fading was subject to the laws of probability. So, from the practical and theoretical point of view his delegation would support the figure of 12 db suggested by France and Switzerland.

50. The Chairman said the acceptance of 12 db was to gain unanimity and this would be put to the vote.

51. The delegate of Switzerland said he had taken the figure of 12 db, which Mr. Mercier had stated a moment ago, merely because it appeared to agree with the method which the Committee had taken yesterday when two protection ratios had been added by taking their root sum square. He had not investigated the mathematical side of this but he had faith in the work of others.

52. The joint amendment of the U.S.S.R., France and Switzerland was approved by 20 votes for to 19 votes against with no abstentions and so it was decided to amend paragraph 2 (a) and 2(c) of document 335 to read "An addition of 12 db to the steady state ratio to provide protection for 90% of the hours and 90% of the days".

53. The delegate for India said that he did **not** agree with the 12 db and therefore reserved the right to reopen the matter at the next Plenary.

54. The Chairman said that the meeting should now take a decision on point 2(a).

55. The delegate of India said he had already proposed a figure of 40 db for paragraph 2 (a) and he had been supported by the delegate of Pakistan.

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56. The delegate of France said he supported the figure of 28 db which had been suggested earlier in the meeting by the delegate of Mexico.

57. The delegate of U.S.S.R. said he supported the Mexican proposal of 28 db.

58. The delegate of Egypt suggested a figure of 34 db for paragraph 2 (a).

59. The delegate of the U.K. said that up to now the Committee could congratulate itself on the strictly technical basis on which all the figures had been reached. The figure of 23 db was arrived at on a basis of recordings for steady state conditions and did not depend on conditions of fading and he considered it wiser to retain a figure of 23 db.

60. A vote then took place on the Egyptian, Indian and Mexican proposal with the following results:-

	<u>Yes</u>	<u>No</u>	<u>Abstentions</u>
India proposal	2	33	2
Egypt "	3	29	5
Mexico "	21	16	2

The Mexican proposal was therefore accepted.

61. The delegate of Mexico said he thought that the decision just taken with regard to paragraphs 2 (b) and 2 (c) should be considered transactional because it could not represent 90% of the hours and 90% of the days. Paragraph 2 (a) would have to be modified to 28 db.

62. The Chairman replied that as far as point (a) was concerned, 28 db was correct. As far as points (b) and (c) were concerned it was not transactional and 12 db had been definitely accepted by the vote. If, however, at a later date the majority wished to reopen discussion on the matter this could be done.

63. The delegate for the U.S.A. agreed with the Chairman but said he thought that 12 db had not been adopted as the figure for 90% of the days and 90% of the hour. The 12 db figure was simply to take into account the long term and short term fading.

64. The Chairman agreed with the delegate for the U.S.A.

65. The delegate of the U.S.S.R. said he did not understand the final text of this paragraph and wished to know how it was to be worded. The proposal adopted was not a compromise but was a proposal submitted jointly by three delegations.

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66. The Chairman agreed that it was not a compromise.

67. The delegate of the U.S.S.R. said this figure of 12 db was based on the figures on 8 and 9 db which had been put together geometrically and therefore the figure of 90% still held.

68. The delegate of Egypt said he could not agree that the wording "90% of the hour and 90% of the days" could be retained. Yesterday similar figures had been added arithmetically while today they were added geometrically and both methods could not be correct.

69. The delegate of Pakistan said he agreed with the proposal of the delegate of Mexico because he could not accept the fact that this 12 db referred to 90% of the hours and days; nor did he agree with the method by which the 12 db had been derived.

70. The delegate of Mexico said it was very difficult to decide whether the root sum square value did correspond to 90% of the hours and days, so he suggested that the paragraph to replace 2 (b) and 2 (c) should simply state that a figure of 12 db had been adopted to take account of all types of fading.

71. The delegate of Belgium then submitted the following proposal: "The Committee had decided to select 12 db although certain delegations considered that they had to add arithmetically the figures 8 and 9, although other delegations considered that the square root should be added while others considered that the figure of 12 db should be adopted because they were not sure of the manner in which the figures 8 and 9 should be combined".

72. The delegate of Switzerland said that since there was obviously uncertainty on the method to be applied in adding protection ratios the matter should be referred to Working Group A in the same manner as the Annex of report No. 5 had been referred back to the Working Group.

73. The delegate of Argentina said that a final figure of 12 db had been arrived at but nobody could state exactly how this figure had been derived.

74. The delegate of the U.S.S.R. said he did not agree with the Argentine statement because the U.S.S.R. delegate knew how the figure of 12 db had been reached. Continuing, the delegate of the U.S.S.R. said he disagreed with the proposal of the delegate for Belgium, but he was in agreement with the proposal of the delegate of Mexico.

75. The delegate for the U.K. said a decision had been taken the previous day to refer Annex A of the 5th report of Working Group 4A

back to the Working Group for further clarification because several delegates expressed the opinion that they did not fully understand the document. In the present case the percentage of members who did not understand the basis on which the 12 db had been derived was even larger, and as this was a particularly important point he supported the proposal that Working Group 4A should be asked to clarify the situation. Mr. Fryer further pointed out that since this figure was likely to be used for reference purposes at other Conferences he felt it was even more important to get a clear picture on this subject.

76. The delegate of Egypt supported the proposal made by the delegates of Switzerland and U.K.

77. The Chairman said it was important to show how we had arrived at these figures and asked the delegates to decide by a vote whether they thought the matter should be referred back to Working Group 4A.

78. By 25 votes in favour to 1 vote against with 12 abstentions it was decided to refer this question to Working Group 4A.

79. The delegate of U.S.S.R. said he considered that Annex A of Document 300 should be studied in detail and substance by Group 4A.

80. The delegate of Roumania said he agreed with the delegate of U.S.S.R. that Annex A of Document 300 should be discussed again in Group 4A and he would like to know what would be the directive to Group 4A on this subject.

81. The Chairman said that if the majority of the members were in favour of reopening discussion on Annex A he would abide by the wishes of the majority.

82. By 17 votes to 10 with 8 abstentions it was decided not to reopen discussion on Annex A.

83. It was decided that the terms of reference for Working Group 4A in connection with the question of 12 db should be "To clarify how the values of 8 and 9 db for short and long term fading respectively are to be co-related with the combined overall allowance of 12 db for all types of fading".

84. It was tentatively decided that Working Group 4A should meet on Friday afternoon, 7th January.

The Reporter :

P. N. Parkor

The Chairman :

M. L. Sastry

RESULT OF THE CO-CHANNEL INTERFERENCE TESTS CARRIED OUT WITH THE AID OF RECORDINGS MADE BY MEXICO AND THE USA.

RÉSULTATS DE LA DEMONSTRATION DU BROUILLAGE DANS UNE VOIE CO-PARTAGÉE EFFECTUÉE A L'AIDE D'ENREGISTREMENTS PHONOGRAPHIQUES PRÉPARÉS PAR LES ÉTATS-UNIS ET LE MEXIQUE.

RESULTADO DE LAS PRUEBAS DE INTERFERENCIA EN EL MISMO CANAL, EFECTUADAS CON DISCOS FONOGRÁFICOS, PREPARADOS POR LAS DELEGACIONES DE MEXICO Y DE ESTADOS UNIDOS.

РЕЗУЛЬТАТ ИСПЫТАНИЙ, КОТОРЫЕ БЫЛИ ПРОИЗВЕДЕНЫ В СВЯЗИ С ПОМЕХАМИ В СОБЛЮЩЕННЫХ КАНАЛАХ, СДЕЛАННЫХ ДЕЛЕГАЦИЯМИ МЭКСИКИ И США.

100 ~ Difference in Frequency Between Transmitter Carriers
100 ~ Écart Entre les Fréquences Portantes
100 ~ Diferencia Entre Frecuencias Portadoras
100 ~ Разница частот между несущими частотами

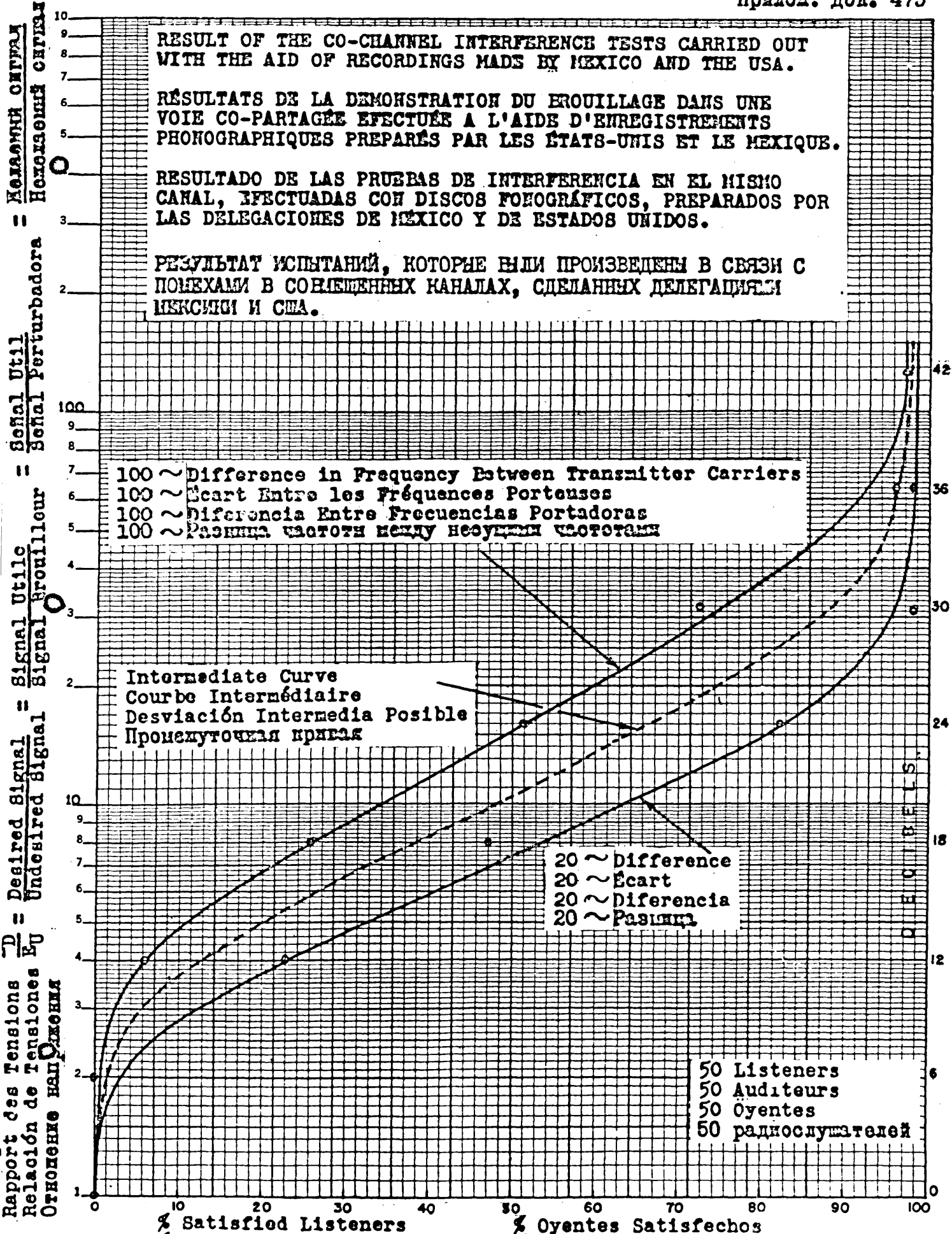
Intermediate Curve
Courbe Intermédiaire
Desviación Intermedia Posible
Промежуточная кривая

20 ~ Difference
20 ~ Écart
20 ~ Diferencia
20 ~ Разница

50 Listeners
50 Auditeurs
50 Oyentes
50 радиослушателей

% Satisfied Listeners

% Oyentes Satisfechos



INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 476-E

14 January 1949

Original: ENGLISH

Committee 4

REPORT OF THE TECHNICAL COMMITTEE

31st Meeting

4 January 1949

(Afternoon Session)

1. The Chairman drew the attention of delegates to the letter, dated January 3, which had been received from Committee 6 and which he had read out to the Assembly during the 30th Meeting.

2. It was decided that the delegation of Italy should be the representative of Committee 4 on Working Group 6 B and that the delegation of Egypt should be the representative of Committee 4 on Working Group 6 D.

It was confirmed that the Chairman and Vice Chairman of Committee 4 could at any time also act as the representatives of Committee 4 on Working Group 6 B and/or 6 D.

3. The Chairman said that the 7th report of Working Group 4 A (Doc. 336) was open for discussion. Mr. Sastry suggested that since the report was in two parts it should be discussed as such.

4. The delegate of the U.S.S.R. said his delegation was not in agreement with the recommendation given in Paragraph 2.A (a) or with the reasons put forward in 2.A (b) to justify the recommendation. Paragraph 2 could not stand up to any technical or logical criticism.

On the basis of the statement in Paragraph 2.A (b) (I) it should have been possible to determine the power required for a given circuit and time of day.

Paragraph 2.A (b) (II) was not understood. It was well known that in calculating the power for a particular circuit there were various factors to be taken into consideration but the art of an Engineer was to select factors so that a reasonable decision could be arrived at.

The statement made in paragraph 2.A (b) (III) was correct and it should not be difficult to derive the maximum power required for circuits once the standards required for satisfactory broadcast reception had been determined. While the first and third part of Paragraph 2.A (b) were in contradiction to the second part there was not one convincing reason in the whole of Paragraph 2.A (b) to prove that unlimited power was necessary.

Those countries, mainly the large ones, who wanted unlimited power had put forward technical reasons as the basis for their desire not to limit the power but in actual fact it was most convenient for these large countries not to have limitation of power. On the other hand it would be most inconvenient for small countries because they were faced with the alternatives of either suffering interference or economic hardship in purchasing transmitters of high power.

Referring to the questionnaire arranged by Committee 3, the delegate of the U.S.S.R. pointed out that 42 countries out of 50 had, in answer to question 20, intimated their desire to have a limitation of power.

In conclusion, the delegate of the U.S.S.R. said he proposed the complete deletion of Paragraph 2.

If it was eventually decided to delete Paragraph 2 then the Committee could decide on a suitable value of maximum power.

5. The delegate of Roumania pointed out an error in the numbering of the pages of the French text.

Continuing, the delegate of Roumania said that his delegation and the delegate of Yugoslavia supported the statement and the proposal made by the delegate of the U.S.S.R.

6. The delegate of India, in supporting the recommendation given in Paragraph 2.A (a), said that in his opinion the reasons given in 2.A (b) were perfectly clear and logical and he proposed the retention of Paragraph 2.

7. The delegates of the U.K. and U.S.A. supported the retention of Paragraph 2.

8. The delegate of Bulgaria said that, speaking as a representative of a small country, he supported all the arguments and the proposal put forward by the delegate of the U.S.S.R.

9. Dr. Metzler said that in the fields of medium and long wave broadcasting an unlimited increase of power could lead to the well known phenomenon of non-linear distortion but in short-wave broadcasting he did not think that such a phenomenon had as yet been noted.

He would, however, like to ask Mr. Richardson if Working Group 4 A had, during their discussions, taken this fact into account.

10. The Chairman said he would also like Mr. Richardson to clarify whether Working Group 4 A had given consideration to the point that once an assignment plan had been prepared, and frequencies had been allocated to give the necessary protection ratios against co-channel and adjacent channel interference, then if any station wanted to increase its power, consideration should be given to the question whether the increase of power would cause co-channel or adjacent channel interference.

11. Mr. Richardson said that there had been no discussion in Working Group A on the point raised by Dr. Metzler. Continuing, Mr. Richardson said that the point raised by Mr. Sastry had been discussed by the Working Group where it had been assumed that once the assignment plan had been prepared, no alteration in power would take place. It was also thought that if an increase of power was requested then the Implementation Committee would produce the necessary procedure to cover this contingency.

12. The Chairman said he thought that it would be a good idea to add an additional paragraph in 2 (b) to cover the point that he had just raised.

13. The delegate of the U.S.A. said that his country had in one particular case operated a station using a power of 9 megawatts and no non-linear effects had been noticed. Continuing, the delegate of the U.S.A. said that at the Geneva Planning Committee when the question of sharing was being considered, it had been found that, depending upon conditions, location of receiver, location of transmitter etc. two stations which did not experience interference when using 1 kW each, did not experience interference when the power of one of them was increased to 100 kW. In other cases it had been found that with two stations using a power of 1 kW each and experiencing no interference, an increase in power of one station to 5 kW could cause interference. It was, therefore, not possible to say, without considering all factors, what maximum power could cause interference and for that reason the delegate of the U.S.A. considered that a limitation of power was unnecessary.

14. The Chairman said he agreed with the statement made by the delegate of the U.S.A. but he still felt that the paragraph he had suggested should be added to Paragraph 2.A (b).

15. The delegate of the U.S.S.R. said he had listened with interest and surprise to the statement made by the delegate of the U.S.A. Since the field strength varied as the square root of the power radiated, he failed to see how an increase of power failed to increase the chances of interference.

Continuing, the delegate of the U.S.S.R. said that the decisions in Working Group 4 A had obviously been taken without thorough and

serious consideration of the problem of power limitation. The reasons for not limiting the power were not technical but were merely to satisfy the egotistical desires of certain large countries who wished to inconvenience the small countries.

Finally, the delegate of the U.S.S.R. said that Committee 4 must take into account the fact that 42 countries out of 50 had expressed their desire, in answer to question 20 of the questionnaire prepared by Committee 3, to have a limitation of power.

16. The Chairman said that the delegate of the U.S.S.R. had obviously misunderstood the statement made by the delegate of the U.S.A.

Continuing, the Chairman suggested that as a compromise, the following clause should be added in Paragraph 2.A (b):

"Once the assignment plan is prepared, the power should only be increased providing the protection ratios against co-channel and adjacent channel interference are preserved".

17. The delegate of the U.K. pointed out that the objective of the Conference was to produce an assignment plan that would be satisfactory from all points of view including protection from co-channel and adjacent channel interference. The question of including a paragraph in the present document to the effect that the power should not be increased above the power which was initially recorded in the Plan, unless the same protection ratios etc. were preserved, was satisfactory in principle, but he felt it necessary to point out the danger of encroaching on the work of either Committee 6 or Committee 7. At present, Working Group 7 A were studying the question of the conditions under which the final plan could be modified. So, if a paragraph on the lines suggested by the Chairman was adopted, it should be carefully worded.

18. The Chairman said that his proposal could be dropped at once if the Assembly so desired.

19. The delegate of Belgium and the Belgian Congo stated that he considered that a limit of power was necessary in order to preserve the protection ratio, otherwise there was no need to make a plan. Continuing, the delegate of Belgium reiterated the need for freedom in broadcasting but without causing interference to other countries. In conclusion, Mr. Henderickx said that his delegation supported the views expressed by the delegate of the U.K. that the matter raised by the Chairman was not really the responsibility of this Committee.

20. The delegate of Czechoslovakia said that a power limitation for short-wave transmitters was indispensable, especially for the smaller countries such as Czechoslovakia. His delegation therefore supported the U.S.S.R. proposal.
21. The delegate of the U.S.S.R. said that his delegation did not understand the compromise proposal suggested by the Chair, since it appeared to contradict the recommendation given in Section 2 A (a) of the document. Such a compromise proposal only caused confusion.
22. The Chairman again expressed his willingness to drop the proposal at the earliest moment if that was the desire of the Committee. Continuing, Mr. Sastry pointed out that the proposal did not, in his opinion, equate itself to zero. The power of a transmitter could be increased as long as it did not cause interference either on the same or on an adjacent channel so the compromise proposal was not suggesting a definite limitation of power.
23. The delegate of the U.S.S.R. said he would like to point out that his delegation did not object to an increase in power in individual cases, but this increase should be up to a certain specified limit.
24. The Chairman agreed that there should be limits, and said that these should be judged by the results produced rather than by a fixed number of kW.
25. The delegate of the U.S.S.R. said that they proposed that Paragraph 2 of the 7th Report of Working Group 4 A should be deleted and that it should be substituted by a paragraph to the effect that power limitation was to be fixed by the Committee. The delegate of the U.S.S.R. suggested the following text for Paragraph 2:
- "Committee 4 considers it necessary to limit the maximum power of broadcast transmitters."
26. At the request of the delegates of the U.S.S.R., Bielorussia, Ukraine, Roumania, Bulgaria and Hungary, a secret ballot was held on the U.S.S.R. proposal. The U.S.S.R. proposal was carried in the secret ballot by 21 votes for to 15 against, with no abstentions.
27. The Chairman then announced that the Committee had therefore decided to fix an upper power limit for broadcast transmitters, and that they had now to decide what that limit was to be.
28. The delegate of Roumania proposed that a peak power of 120 kW should be accepted as the maximum power for the transmitter.
29. The delegate of the U.S.A. said that the U.S.A. delegation had, at the request of Working Group 4 A, interrupted the work of the Mexican engineers on field intensity studies in order to investigate the power required on a few typical circuits. It had been found that the 30 kW carrier power (120 kW peak power) now proposed would not meet the

requirements of a large number of long circuits. Mr. Veatch suggested that before proceeding any further the Committee should define a transmitter.

30. The Chairman asked the delegate for the U.S.A. and other delegates whether they had a definition of a transmitter which they would like to submit for consideration.
31. The delegate of the U.S.S.R. pointed out that the power required for various circuits had been included by all the countries in the Forms 4 when the countries' requirements had been submitted, and it was necessary, therefore, to abide by the figures given there.
32. The Chairman pointed out that the powers given in Document 144 were the carrier powers and not the peak powers of the transmitters.
33. The delegate of the U.S.S.R. agreed with the Chairman that the carrier power and not the peak power should be taken as a basis, and his delegation, therefore, proposed that a maximum power of 120 kW on the carrier frequency should be established.
34. The Chairman then said that there were two proposals, that of Roumania (a peak power of 120 kW which was four times the carrier power of 30 kW), and that of the U.S.S.R. (a carrier power of 120 kW, with 480 kW as the peak power of the transmitter).
35. The delegate of Roumania then said his delegation would like, in view of the fact that the power given on Forms 4 was carrier power, to withdraw their proposal and would like to express their support of the proposal of the U.S.S.R.
36. The Chairman agreed to withdraw the Roumanian proposal in favour of the 120 kW carrier power proposed by the delegation of the U.S.S.R. Continuing, the Chairman said he thought that, as a technical committee it was the effective power rather than merely the power of the transmitter that should be defined. He said it was open to the assembly to decide whether they defined the transmitter power or the effective power which included the antenna gain.
37. The delegate of Argentine said that his delegation considered that the maximum value of the field intensity in the reception area should determine the limitation of power. In that way each country would be able to determine what power it required for each circuit requirement.
38. The Chairman agreed with the opinion expressed by the delegate of Argentine, but said that the problem still arose to find a limit for the transmitter power alone or for the transmitter power plus the antenna gain.

39. The delegate of Argentine said that the Committee had agreed to limit the power and his delegation felt that this power limitation should be determined by the maximum value of field intensity required in the reception area.
40. The delegate of Egypt pointed out that the problem was becoming unnecessarily mixed, and it was necessary firstly to fix the limitation of the power of the transmitter.
41. The Chairman pointed out that the delegate of Argentine had said that the maximum power should be derived from the maximum field strength and had not mentioned the field strength to be protected.
42. The delegate of the U.S.S.R. said that he thought that the delegate of the Argentine was speaking on an entirely different question, i.e. the second part of the question in the 7th Report of Working Group 4 A, which was the value of the signal to be protected. He pointed out that the Committee was now considering the first question which was the limitation of power, and this question was entirely separate from the question of field intensity. On the question of the effective power the U.S.S.R. delegate said that since different antennas having different coefficients of amplification would be used for different frequencies and different types of circuits it was not practically possible to try and set a limit in terms of the effective power radiated. Therefore the U.S.S.R. delegation considered, after considerable study, that the limitation should be made in respect of the power on the carrier frequency of a broadcast transmitter, and that the carrier power should be 120 kW.
43. The Chairman then asked what would be the propriety of defining a transmitter power of 120 kW when, with an antenna gain varying from 1 to 20 db, it would be possible to raise the effective power up to a value of 12000 kW. If a maximum effective power was quoted then there would be no question of variation.
44. The delegate of Mexico supported the proposals made by the Chairman and the Argentine delegate and stated that it was the effective power that should be considered. The delegate of Argentine had proposed that once the minimum signal which should be protected had been fixed, the maximum signal with which the specific area could be served could also be fixed, and thus the maximum power of the transmitter could also be fixed. The delegate of Mexico supported this view.
45. The Chairman then pointed out again that the effective power of the transmitter was of greater importance than the transmitter power alone.

46. The delegate of France said that when a limitation of power had been mentioned his delegation thought this was the unmodulated transmitter power as indicated in the Atlantic City documents and also in the Forms 4. One of the aims in the consideration of the limitation of power should be to avoid interference especially in adjacent channels. In a report of Working Group 4 B it had been stated that a directive antenna should be assumed to radiate in all directions, other than in the direction of the main lobe, a power equal to the power in the transmitter. In conclusion the delegate of France said that he did not think that the Plan Committee would assign frequencies in adjacent channels to transmissions destined for one and the same area and he supported the proposal that the maximum power should be that of the unmodulated carrier.
47. The delegate of the U.S.S.R. supported the statement made by the delegate of France. There were the two questions, the field intensity and the limitation of power and the statement made by M. Mercier, that the radiation in the undesired direction was determined by the power in the transmitter, forced the U.S.S.R. delegation to adopt a limitation of power without considering the gain in the antenna.
48. The delegate of Cuba expressed his complete agreement with the proposal of Mexico and Argentine.
49. The delegate of the U.S.S.R. said that Mexico and Argentine were attempting to substitute the question of the limitation of power of a transmitter by the question of the value of field intensity. The question at present under discussion was the former, and his delegation objected to any attempt to circumvent the decision taken in regard to the limitation of power.
50. The Chairman then said that the assembly was at full liberty to rule any proposal as out of order. Continuing, Mr. Sastry said he would like to ask the delegate of the U.S.S.R. on what basis the figure of 120 kW had been fixed, since 100 kW was the maximum power requirement submitted by any country in Forms 4 (with the exception of the 400 kW of the Netherlands).
51. The delegate of the U.S.S.R. said that this figure was fixed when the power for various circuits had been calculated. This power was the highest power considered necessary if the correct selection of time of transmission and working frequency were made.
52. The delegate of Mexico said he proposed that points (a) and (b) should be considered simultaneously because if the minimum and maximum level of field intensity was fixed it would mean that the maximum power could automatically be determined. If a high power transmitter limited its radiation in the non-desired directions to a power of approximately 100 kW then this would act in the same way as a transmitter with a limited power of 100 kW.

53. The delegate for the U.S.A. said that he was inclined to agree with the delegates of Mexico, Argentine and Cuba, that the most important factor was the field at the receiving end. A limitation of power was not going to help in the question of protection ratios because he could prove that depending upon certain conditions a 10 kW transmitter could be just as dangerous from the interference point of view as a 1 megawatt transmitter. Mr. Veatch again stressed the fact that it was essential first to define a transmitter.
54. The delegate for the U.S.S.R. said that his delegation's proposal was quite rational as it aimed primarily at preventing one station from interfering with another station. The Mexican proposal seemed rather vague, and appeared to go a long way round to reach the aim it was intended to achieve.
55. The delegate for Egypt said that he could not agree with Mr. Buchanan's suggestion that points (a) and (b) should be linked, because the minimum field to be protected was a different question from the maximum permissible power of a transmitter. The delegate of Egypt gave an example to confirm his opinion.
56. The delegate of Switzerland said that he had listened to the discussion very **care**fully and he had come to the conclusion that there were two points of view. The first point of view was that expressed by the delegates of the U.S.S.R. and France and the second point of view was that expressed by the delegates of Mexico and Egypt. Both these points of view could be correct, depending upon the position and conditions at the receiver. If the receiver was in the path of one transmission beam then the former delegate's opinion would be correct, but if the receiver was in the path of two beams then the latter's opinion would be correct. Mr. Veatch had also been correct when he stated that conditions in the reception area were of prime importance. If the view expressed by the delegate of Egypt was accepted it would mean that it would be impossible to decide on any value of maximum power unless the geographical positions of the receiver and transmitter were taken into consideration together with the direction of the radiating beam.
57. The Chairman expressed his agreement with Dr. Metzler's views, and said that in his opinion it was necessary to define the effective power and not the transmitter power.
58. The delegate for Pakistan said he wished to point out that Prof. Siforov's report gave a power of 120 kW on an assumption that suppression of industrial noise would be applied. He would like a clarification of this point.

59. The delegate for the U.S.S.R. said that Professor Siforov's report was intended to convey the fact that in large cities it would be impossible to have a reasonable standard of satisfactory field intensity without suppression of industrial noise. The figure of 120 kW was based on the assumption that the field required in the reception area was a few hundred microvolts per metre. If industrial noise was not suppressed then it would mean that a field of about 25 millivolts per metre would be required for satisfactory reception and this meant that an excessively high power would be required. The delegate for the U.S.S.R. then turned to the subject that had been introduced by Dr. Metzler. On this subject, the delegate for the U.S.S.R. said that the situation where a receiving station was in the main beam of radiation of two transmitting stations should rarely occur because no engineer, when deciding the question of sharing, would situate a receiving station in the main beam of two stations operating on the same frequency.
60. The delegate for the U.K. said that he was in complete agreement with Mr. Veatch's request for a definition of the term "transmitter". As an example, two entirely separate radio frequency amplifiers, excited by the same radio frequency, modulated by the same programme, and connected at their outputs to the same antenna might be regarded as one transmitter or two transmitters. This example which in the opinion of the U.K. delegation was not impracticable clearly showed how important it was to make it perfectly clear what was meant by a transmitter.
61. The delegate for Mexico said that the basis of his delegation's proposal was that an area to be served should be served with comparable field intensities. He said he would like to propose two principal points:
- (1) that radiation in undesired directions should be limited to the radiation of a transmitter of 120 kW with a non-directional antenna;
 - (2) that the maximum power of a transmitter, including its directional antenna system, should be such as to establish a maximum level of field intensity of 6 db above the minimum level of field intensity which was to be protected.
62. The delegate for Bulgaria, on behalf of the delegation of Bielorussia expressed his support of the French and U.S.S.R. proposal for a maximum power of 120 kW on the carrier frequency.
63. The delegate for the U.S.S.R. stated that if the recommendations contained in the Mexican proposal were adopted, it meant 120 kW radiation in the undesired direction which contradicted the recommendations of 4 B on directional antennas.

64. The Chairman pointed out that a decision had already been taken on the power in the unwanted direction, namely, that it may be as large as one-tenth of the power in the main direction.

65. The delegate for Switzerland referring to the report of Working Group 4 B said he thought that what had been stated in connection with that document was correct. He also believed that the first part of the Mexican proposal would fix, in principle, the power of the transmitter at 120 kW but he felt that the second part of the Mexican proposal would mean that in certain cases a power of 120 kW would be exceeded.

66. The delegate for Mexico said he agreed with the U.S.S.R. statement with regard to the report of Working Group 6 B on directional antennas. The Mexican proposal, was in agreement with the U.S.S.R. proposal as far as the recommendation of the report of Working Group 4 B was concerned, since it proposed to limit the power in the unwanted direction to 120 kW, which the U.S.S.R. had suggested should be the power of the transmitter. For this reason it was not understood why anybody should be concerned what power was used in the wanted direction, in order to give a satisfactory field at the reception point, providing it did not cause interference in the unwanted direction.

67. The Chairman then proposed that the discussion should be continued at the next meeting, and this proposal was carried by 24 votes to 8, with 2 abstentions. The meeting adjourned at 7:40 p.m.

The Reporter

P. N. Parker

The Chairman

M. L. SASTRY

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 477-E

15 January 1949

Original: ENGLISH

Committee 6

PLAN COMMITTEE

The following correspondence between the Chairmen of Working Groups 6B and 6D, and the Chairman of the Committee, regarding the United Kingdom proposal contained in Document 397 (the revised version of Document 318) is submitted for the information of the members of Committee 6.

1. "January 3rd 1949.

To: Chairman, Working Group 6D

From: Chairman, Working Group 6B

At its meeting on December 14, Committee 6 agreed that Working Group 6B would work out a transactional text embodying the substance of Document No. 318-E and the various additional ideas that were expressed in the meeting.

Working Group 6B has met several times and has prepared a working draft which is intended to incorporate these various ideas, a copy of this draft is annexed.

At the meeting of Committee 6 on December 21, Working Group 6D was constituted and included in its terms of reference was the task of making certain studies by grouping the high frequency broadcasting stations into different classes according to transmitter power.

Therefore, it is the unanimous opinion of Working Group 6B that the attached working draft should be referred to Working Group 6D for additions and/or modifications according to its own needs and desires and that Working Group 6D would submit the final draft to Committee 6 for its consideration.

F.H. Trimmer."

Annex.

United Kingdom Proposal for Consideration by
Committee 6

In order to assist the Plan Committee in the practical side of its work, Committee 6 decides to ask all Delegations participating in the Conference to submit to the Chairman,

Mr. Pedersen, by 10.00 a.m. on 1949, a statement giving the number of high frequency transmitter hours per day on the air both in September 1939 and in September 1948.

This information is required for statistical purposes only and will in no way be used to prejudice the findings of Committee 3 on the subject of the "status quo" now under consideration in that Committee.

This statement should include the power of the transmitter and should show the number of transmitter hours both inside and outside the Atlantic City bands between 5950 kc/s and 26100 kc/s. Frequencies outside the Atlantic City bands will be counted in the nearest Atlantic City band.

It is suggested that this statement be made in the following form:

<u>Transmitter</u>	<u>Power</u> kW	<u>Transmitter Hours per Day</u> <u>Atlantic City Bands</u>								<u>Total Hours</u>
		6	7	9	11	15	17	21	26	
A	5	-	-	3	-	4	-	-	-	7
B	50	-	-	-	-	7	-	-	-	7

2. "January 12th 1949.

To: Chairman, Committee 6

From: Chairman of Working Group 6D.

I have the pleasure of addressing the Chairman in order to inform him that Working Group 6D has received a note from Mr. Fred H. Trimmer, Chairman of Working Group 6B, asking our Group to revise the draft of the report made by Group 6B, concerning the proposal of the U.K. contained in Document No. 318. Working Group 6B also requested us to make any additions and/or alterations which we might deem advisable.

Having taken note of this message and of the draft plan attached to same, Working Group 6D unanimously decided that the report referred to did not fall within its terms of reference.

Consequently, and in accordance with the request, this matter is submitted to the consideration of Committee 6.

Antonio Navatta. "

THE CHAIRMAN.

INTERNATIONL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City 1948/49

Document No. 478-E

Original: ENGLISH

15 January 1949

Committee 4.

REPORT OF THE TECHNICAL PRINCIPLES COMMITTEE

32nd Meeting

7 January, 1949

Morning Session

1. Before the discussion of Document 336 continued, the delegate for Egypt stated that unfortunately, owing to the heavy commitments of his delegation in other committees they could not accept the offer to represent Committee 4 on Working Group 6D.

It was decided that the delegate of Pakistan should represent Committee 4 on Working Group 6D.

2. The Chairman then briefly summarised the discussion that had taken place at the previous meetings in connection with Document 336.

3. The delegate of the Netherlands said that he wished to clarify a misunderstanding that had apparently arisen over the requirements submitted by his delegation on the Forms 4. Due to an error in the interpretation of the instructions his delegation had submitted the peak powers of the transmitters and not the carrier powers. This error had been rectified so that the maximum power shown on the Netherlands requirements was now 100 kW.

Continuing, the delegate of the Netherlands said that his delegation proposed a maximum power limitation of 120 kW, in order to assist in the preparation of the frequency assignment plan, but they considered that a deviation from this 120 kW should be permitted under special circumstances.

4. The delegate for the U.S.S.R. said he was very glad that the point of 400 kW had now been clarified.

5. The delegate for Mexico said that his delegation, in conjunction with the delegations of the Latin American States, had formulated a joint proposal which he would like to submit to the Committee for consideration. The joint proposal, in effect, took the form of the second part of the original Mexican proposal. The joint proposal read as follows:-

"The maximum power for transmissions for long and short distance circuits shall be limited by the power necessary to establish a median field intensity value in a reception area which should not be more than 6 db higher than the minimum field intensity value

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higher than the minimum field intensity value which is to be protected".

Continuing, the delegate of Mexico said that the proposal was based upon the difficulties which the Latin American States experienced in setting up a satisfactory field intensity in reception area to the East of their countries. In order to transmit to Europe or Africa, for reception in those areas during their peak listening periods, the transmission had to start from the American States during the afternoon and so great absorption was experienced on those circuits which, in some cases, meant that a power of 120 kW was not sufficient. For European and African countries to broadcast to the Americans such difficulties did not arise.

It was not the intention of the American countries to start a war of field intensities and that was why they had suggested a maximum field intensity of only 6 db, above the minimum field intensity to be protected.

5. The Chairman said that he thought that the Mexican proposal would tend to raise the value of the minimum field to be protected because the difference of 6 db between the minimum and maximum field, as given in the Mexican proposal, was very small. This 6 db would hardly be sufficient to cover the difference in field intensities required in Urban and Country districts respectively.

6. The delegate of Indonesia said that the proposal of Mexico would lead to great difficulties. The proposal might be scientifically correct but it would be difficult to work out in practice. Continuing, the delegate for Indonesia said he would like to draw attention to the proposal made by the delegate of the Netherlands which he thought was quite practicable.

7. At the request of the Chairman, the delegate for the Netherlands read out the following proposal:-

"To recommend the limitation of the carrier power to 120 kW for the purpose of producing a frequency assignment plan but in special circumstances deviation should be accepted if such an increase is not harmful from the point of view of co-channel sharing and adjacent channel interference."

8. The delegate of Italy said he had listened with interest to the statements made by the delegates of Mexico, Netherlands etc. He agreed that a difference of 6 db between the minimum and maximum field intensity for a reception area was too small and would cause practical difficulties in the Planning Committee. No figure had yet been adopted for the minimum field intensity but if a field of 500 $\mu\text{V}/\text{m}$, as suggested by Working Group 4A, was adopted, it would mean that the maximum field would only be 1000 $\mu\text{V}/\text{m}$. In this case it would be very difficult to produce a plan which gave a field intensity in a reception area varying between 500 and 1000 $\mu\text{V}/\text{m}$. In conclusion, the delegate for Italy said he would like to stress the fact that if it was decided to establish an upper limit of

field intensity, then not only the maximum power would have to be limited, but also the gain of the antenna.

9. The delegate for the Ukraine said he had intended to ask the delegate for Mexico what was the minimum field intensity to be protected but this question had already been answered by the delegate for Italy. He would like to draw the attention of all delegates present to the fact that it was the intention of this Conference to produce a plan incorporating as many channel hours as possible, especially in the low frequency bands where a large amount of sharing was possible. To this end, Working Group 6D had put forward several interesting proposals for increasing the sharing possibilities in the low frequency bands. In the view of the Ukrainian delegation, it was therefore, the duty of Committee 4 to give to the Planning Committee a very clear recommendation of what the limit of the maximum power of transmission should be. In the requirements submitted by the various countries on Forms 4, no requirements had exceeded 120 kW and so a maximum power of 120 kW seemed a very realistic figure. Turning to the questionnaire prepared by Committee 3, the delegate of Ukraine said that 42 out of 50 countries had expressed a desire for a limit of power.

The Mexican proposal was twofold. Firstly, it did not limit the power because no figures had been given for the minimum field intensity to be protected. Secondly, if the proposal was considered in substance, it would be seen that it involved a discrimination between the maximum power for short and long distance circuits. This would mean that national broadcasting would have to be carried out on low power while international broadcasting could have unlimited power. In the view of the delegation of the Ukraine, the Mexican proposal was vague and also it was contrary to the decision made in Committee 4 to fix a definite maximum power.

10. The delegate for Egypt said he would like to make two comments. Firstly, for large reception area it would be impossible to cover the extreme limits of this area with only 6 db difference in field intensity. Secondly, the explanation given by the delegate for Mexico seemed to indicate that the American countries could have a maximum power of 100 kW while the European and African countries would be limited to 20 kW, because the transmission path from East to West was considered less difficult than the path from West to East.

11. The delegate for Pakistan said that he agreed with the comments made by the delegate of Egypt. Pakistan was interested in tropical broadcasting in which they had to cover areas not only up to 800 kms distant but also more than 800 kms distant. For this reason they would be interested in protecting figures lower than 500 $\mu\text{V/m}$ which meant that the 6 db tolerance, as given in the Mexican proposal, was too low.

12. The delegate for the U.S.S.R. said that he found the Mexican proposal three-fold and not two-fold, as suggested by the delegate of the Ukraine.

The delegate for Mexico had withdrawn the first part of his proposal

and this procedure was not clear to the U.S.S.R. delegation. The Mexican proposal had said nothing about a limitation of power in the undesired direction which, from a sharing point of view, was most important.

Committee 4 had clearly decided to limit the maximum power of transmission but the Mexican proposal was obviously designed to limit the maximum field intensity. The question of field intensity was dealt with in the second part of the report and in the opinion of the U.S.S.R. delegation, had no bearing on the power. The delegate for Mexico had pointed out that at certain times, certain circuits required very great power but, in the opinion of the U.S.S.R. delegation, if a circuit was engineered correctly, then a large power would not be required. He could not agree that West to East circuits were more difficult than East to West circuits. In conclusion, the U.S.S.R. delegate said that his delegation considered that the Mexican proposal was vague, circumvented the decision already taken by Committee 4 and cancelled an earlier recommendation of Working Group 4B on directional antennas.

13. The Chairman said that there was a further point to be taken into consideration; namely, the variation of field intensity due to the variation in conditions which determined the field set up at the reception area. Tests carried out between India and the U.K. and between India and Switzerland, showed that the field intensity varied considerably and he would like to know how the Mexican proposal took this into consideration.

14. The delegate for Mexico said that a great number of delegates had spoken but unfortunately he was not in a position to answer all their objections because he had not been able to make a note of all the points raised. With regard to the proposal of the delegate for the Netherlands, the suggestion that in certain cases the power should be increased above 120 kW seemed satisfactory if there were only a few special cases, as, however, the whole of the American Continent seemed to present a special case in their transmissions to the East, and, as many other transmissions would undoubtedly come under the same category, he felt that it would be better to have a new rule rather than have so many exceptions to that rule. The Netherlands proposal also stipulated that the power could be increased providing the co-channel and adjacent channel protection ratios were not violated. In the opinion of the Mexican delegation this question did not arise.

As an answer to those delegates who had said that the Mexican proposal had not indicated the power of the transmitter, he would like to point out that from the Mexican proposal, the effective radiated power, (which depended upon the power of the transmitter and the gain on the antenna,) could be found once the maximum field intensity had been determined.

Several delegates had stated that the 6 db tolerance was too low. The Mexican delegation agreed that it was low but it was a reasonable and practicable tolerance. On the other hand, limiting the maximum power to 120 kW meant that the field intensity set up in any given area could vary between very great limits. These limits could vary from a very bad service, because insufficient power was being used, to the other extreme

where the field set up was so great that it caused interference with other transmissions.

The Mexican proposal was based on a figure of minimum field intensity that would be established in the second part of the report. This minimum field intensity might be 500 μ V/m which, with the 6 db proposed tolerance meant a maximum field intensity of 1000 μ V/m. For short distance circuits this might mean a limitation of power to 5 kW. For long distance circuits it would probably mean a power of a few hundred kW, depending upon the time of the day and the season of the year. In this connection Mr. Buchanan said he would like to ask the U.S.S.R. delegation what power they proposed to use to serve Europe from America, for a local reception time of 1900 to 2300 in Europe, and also what power they would propose to use to serve America from Europe at the same local time of reception in America.

In connection with the statement made by several delegates that the 6 db variation was too small, he would also like to give an example of how the Mexican proposal could be adopted to meet the case where, over a period of two or three hours, a variation in field intensity of 18 db was being experienced. In such a case a transmitter could be set up which, at the beginning of the period of transmission, might produce a field intensity 6 db below the minimum field to be protected and as conditions improved, this field intensity, still using the same power, might increase to 6 db above the minimum to be protected. In the course of time the field might tend to increase to 12 db above the minimum, in which case, means would have to be provided at the transmitting end of limit the field intensity to the maximum permissible value of 6 db above the minimum field to be protected.

The Mexican proposal in the view of the Mexican and Latin American delegations, seemed most valid and reasonable because it proposed the limitation of field intensity in reception areas to a reasonable value and the question of co-channel and adjacent channel interference did not arise. The Mexican proposal did not specify any figure for maximum power but it definitely limited the power both for short and long distance circuits so that for all cases, the field intensity set up in a reception area would be the same.

Some delegates had said that the 120 kW maximum power which they had suggested was based upon the fact that no country had asked in their requirements, for a power greater than 120 kW. The Mexican delegation would like to point out that the countries' requirements had been prepared before this Conference had started its work and, in view of the standards that had been recommended by this Conference and the information which had been made available during this Conference, it was felt that several countries might now have different ideas on what maximum power they would require for certain difficult circuits.

15. The delegate of the U.S.A. said that it appeared from the discussions of the last two sessions that delegates were arriving at the same

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conclusion as Working Group 4A had arrived at a few months ago, namely that it was difficult to set a limit for the maximum power.

Mr. Veatch said he would like to point out for the benefit of those who were objecting to the 6 db, that this 6 db represented a ratio of power of 100 kW to 50 kW. If the U.S.A. delegation were doing an engineering job, it would undoubtedly adopt the Mexican proposal. The U.S.A. delegation had not objected to a power limitation because it was felt... that 120 kW was an economical limit to the power at the present moment it was not the intention of the U.S.A. to build transmitters of power greater than 100 kW. On the other hand, the U.S.A. did intend to experiment in order to improve the design of antennas so that a higher field intensity could be set up at the reception point.

Continuing, Mr. Veatch said he would be willing to accept the Netherlands proposal, providing it was slightly amended. In his view the phrase "as being favourable to the setting up of a plan" should be replaced by the phrase "because no greater power has been contemplated by countries submitting their requirements to this Conference". This latter phrase, in the opinion of the American delegation, was the actual basis for the selection of 120 kW. It was not a limitation of the maximum power that would assist in the setting up of a plan but rather power equality.

16. The delegate for the Netherlands said he would accept this amendment.

17. The delegate for the U.S.S.R. said he would like to give an answer to the question set by Mr. Buchanan. Based on curves and tables given in NBS Circular 462, the U.S.S.R. delegation had found that a transmitter of 120 kW carrier power at New York, working on a frequency of 17 Mc/s and using an antenna with a gain of 80 (relative to a standard antenna) set up a field intensity of 460 uV/m and a field intensity of 1600 uV/m at 1800 L.M.T. and 2400 L.M.T. respectively in Paris. This calculation had been made for June sunspot maximum. Continuing, the delegate of the U.S.S.R. said that the Mexican proposal could be summed up as being vague and in reality it suggested that there should be no limitation of power.

The amendment suggested by the delegate of the U.S.A. to the Netherlands proposal was not acceptable because it only made the original Netherlands proposal vague.

18. At this point, the opinion was expressed by the delegate for Switzerland that speakers should be limited to five minutes. It was, however, decided that since delegates had so far not been limited to five minutes on the point under discussion, this procedure should not be adopted. It was agreed that for future discussions a time limit of five minutes per speaker should be adopted in order to expedite the work of Committee 4.

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19. The delegate for Mexico said he would like to point out that the example the delegate for the U.S.S.R. had given was badly chosen. Firstly, New York was not representative of the whole of America, and secondly, at other seasons when 6 or 9 Mc/s was the value of the OWF, a power greater than 500 kW would be required for broadcasting to Europe from Mexico.

20. The delegate for the Netherlands said there was a possibility of finding a compromise solution between the U.S.S.R. and Netherlands proposal. The compromise suggested was to drop the U.S.A. amendment so that the original wording of the Netherlands proposal was retained, and secondly, to limit the power for exceptional cases to 240 kW.

21. The delegate for Portugal said he had listened to the proposal made by Mexico. He would like to point out that on the circuit from Lisbon to Portuguese Africa the necessary power at certain hours was approximately 10 kW, using an antenna with 18 db gain. According to the Mexican proposal, the power would be limited to 40 kW. In actual fact, a 100 kW transmitter was used. If the Mexican proposal was adopted, it would mean that the 100 kW transmitter would become redundant.

In order to draw up a frequency assignment plan, every factor would have to be taken into consideration, including the power of the transmitter available, the gain of the antenna, the field intensity required in the reception area, the time of transmission and the unwanted field intensity set up. For this reason, the delegation of Portugal supported the proposal of the U.S.S.R. with the amendment suggested by the U.S.A.

22. The delegate of Albania said that the discussions had been lengthy and this was undoubtedly due to the fact that certain proposals were not sufficiently clear and were based on standards not yet discussed or decided. A similar case had arisen when Annex A of Report 300 had been discussed by the Committee. The U.S.S.R. proposal was very clear but certain delegates were attempting to substitute in its place a text which was very vague and which was based upon data not yet adopted.

Mr. Veatch had said that he did not object to a limit of power of 120 kW and if that was the case, why had Mr. Buchanan cited the Americas as an example that in certain cases a power of more than 120 kW was required.

The Mexican proposal limited the power for national broadcasting but did not limit the power for international broadcasting, and this meant that two standards were going to be set up.

23. The delegate of Mexico said that several delegates had stated that the Mexican proposal did not limit the power. In the opinion of his delegation a limit of field strength also meant a limit of power. The Mexican proposal did not limit the power to an absurd value but to a sensible value necessary for the purpose to which it was to be used.

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This meant that there would be a maximum value for the various types of transmission to be carried out, and that countries would not use a power of 100kW on a circuit for which 5 kW would be satisfactory.

The Portuguese delegate had given an example of the misuse of power. By using a transmitter of 100 kW where in actual fact a satisfactory field intensity could be set up using a power of 40 kW, then the Portuguese delegate was setting up unnecessary interference and at the same time was reducing the possibilities of some other country sharing the particular frequency he used.

To limit the power of all circuits to 120 kW did not seem logical and the fact that no mention had been made of antenna gain was even less logical. The Mexican proposal set a limit to both the transmitter and antenna gains. As far as any particular circuit was concerned the important factor was to set up a satisfactory field intensity at the reception area and for this reason by stipulating that the maximum field intensity should be limited to a value 6 db above the minimum field intensity to be protected, then the power for that circuit was being judged solely on the basis of a satisfactory field in the reception area. This method also ensured that the interference to any other transmission on the same frequency was reduced to a minimum.

24. The delegate of the U.S.S.R. said that he was sorry to see such a highly qualified engineer as Mr. Buchanan wasting so much time in defending such a vague proposal. Mr. Buchanan had said that the U.S.S.R. proposal was trying to fix a power for a transmitter without knowing beforehand what that transmitter was going to do. The U.S.S.R. delegation had, on an engineering basis, studied this question very thoroughly and they had come to the conclusion that 120 kW was the maximum power required for any transmission.

Mr. Buchanan had also said that countries had not known what power they would require when they had submitted their requirements. In the opinion of the U.S.S.R. delegation it was felt that all countries had competent engineers who had worked out the power required for any particular circuit and all countries had arrived at the conclusion that a power, not exceeding 120 kW, was necessary.

The proposal of Mexico was unacceptable for the following reasons. Firstly, it only referred to the power in the desired direction and did not mention what happened in the undesired direction; secondly, the proposal was trying to substitute field intensity for power limitation; thirdly, the proposal gave any country the right to use unlimited power and fourthly, the proposal was too scientific and not sufficiently practicable.

In conclusion the delegate of the U.S.S.R. said they could accept the Netherlands proposal if, for extremely difficult circuits, the maximum power did not exceed 240 kW.

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25. In order to clarify the position the Chairman then read out the joint U.S.S.R.-Netherlands proposal as follows:-

"To establish the limit of carrier power to 120 kW, for the purpose of producing a frequency assignment plan, but in special circumstances of extremely difficult circuits the carrier power may be increased up to a maximum of 240 kW provided that such an increase is not harmful from the point of view of co-channel sharing or adjacent channel interference".

26. The delegate of Indonesia asked if the proposed limit of 120 kW meant that any country could, after the plan had been prepared, raise its power to the maximum.

27. The Chairman said this was a different issue and, as pointed out at the last meeting this point would be taken care of by either Committee 6 or 7.

28. The Chairman asked the delegate of U.S.A. if he would accept the joint U.S.S.R. - Netherlands proposal.

29. The delegate of U.S.A. said he objected to the limitation of 240 kW and he therefore proposed that the original Netherlands-U.S.A. proposal should stand as the U.S.A. proposal.

30. The delegate of the U.K. supported the U.S.A. proposal.

31. The delegate of Switzerland suggested that the U.S.S.R. - Netherlands proposal should be voted upon in two parts because his delegation felt that 120 kW was the maximum power required under any circumstances.

32. The four proposals were then put to the vote with the following results:

	<u>For</u>	<u>Against</u>	<u>Abstentions</u>
U.S.S.R.-Netherlands	18	21	4
Mexico	12	31	0
U.S.A.	9	24	9
Switzerland	18	21	4

33. The Chairman pointed out that as each proposal was unacceptable then further discussions would have to take place to decide what maximum power should be recommended.

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34. Before the meeting closed it was pointed out that Working Group 4A would meet during the afternoon and also on Saturday morning, 8th January.

The Reporter:

P.N. Parker

The Chairman

M.L. Sastry

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

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Committee 4

REPORT OF THE TECHNICAL PRINCIPLES COMMITTEE

This report of the Technical Principles Committee is submitted for approval in accordance with directives of the Plenary Assembly.

TECHNICAL PRINCIPLES AND STANDARDS

COMMITTEE

Chapter 1.	Introduction.
Chapter 2.	Terms of Reference.
Chapter 3.	Plan of Work.
Chapter 4.	Data and References.
Chapter 5.	Definitions.
Chapter 6.	Technical Standards and Principles.
Chapter 7.	Recommendations.
Chapter 8.	Economy in the use of High Frequency
Chapter 9.	Future lines of development of High Frequency Broadcasting.
Chapter 10.	Subjects to be studied on a World-Wide Basis.
Chapter 11.	Other items of work of the Committee.
Chapter 12.	Concluding Remarks of the Chairman.
Annex 1.	List of Participants.
Annex 2.	Reservations

Chapter 1.

INTRODUCTION:

The Technical Principles and Standards Committee was constituted by the High Frequency Broadcasting Conference, Mexico City, at the Plenary Session held on the 25th October 1948, when India (Mr. M. L. Sastry) was elected to the chairmanship of this Committee. U.S.A. (Mr. G. Sterling) and U.S.S.R. (Professor Siforov) were elected to the 1st and 2nd vice-chairmanships respectively, of the Committee.

Mr. P.M. Parker of the U.K. Delegation was appointed as the Reporter of this Committee.

The Committee had the benefit of the advice of the expert, Dr. Van der Pol, now Director of the C.C.I.R. during the initial deliberations. Mr. Hernandez Cata, the I.F.R.B. member attended the sessions of this Committee in a consultative capacity.

Chapter 2.

TERMS OF REFERENCE:

The terms of reference, as approved by the Plenary Assembly of the Conference, were:-

1. To study and recommend the Technical Principles and Standards which should be applicable in drafting a High Frequency Broadcasting plan or plans taking into account:
 - a) Those principles and standards upon which the countries have agreed, specifically the final acts of the International Telecommunications and Radio Conferences of Atlantic City 1947.
 - b) The report of the High Frequency Broadcasting Conference at Atlantic City 1947.
 - c) The reports and documents of the Planning Committee (Geneva and Mexico Sessions, 1948).
 - d) Other existing applicable data such as are contained in documents of the various organs of the I.T.U.
 - e) Comments submitted by the various countries and the documents of the Conference which contain points of view or information on the subject.

2. To study and recommend to the Conference, for adoption, technical principles and standards which it seems necessary to the successful operation of a plan or plans.
3. To study the means of ensuring co-ordination, on a world scale, of the technical questions and other questions bound up with the solution of technical problems concerning high frequencies which are within the scope of the International Telecommunications Union.

Chapter 3.

PLAN OF WORK:

In order to fulfil the above terms of reference, the Chairman outlined the main tasks before the Committee as follows and prepared the list of subjects to be studied:

Main tasks as outlined by Chairman:

- a) Technical principles and standards which should form the basis of the High Frequency Broadcasting assignment plan or plans.
- b) Technical principles and standards necessary for the successful operation of the plan and plans.
- c) Technical problems which have to be co-ordinated and/or studied on a world basis.
- d) Future lines of development of High Frequency Broadcasting and technical methods of exchanging programmes.

Technical Principles to be studied:

- I. Technical standards:
 - a) Frequency tolerance.
 - b) Non linear L.F. distortion caused by the process of modulation.
 - c) Depth of audio modulation.
 - d) Bandwidth of emission.
 - e) Channel separation.
 - f) Harmonic radiation.

PLAN OF WORK continued...

- II. Receiver characteristics.
- III. Directional antennas.
- IV. Minimum protection ratio taking into account:
 - a) Atmospheric noise.
 - b) Interference from unwanted stations (co-channel, adjacent channel and second adjacent channel).
 - c) Industrial interference.
- V. Minimum signal to be protected.
- VI. Power required for long and short distance transmissions.
- VII. Number of frequencies required for:
 - a) Long distance circuits.
 - b) Short distance circuits.
 - c) Circuits passing through the Auroral zones.
 - d) Circuits with high contrast conditions.
 - e) Circuits destined to various areas of reception.
- VIII. Propagation problems.
- IX. Simultaneous channel sharing possibilities.
- X. Methods of economising the use of high frequencies.
- XI. Technical problems that have to be studied or co-ordinated on a world basis.
- XII. Consideration of future lines of development of high frequency broadcasting and technical methods of programme exchange in the light of the latest technical advances.

To facilitate the work of this Committee, three Working Groups were formed as follows:

WORKING GROUP 4A: Chairman - Canada (Mr. Richardson).

This Working Group was charged with studying the following points:

- (1) Propagation Problems.

PLAN OF WORK contained.....

- (2) Minimum Protection Ratio, taking into account:
 - a) Atmospheric Noise.
 - b) Interference from unwanted stations, co-channel, adjacent channel and second adjacent channel.
 - c) Industrial Interference.
- (3) Minimum Signal to be protected.
- (4) Power required for long and short distance transmissions.
- (5) Simultaneous channel sharing possibilities.

The Reports of this Working Group are contained in documents No. 111, 133, 136, 300, 335, 336, 378, 379 and 380.

WORKING GROUP 4B: Chairman - Switzerland (Dr. Metzler).

This Working Group was charged with studying the following points:

- (1) Directional Antennas.
- (2) Receiver Characteristics.
- (3) Technical Standards for :
 - a) Frequency Tolerance.
 - b) Harmonic Radiation.
 - c) Non-Linear L.F. Distortion caused by the process of modulation.
 - d) Bandwidth of emission.
 - e) Channel separation.

The Reports of this Working Group are contained in Documents No. 66, 173, 174, 356 and 410.

WORKING GROUP C: Chairman - France (Mr. Mercier)

This Working Group was charged with studying the following points:

- (1) Technical Problems that have to be studied or co-ordinated on a world basis.

PLAN OF WORK continued.....

- (2) Consideration of future lines of development of high frequency broadcasting and technical methods of programme exchange in the light of the latest technical advances.
- (3) Methods of economising the use of high frequencies for broadcasting.
- (4) Methods of Standardisation of recordings.

Item (4) was suggested at a later stage of the Committee's work to the Working Group, and as the study of this problem does not directly affect the work of drawing up an assignment plan, the Working Group is studying the problem in detail and proposes to present a report on this subject at a later stage.

The Reports of this Working Group are contained in Document No. 408.

It was agreed by the Committee that the following three points will be taken up in the main Committee itself:

1. Data and comments offered by Dr. Van der Pol.
2. Number of Frequencies required for:
 - a) Long distance circuits.
 - b) Short distance circuits.
 - c) Circuits passing through Auroral Zones.
 - d) Circuits with high Contrast Conditions.
 - e) Circuits destined for various areas of reception
3. Definitions of "Region of Reception".

Committee 4 held..... meetings in all between the 29th October 1948 and 21st January 1949.

Chapter 4.

DATA AND REFERENCES

1. Radio Regulations of the Final Acts of the Atlantic City Conference 1947.
2. Report of the International High Frequency Broadcasting Conference. Atlantic City 1947.
3. Reports of the Planning Committee, Geneva and Mexico Sessions, 1948.
4. Documents of the P.F.B. Geneva.
5. Curves of OWF for the three seasons and three epochs of the sunspot cycle, as produced by the U.S.A. delegation.
6. Information received from the different countries in reply to a telegram of the 16th October 1948 of the Planning Committee Mexico City, relative to broadcasting receivers.
7. Report of the C.C.I.R., 5th Meeting, Stockholm 1948.
8. Document No. 187 of the Administrative Conference of Atlantic City 1947.
9. Documents Nos. 13, 27 and 79 of International H/F B/C Conference, Atlantic City 1947.
10. Documents Nos. 45 and 56 Geneva Planning Committee 1948.
11. Document No. 79, Appendix I, Mexico City Planning Committee 1948.
12. Newbern Smith and M. B. Harrington "The Variability of Sky Wave Field Intensities at Medium and High Frequencies". Report CRPL-1-6, U.S. Department of Commerce, National Bureau of Standards, Washington D.C.
13. F.C.C. Report "Report and Recommendations of Committee 1 as to what Constitutes a Satisfactory Signal", Part 1, 14 January, 1946.
14. U.S.A. Bureau of Standards Circular No. 462..
15. Document RHF 149 of the Atlantic City H/F B/C Conference 1947.
16. Proposal of the Mexican Delegation with respect to the Spacial Distribution of the Vectors of Field Intensity which exists in the principal radiation lobe of a Rhombic Antenna. Mexico City H/F B/C Conference, Annex Document No. 410 and Appendix A.

17. Information on atmospheric noise measurements for the Technical Committee.Furnished by the U.S.A. delegation Mexico City H/F B/C Conference, Annexes A, B and C of Document No. 380.
18. The technical principles on which the plan for the assignment of high frequencies for broadcasting submitted by the USSR Delegation, is based. Document No. 277 Mexico City H/F B/C Conference 1948/49.
19. Documents Nos. 26, 37, 40, 41, 58, 66, 78, 89, 92, 93, 95, 102, 111, 117, 119, 133, 134, 151, 158, 173, 174, 192, 219, 237, 261, 273, 274, 277, 294, 295, 300, 317, 322, 330, 335, 336, 356, 357, 365, 378, 379, 380, 387, 389, 393, 396, 398, 403, 408, 410, 416, of the Mexico City H/F B/C Conference.

Chapter 5.

DEFINITIONS:

1. Receiver Characteristics:

- a) Standard Receiver: In the present state of technical development, the receiver considered most suitable for the use of the average radio listener from the point of view of performance and cost is a superheterodyne receiver, which is basically made up of:

xx

1 radio frequency amplifier stage

1 mixer stage

1 intermediate frequency stage

* 1 double diode detector stage

1 power stage

* 1 triode voltage amplifying stage

(* The diode and triode are generally inside the same envelope)

(xx in this respect see the information received from the different countries in reply to telegram of 16th October, 1948 of the Planning Committee, relative to broadcasting receivers)

The receiver possesses band spread control and an automatic gain control which, whenever possible, should have a delay voltage. (Delayed A G C)

- b) Principal characteristics of the receiver: The following are its characteristics: 1) Receiver noise; 2) Sensitivity; 3) Selectivity; 4) Stability of the local oscillator; 5) Elimination of image frequency; 6) Fidelity; 7) Automatic gain control.

2. Antennas:

- a) Designations: The following designations are recommended:

Curtain arrays H or V RA/m/n/h

H = Horizontal

V = Vertical

m = Number of half-wave elements in the horizontal plane.

n = Number of rows in the vertical plane.

h λ = Height above the soil of the lowest row of the array, expressed in terms of the working wavelength.

RE = Active reflector.

RP = Passive reflector.

RA = Reversible antenna

, O = Steerable.

f = Working frequency.

a = Azimuth, the angle of the centre axis of the beam measured East of true North.

X = Rotating field dipole (Turnstile array).

- b) Simple Dipole Antenna:

A simple dipole antenna is a straight radiator, generally fed in the centre, the maximum radiation of which is in the plane normal to its axis. The specified length is the total length expressed in terms of the Working Wavelength.

- c) Frequency Range:

Frequency range of an antenna is the range of working frequencies over which the antenna is able to approximately preserve the gain, coefficient of directivity and efficiency.

d) Angular width of beam:

As the width of the main beam of an antenna is the angle which is formed by the two directions from the antenna for which the field is half the maximum value of the main field.

e) Directivity diagram of an antenna:

- (i) The directivity diagram of an antenna is the graphical representation of the gain of this antenna in the different directions of space.
- (ii) The horizontal directivity diagram of an antenna is the representation of the gain in the different directions of a horizontal plane, or, if necessary, in the different directions of a plane slightly inclined to the horizontal.

f) Efficiency:

The efficiency of the antenna is the ratio of the power radiated by an antenna to the power supplied to it.

g) Gain:

The gain of an antenna in a given direction is the ratio, expressed in decibels, of the square of the field intensity radiated in this direction by the given antenna 1/ to the square of the field intensity radiated in its median plane by a perfect half-wave antenna isolated in space, where the fields are measured at a distance sufficiently great. 2/ It is assumed that the real antenna and the perfect half-wave antenna are supplied with equal power.

(1/ When not specified otherwise the figure expressing the gain of an antenna refers to the gain in the direction of the main beam.

(2/ The Technical Committee interprets the expression "sufficiently great" to mean a distance of ten times the maximum dimension of the antenna and in no case less than ten wavelengths).

h) Coefficient of Directivity:

The coefficient of directivity of an antenna 3/ in a given direction is the ratio, expressed in decibels, of the square of the field intensity radiated in this direction to the mean of the squares of the field intensity radiated in all directions in space, where the fields are measured at a distance sufficiently great. 4/

(3/ When not specified otherwise, the figure expressing the coefficient of directivity refers to that in the direction of the main beam. When it is not necessary to take into account antenna and earth losses, the coefficient of directivity as defined above is 215 decibels higher than the gain of the antenna as defined in paragraph 65. (Radio Regulations of the Atlantic City Conference, 1947).)

(4/ The Technical Committee interprets the expression "sufficiently great" to mean a distance of ten times the maximum dimension of the antenna and in no case less than ten wavelengths).

3. Difficult Circuits:

A circuit longer than 4000 kms when OMF changes within one hour to approximately double (or half) of the frequency which is being utilized, is a difficult circuit.

4. (i) Area of Reception:

Reception area or intended area of reception is the area over which broadcast coverage is contemplated by a country.

(ii) Area served by a transmission:

The area served by a transmission is that area which lies within the principal radiation beam (horizontal as well as vertical) of an antenna and receives the desired signal consistent with the standards for good reception, as determined by the protection ratios for signal to atmospheric and industrial noise and for wanted signal to unwanted signal on the same channel as well as on adjacent channels.

(iii) Geometric area:

Geometric area is a term applied to part of the surface of the globe situated in relation to the transmitter as indicated in paragraphs 7 (IV and V) of Chapter 7 of this Report.

5. Simultaneously Shared Channel:

A simultaneously shared channel is a channel used simultaneously by two or more transmitting stations on the condition that the protection ratio of 40 db between the median values of desired and undesired signals is maintained.

Chapter 6.

TECHNICAL STANDARDS AND PRINCIPLES:

1. Channel Separation:

The separation between assigned frequencies must be 10 kc/s.

2. Frequency Tolerance:

1. In principle, the frequency tolerances must be such that the simultaneous multiple assignment of frequencies is not restricted thereby.

2. Frequency tolerances for simultaneous multiple assignment of frequencies shall provisionally be ± 50 cycles per second and, in future, must be ± 20 cycles per second.

3. Frequency tolerances for frequencies operated without simultaneous multiple assignments must be such that the possible variation in a 10 kc/s separation between assigned frequencies shall not exceed 100 cycles.

3. Bandwidth of Audio Modulating Frequencies:

It is proposed, in accordance with the conclusions presented by the C.C.I.R. in Opinion No. 28, Stockholm Meeting, 1948, that the audio frequency bandwidth be 6,400 c/s, while allowing a channel separation of 10 kc/s.

4. Non-linear Distortion:

With a bandwidth of 6,400 c/s, the non-linear distortion on leaving the transmitter must not exceed 5% at 90% modulation for modulating frequencies between 100 and 5,000 c/s; moreover, it shall not exceed 5% at 50% modulation for modulating frequencies between 5,000 and 6,400 c/s.

5. Radiation of radio-frequency harmonics:

The intensity of radio-frequency harmonics must not, in principle, exceed the values stipulated by Appendix 4 of the Radio Regulations of the Final Acts of the Atlantic City Conference, 1947.

Unwanted radiation must be kept at the lowest level allowing satisfactory reception.

6. Industrial Interference:

For the purpose of laying down Technical Standards and Principles at this Conference, industrial interference shall be taken into consideration.

7. Percentage time for protection of signal against atmospheric and industrial noise in presence of fading: _____

Protection should be provided for approximately 80% of the total time or for 90% of the hour and 90% of the day.

8. (i) Ratio of steady carrier to average atmospheric noise under non-fading conditions:

With respect to steady signal carrier to average atmospheric noise in a radio frequency bandwidth of 4,000 c.p.s., the voltage ratio must be 80 to 1 (38 db).

- (ii) Ratio of steady carrier to peak industrial noise under non-fading conditions:

With respect to steady signal carrier to peak industrial noise in a radio frequency bandwidth of 9,000 c.p.s., the voltage ratio must be 10 to 1 (20 db).

9. (i) Atmospheric noise protection ratio in presence of fading:

Based on a ratio of 38 db for steady carrier to average atmospheric noise in a 4 kc/s radio frequency band, the ratio of median carrier to average atmospheric noise in a 6 kc/s radio frequency band shall be 46 db to include all types of fading.

- (ii) Industrial noise protection ratio in presence of fading:

Based on a ratio of 20 db for steady carrier to peak industrial noise, and using the same considerations with respect to the fading signal as in the case of atmospheric noise, the ratio of median carrier to peak industrial noise shall be 34 db. Since the industrial noise is not subject to fading, only the signal fading corrections were taken into account to provide the 20 db ratio for 90% of the hour and 90% of the days.

10. Minimum protection ratio for interference from unwanted stations operating on the same channel under steady state conditions:

The ratio of wanted to unwanted signal shall be 28 db in the absence of fading.

11. Allowance for short and long term fading:

It was decided that the total allowance for short and long term fading should be 17 db.

12. Minimum protection ratio for interference from unwanted stations operating on the same channel taking fading into account:

The ratio of median wanted carrier to median unwanted carrier shall be 40 db to provide a steady state ratio of not less than 28 db for 90% of the hour and 90% of the days.

13. (a) Adjacent channel protection ratio:

Without limiting the audio frequency modulation bandwidth of emission to a value less than 6,400 c.p.s., the ratio of desired to undesired signal shall be 2 to 1 (including all types of fading), i.e. 6 db.

(b) If the modulated bandwidth is limited, in accordance with the filter characteristic proposed, the ratio of undesired to desired signal must be 1.4 (including all types of fading).

(c) The Committee decided that the audio modulation bandwidth shall be 6,400 c/s.

(d) Second adjacent channel protection ratio:

The ratio of desired to undesired signals on second adjacent channels 20 kc/s removed is unimportant and no recommendation will be needed for this Conference.

14. Power required for long and short distance transmissions:

The maximum power for transmissions for long and short distance circuits shall be limited by the power necessary to establish a median field intensity value in a reception area which should not be more than 6 db higher than the minimum median field intensity which is to be protected. The limit of maximum carrier power of the transmitter shall be 120 kW; however, in exceptional cases of especially difficult circuits a deviation from this value shall be permitted which shall not exceed 240 kW.

15. Minimum Signal to be Protected:

The median field intensity of a signal which must be protected in any zone of a service shall be 250 microvolts/metre for frequencies below 10 Mc/s and 150 microvolts/metre for frequencies above 10 Mc/s.

16. Number of frequencies most appropriate for each programme requirement:

(i) In accordance with the decision of the Atlantic City Conference, normally only one frequency will be used for the transmission of one programme to a given reception area.

- (ii) Nevertheless, it will be admissible to depart from this general rule in the case of circuits longer than 4,000 kms when the OWF changes within one hour to approximately double (or half) of the frequency which is being utilized, in which case the simultaneous use of two frequencies could be authorised for one hour.

Chapter 7.

RECOMMENDATIONS

1. Curves of OWF

That the Winter, Summer and Equinox OWF curves for the three epochs of the sunspot cycle, as prepared by the USA delegation, are recommended as convenient for mass calculations that do not require great accuracy.

2. Receiver Characteristics

- (a) It is recommended that the image frequency be considered as an interfering signal on the same channel, as recommended in Point 1, "Technical Information Bulletin" of Committee 12 of the International High Frequency Broadcasting Conference, Atlantic City, 1947, and therefore, based on the Final Report of said Conference, Chapter V, Point 9, paragraph a), the ratio of the wanted signal to the image signal should, when possible, be 100. This is easy to attain in receivers having a high frequency amplifying stage preceding the mixer stage, as set forth in the comments appearing in the above-mentioned "Technical Information Bulletin".
- (b) In making a draft plan for the assignment of frequencies, the interference caused in receivers by the image frequency should not be taken into account, in accordance with the Final Report of the International High Frequency Broadcasting Conference, Atlantic City, 1947, Chapter V, point 9, paragraph c).
- (c) With respect to Receiver fidelity and automatic gain control, it would be desirable for the various countries to carry out studies in order to arrive at a future agreement on typical curves which represent the required characteristics.
- (d) Since it is impossible to establish exact standards for short-wave broadcasting receivers, it is recommended that the various countries send to the CCIR as soon as possible the documents relating to the problem we are dealing with and that the Conference request the CCIR to take up the matter of formulating exact standards, once it is in possession of all necessary data.

RECOMMENDATIONS (Continued)

3. Directional Antennas

- (a) The maximum radiation in the horizontal plane and the angle of elevation of the maximum radiation shall be chosen in such a manner as to provide the most efficient transmission to the intended area of reception.
- (b) Radiation in the unwanted directions shall be kept as low as possible.
- (c) In the case of short distance broadcasting services the radiation in the vertical plane shall be restricted to that angle necessary to provide reception in the intended area of service, and radiation at lower angles of elevation shall be kept at a minimum.

4. Consideration of the most Commonly employed Types of Antennas

The Technical Committee refers to the enquiry made by Working Group 3-A of the Planning Committee (Mexico City Session), the results of which, appearing in PC-Rhf Document No. 79, Appendix 1, are as follows:

"The analysis related to some 500 antennas and was based on information provided by 20 out of the 34 countries submitting full antenna data on Forms 4. The following approximate proportions were obtained:

Curtain arrays	60%
Rhombic antennas	20%
Other types	20%
(including V antennas, single wire antennas and special types)	

5. Methods of Determination of the various electric parameters of Antennas.

For the calculation of the gain and of the angular width of the beam radiated by antennas arrays the Technical Committee recommends the method suggested by the U.S.A. Delegation in Document No. 18121 - 2/48 entitled "Determination of High Frequency Broadcasting Antenna gain and width of beam", the U.S.A. Delegation having made a correction of 3 decibels in diagram 4 during the discussions of Working Group 3-A of the Planning Committee (Mexico City Session) at the instance of the U.S.S.R. Delegation.

RECOMMENDATIONS (continued)

With a view to speeding up the work, the Technical Committee recommends resort to the table prepared on the basis of this method, by the Delegates of the U.K. and India, which appears in Appendix I, D of PC-Rhf Document No. 79 of the report of the Planning Committee (Mexico City Session) 1/

The Technical Committee directs attention to Document No. 151, submitted by the U.K. Delegation, containing calculations of rhombic antenna radiation diagrams and further recommends the following methods of calculation and charts:

- (I) Calculation of the gain of rhombic antennas, with angle of incidence 15° , semi-side angle $2\phi = 140^{\circ}$, as given in the curves appearing on page 5 of PFB Document No. 231, Annex 2, submitted by the U.S.A. Delegation.
- (II) Chart to determine the angular width of the major lobe in the horizontal plane, showing the width of beam for seven types of rhombic antenna (each with a different angle ϕ), as proposed by the U.S.S.R. Delegation in Appendix I, C of PC-Rhf Document No. 79.
- (III) Proposal of the Mexican Delegation with respect to the Spacial distribution of the vectors of Field intensity which must exist in the principal radiation lobe of a Rhombic antenna. 2/

In cases where complete data are not available as to the exact form of principal radiation lobe of a rhombic antenna and only the gain of the same at the elevation angle of the principal radiation is known, the following will be the characteristics of the lobe:

- (a) The principal radiation lobe will be considered as a solid of revolution whose axis is determined by the direction of maximum radiation.
- (b) The angular width of the principal radiation beam will be 1.33 times the angle of elevation, i.e., it is considered as representative of a sinusoidal distribution of the radiated field.
(100% of the maximum gain in the direction of the elevation angle, 86.6% for an angle which is $2/3$ of the elevation angle, 50% for $1/3$ of this same angle, and 0% for 0°).

The Group is of the opinion that the information made available on the subject of rhombic antennas is still incomplete and proposes to study the subject further.

RECOMMENDATIONS (continued)

1/ See also Prof. Dr. Van der Pol in Appendix I. A of Document RP-Rhf No. 79.

2/ See also Appendix A of Document 410.

6. Recommendation of Electric Parameters for adoption as bases for the elaboration of a plan or plans for the assignment of frequencies.

The Committee regrets to have to record that there is very little in the way of documentary material or calculations in the case of other types of antennas specified in the lists of requirements, and that it is not easy therefore to make recommendations in regard to them. Where no specific information is available as to the directional characteristics of such antennas, they may be taken for the purposes of the assignment of frequencies to be ~~Omni~~-directional.

As regards simultaneous sharing, it is to be assumed that the power radiated by a directional antenna is equal to the power of the transmitter, except in the direction of the major lobe. However, in the case of certain antennas the power radiated in any other direction may attain as much as one-tenth of the power radiated in the direction of the major lobe.

7. Area of Reception and Area served by a Transmission

(I) General definitions

(a) Reception area or intended area of reception is the area over which broadcast coverage is contemplated by a country.

(b) The area served by a transmission is that area which lies within the principal radiation beam (horizontal as well as vertical) of an antenna and receives the desired signal consistent with the standards for good reception, as determined by the protection ratios for signal to atmospheric and industrial noise and for wanted signal to unwanted signal on the same channel as well as on adjacent channels.

(c) Geometric area is a term applied to part of the surface of the globe situated in relation to the transmitter as indicated in paragraphs IV and V below.

(II) The area served by a transmission must be determined by the radial distance from the transmitting station as well as by the azimuthal direction.

RECOMMENDATIONS (Continued)

- (III) However, as first approximation and for practical application the following readily applicable rules are recommended:-
- (IV) Geometric rules referring to the radial distance:-
- (a) The first geometric area is that from 0 to 800 kms from the transmitter.
 - (b) The second geometric area is that from 800 to 2000 kms from the transmitter.
 - (c) The third geometric area is that from 2000 to 4000 kms from the transmitter.
 - (d) The fourth geometric area is that which is more than 4000 kms from the transmitter.
 - (e) If the intended reception area is situated between two or more of the above areas it is to be considered as one area if the ratio of the maximum to the minimum distance does not exceed 2.5, and as two areas when the ratio is greater than 2.5.
- (V) Geometric rules referring to the azimuthal direction:-
- (a) For distance of 0 to 800 kms the geometric area is determined by an angle of 360° .
 - (b) For distance of 800 to 2000 kms the geometric area is determined by an angle of 65° .
 - (c) For distances of 2000 kms to 4000 kms the geometric area is determined by an angle of 35° .
 - (d) For distances of more than 4000 kms the geometric area is determined by an angle of 18° .
- (VI) The above definitions are given from the technical point of view only, and do not reflect such factors as the boundaries between States, difference of languages, etc. which have to be taken into account when considering the concrete directions of broadcast.
- (VII) For short distances up to 4000 kms Mercator map projection will be used while for longer distances Great Circle projections are necessary.

RECOMMENDATIONS (Continued)

8. Necessity for Simultaneous Channel Sharing:

Although simultaneous channel sharing is not desirable from the point of view of the possibilities of interference among stations the need for such channel sharing comes about because of the fact that the number of channel hours in the requirements submitted by all the countries is much greater than the number of channel hours available for broadcasting, according to the Atlantic City allocations

9. Simultaneous Sharing Possibilities

- (i) The exact sense of simultaneous channel sharing possibilities can be obtained only on the basis of an analysis of concrete cases of co-sharing by stations.
- (ii) The Committee finds that the problem of simultaneous channel sharing requires detailed study of individual requirements and at this time recommends, subject to review in the light of any further information and experience, adoption of curves of field intensity being prepared by Mexican Engineers in collaboration with the delegation of the U.S.A. and based on Bureau of Standards Circular No. 462.

10. Proposal regarding the use of frequencies in the 26 Mc/s broadcasting band.

That recognizing the necessity for encouraging the use of the 26 Mc/s broadcasting band with a view to relieving congestion in the lower bands, and bearing in mind that the 26 Mc/s band is 500 kc/s wide and unlikely, in any event, to be fully utilized during the life of the Plan adopted by the present Conference, Committee 4 recommends:

- (a) that Committee 6 may as an exception to the general rule for the assignment of one frequency to one programme to one reception zone, allocate duplicate frequencies in the 26 Mc/s band, when so requested by the country concerned and when the frequency is likely to prove useful for technically justified assignments in the 15, 17 and 21 Mc/s bands.
- (b) These rules will be considered acceptable only during the life of the Plan accepted by the present Conference.

CHAPTER 8

METHODS OF ECONOMIZING IN THE USE OF HIGH FREQUENCIES FOR BROADCASTING:

It is recommended that:

- 1. (a) To avoid, as much as possible, transmissions during periods of very rapid change in ionospheric conditions (in accordance with the decision taken by Committee 4), if there is no strong reason for continuing the transmissions:

(b) Subject to objections which may be submitted by interested countries, to 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. In each particular case, Committee 5 will propose the most appropriate technical solution, taking into account the preceding suggestions:

(c) To begin to meet only the requirements representing such communications as are assured by satisfactory reception conditions all other requirements to be reconsidered after seeking possibilities of improving reception conditions.

(d) Wherever technically and economically possible, to use other frequencies than those in the high frequency broadcasting bands (low, medium, very high frequencies, tropical bands).

(e) To take advantage of every practical possibility offered by the utilisation of point-to-point circuits (when such practice is acceptable to the interested services) and of transcriptions, in order that exchanges of programs between local or regional stations may lead to reductions in the use of high frequencies.

(f) That the Conference lay down general rules leading to the prompt standardisation of recording methods.

(g) That, as much as possible, an effort be made in the construction of receivers to prevent their characteristics from limiting the potential output of all high frequency and tropical broadcasting bands.

Detailed comments on the above recommendations may be found in the Report of Working Group C as contained in Document No. 408.

CHAPTER 9

Consideration of Future Lines of Development of High Frequency Broadcasting and Technical Methods of Programme Exchange in the light of the latest technical advances.

This question is closely bound up with the problem arising in connection with the economy of frequencies. The recommendations already made on the economy of frequencies (Chapter 8) are accordingly recalled, and attention is more particularly directed to the following suggestions:

The development of telephone circuits (cables or point to point radio circuits), especially in the interior of countries of a certain size, should lead to a greater use of local stations for the transmission of programmes which are at present broadcast on high frequencies for lack of any other possibility:

The standardisation of methods of transcription should allow a limitation of the requirements in high frequencies by facilitating the exchange of programmes, and by the retransmission, under improved conditions, of an important part of artistic programmes by the local broadcasting networks.

An improvement in the construction of receivers should facilitate a more rational use of the highest frequency bands allotted to broadcasting:

Attention is called to the study entrusted to the C.C.I.R., concerning the possibility of employing the system of single sideband transmission. The advantages of using this system are numerous (see Document of the C.C.I.R., Stockholm 1948, attached to Question 24). It is desirable that the work done by manufacturers with the collaboration of the administrations should be coordinated to facilitate the study of the C.C.I.R. and contribute as much as possible to the practical application of this system, particularly in the case of new services to be established where transmitting and reception techniques can be coordinated:

CHAPTER 10

TECHNICAL PROBLEMS THAT HAVE TO BE STUDIED OR COORDINATED ON A WORLD BASIS.

1. Scientific or general technical problems concerning basic data useful in the formulation of recommendations when preparing or modifying a plan.

All the problems concerning broadcasting submitted to the C.C.I.R. for study and listed by Prof. Van der Pol (see document C.C.I.R. Stockholm of 1948, List of Questions for Study).

2. Problems more directly concerning the implementation of a plan and the daily operation of transmitters.
 - a) Analysis of reports concerning sunspot activity and ionospheric phenomena in order to have the necessary information for ascertaining and forecasting the propagational conditions for radio waves; and for putting into operation frequency assignment plans;
 - b) Analysis and coordination of the monitoring reports of high frequency broadcasting stations received from various sources, in order to check on the operation of the plan. Organisation of listening or trial test (for example on the practical possibilities of simultaneous sharing, on the importance of interference, etc.) for the purpose of determining the most efficient means of using that part of the spectrum reserved for high frequency broadcasting.

Various measurements regarding transmission (especially measurements of frequency and field intensity) wherever useful in tracking down the cause of interference experienced, or in adding to our knowledge of propagation. The methods of measurements used should be standardised.

- a) The study of information obtained from countries after the implementation of the plan and the necessary recommendations to be made to ensure orderly and efficient use of high frequencies for broadcasting.
- d) Study of all technical and practical question in relation to the subjective aspect of the quality of reception (modulation band width, fading and distortion);
- e) Study of questions concerning the practicability of exchanging programmes (research of the standardisation of recording methods, exchange of information on characteristics of recording methods used by different countries, publication of information concerning programmes and time tables, transmitter operation, all data on possibilities of using radio circuits for relay);
- f) Publication of a bulletin, or of documents giving the results of observations or work on the problems enumerated above. It is recommended that the preceding conclusions be forwarded to Committee 7.

Chapter 11

OTHER ITEMS OF WORK OF THE COMMITTEE.

As a result of the recommendation of the co-ordinating Committee, three joint meetings of Committees 4 and 6 were held to hear an explanation of the technical Principles underlying the Soviet Plan. It must be mentioned here that Prof. Siforov of the U.S.S.R. delegations gave an excellent expose of the technical principles underlying the Soviet Plan. The reports of the joint meetings are contained in Document

Chapter 12.

CHAIRMAN'S CONCLUDING REMARKS.

The Chairman most sincerely thanks all the members of the Committee who had all along shown good will, mutual understanding and spontaneous and whole hearted co-operation. The Chairman would like to specially thank the two vice-Chairmen, Mr. George Sterling and Prof. Siforov, the Chairman of the Working Groups, Mr. W.B. Richardson, Dr. Metzler and Mr. Mercier. The Chairman also thanks the reporter, Mr. Parker of the United Kingdom delegation, who worked extremely hard throughout and produced accurate and excellent reports of the minutes of the meetings. Further, the Chairman will be

failing in his duty if special mention is not made of the very valuable and extensive information provided by the delegations of U.S.A., Mexico, U.S.S.R. and United Kingdom. In addition, on behalf of the Committee, the Chairman thanks the delegations of Mexico and U.S.A. as well as the authorities of Broadcasting Station XEX for preparing the recordings and arranging the listening tests in connection with co-channel and adjacent channel interference and atmospheric and industrial noise. Special mention has to be made of the excellent way in which the members of the interpretation service all along helped the Committee in its work. It may be pointed out in this connection that the task of the interpreters of this Committee was an extremely difficult one in view of the complicated and technical terminology used in its proceedings. The present report of the Technical Committee covers the study of most of the subjects entrusted to this Committee. However, it is to be stated that the Committee is still continuing its work and a supplementary report will be submitted to the Plenary Assembly in due course.

ANNEX 1

LIST OF PARTICIPANTS

Delegations

Albania	El Salvador	Poland
Argentine	Ecuador	Portugal
Australia	USA	Morocco and Tunisia
Austria	Finland	Yugoslavia
Belgium	France	Ukraine
Biolorussia S.S.R.	Guatemala	Southern Rhodesia
Bolivia	Honduras	Roumania
Brazil	Hungary	U.K.
Bulgaria	India	Siam
Canada	Indonesia	Sweden
Chile	Iran	Switzerland
China	Iceland	Syria
Vatican City	Italy	Czechoslovakia
Colombia	Luxemburg	USA Territories
Portuguese Colonies	Mexico	Turkey
U.K. Colonies, Pr., etc.	Nicaragua	French Oversea Territories
Belgian Congo	Norway	South African Union
Cuba	New Zealand	URSS
Denmark	Pakistan	Uruguay
Dominican Republic	Panama	Venezuela
Egypt	Netherlands	

Experts

I.F.R.B.
Dr. Van der Pol

Observers

Mongolia
IRO
UNESCO

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document no. 480-E

14 January 1949

Mexico City, 1948/49

Original: ENGLISH

THE UNITED NATIONS TELECOMMUNICATION SYSTEM

HISTORICAL. The General Assembly at its first session in London approved the following recommendations:

"The United Nations should also have its own radio broadcasting station or stations (at headquarters) with the necessary wave lengths, both for communications with members and with branch offices, and for the origination of United Nations programmes. The station might also be used as a centre for national broadcasting systems which desire to cooperate in the international field. The scope of the radio broadcasting activities of the United Nations should be determined after consultation with national radio broadcasting organizations".

The Secretary General, on the basis of this recommendation, appointed a committee of technical experts from eight countries which prepared a detailed report for consideration by the General Assembly at its second session (document A/335). At that session, however, it was decided to postpone consideration of these proposals.

A committee of international experts representing all fields of public information, press, film, and radio, at its conference in New York during May 1948, recommended to the Secretary General a partial implementation of the United Nations Telecommunications Plan, and stressed the urgency of their recommendation (document A/C-5/223, Annex 1).

At the last session of the General Assembly in 1948 in Paris, the Secretary General presented a report recommending, for the consideration of the General Assembly, a draft resolution, which embodied all essential action to be taken at this time, without special appropriation of funds.

This resolution was accepted with 44 votes against 1 (Belgium), and no abstentions. The resolution reads as follows:

The General Assembly -

Approves in principle the establishment of a United Nations Telecommunications System; reaffirms the United Nations' position as an operating agency in the field of international telecommunications and

and calls upon all Member Governments to support at all international telecommunications conferences the requirements of the United Nations for frequencies and services envisaged in the report of the Advisory Committee on United Nations Telecommunications (A/335); authorizes the Secretary General to present to the General Assembly at its regular session of 1950 such recommendations as he deems necessary to implement a United Nations Telecommunication System.

As seen in this resolution, the General Assembly reaffirms that the Radio Division of the Department of Public Information is an operating service in the field of international broadcasting and calls upon all Member States to support.

As a consequence the Secretary General of the United Nations has sent a telegram to all the Member Governments requesting these, in conformity with the resolution to support the claims for channel-hours of the United Nations at all international telecommunications conferences.

PRESENT SITUATION.- The present situation may be summarized as follows:

State Department	-	38.5 hours
WRUL - WRUW	-	5. "
Montreal Canadian		
Broadcasting Corp.	-	4. "
Tangier Relay	-	6. "
		<u>53.5</u> hours

To which must be added

Haway relay	-	<u>7.</u> "
		60.5 hours

When there are no meetings at Lake Success, no assembly, Economical Social Council, or Security Council, about 10 - 12 hours a day on transmitters time basis must be deducted.

FUTURE REALIZATION.- The last paragraph of the above reproduced resolution authorizes the Secretary General of the United Nations to present to the coming General Assembly such recommendations as he deems necessary for implementing a United Nations Telecommunication System. It can therefore be accepted that the implementation of this system may be initiated in the beginning of the year 1950, to be completed in the

summer of 1951.

Actually the service has been in existence for only two years and is in full development. Many requests for broadcasting in more languages are under consideration for realization within the limits of the actual budget. The requirements of the United Nations as expressed in forms 3 and 4, show a total of 117 channel-hours, which figure has to be considered as an ultimate goal, to be reached after the complete implementation of the whole plan in the second half of the year 1951. As mentioned in Comments No. 34 of 2 November 1948, an agreement was concluded in December 1947, between the United Nations and UNESCO for the joint operation of their facilities. In accordance with the terms of this agreement, the United Nations requirements for channel-hours as expressed in forms 3 and 4, embrace also the requirements and special needs of UNESCO. It is in the light of this information that the requirements of the United Nations have to be studied and considered.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 481-E

15 January 1949

Original: ENGLISH

Committee 6

PLAN COMMITTEE

Agenda for the 18th Meeting

to be held at 3:30 P.M., 17th January 1949

1. Approval of the Report of the 15th Meeting of the Committee (Document No. 452).
2. Continuation of discussion on the future work of the Committee (Report of Working Group A, Document No. 470).
3. Consideration of First Report of Working Group D (Document No. 460).
4. Miscellaneous.

GUNNAR PEDERSEN,
Chairman of Plan Committee

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 482-E

15 January 1949

Original: ENGLISH

Committee 2

U. S. A.

Additional members of Delegation

The Secretary has received the following letter:

"I have the honor to inform you that the United States Delegation has been augmented by the addition of the following persons in the category of Adviser:

George Herrick,
Chief, Facilities Branch,
International Broadcasting Division,
New York, N. Y.

Howard DeLong,
Chief, Operations Section,
Facilities Branch,
International Broadcasting Division,
New York, N. Y.

In addition, I should like to advise your that Mr. Mucio Delgado, Chief of Program Operations of the International Broadcasting Division, has returned to Mexico and will attend the Conference in the capacity of Adviser.

Credentials for these three delegates will be forwarded duly to the Conference through proper channels.

Very truly yours,

(s) Ellis K. Allison
Secretary of the Delegation "

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 483-E

15 January 1949

Mexico City, 1948/49

Committee 3

Corrigendum to Document No. 448-E

Add the following text to page 17:

VIII. WORKING GROUP C

This Group, the composition and terms of reference of which were indicated in paragraph II of the present Report, began work immediately after the time limit fixed for the submission of Replies to the Questionnaire in Document No. 265 (evening of December 9).

On the working method adopted by the Group, and on the difficulties with which it has had to deal, the Chairman, Prof. Bokhari (Pakistan), has interesting information to give in his Report (Document No. 375). But the latter does not adequately reflect the extent of the work done by the Group, or the devoted service of all its members under the inspired direction of its Chairman. If Documents No. 375 and No. 384 are amongst the most useful and the most illuminating hitherto published by the Conference, it is to the work of Group C and its Sub-Groups that this result is due.

After the Christmas and New Year holidays, owing to the heavy work of the Secretariat in connection with the translation, reproduction and distribution of the analyses and replies, a certain number of delegations were not in a position to take note of these documents until the early days of 1949.

The consideration of these documents began in the afternoon of January 7. After a short general discussion it was decided by votes to to accept them as working documents.

The question of the best method of procedure to enable, not only Committee 3, but also the Conference as a whole, to derive the fullest advantage from the work done, gave rise to prolonged discussion. A Norwegian proposal to invite Group C to meet again in order to take note of such corrections as delegations might have to make, with a view to a Supplementary Report to the Committee, was rejected; and the Committee, on the proposal of the Cuban Delegation, approved the following solution:

"Certain Replies to Document No. 265 having been incorrectly analyzed or reproduced in Document No. 375, Committee 3 decides that the last named document shall be considered question by question, in order to eliminate such errors, on the understanding that each delegation shall correct such errors as concern it without intervention by other parties.

"Committee 3 further expresses a wish to be informed immediately as to the details of the classification of the different countries in the four categories: "Yes", "No", "Abstentions", and "Other Replies", in order that delegations may be enabled to indicate their agreement with the classification of their Replies, so that perfectly correct statistical data may be established."

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 484-E

15 January 1949

Mexico City, 1948/49

Original: ENGLISH

S.C.A.P.

Formulae proposed for consideration for use in
calculating the number of channel-hours to which each
country is entitled

1. The formula proposed by the Delegation of India and the formula proposed by the Delegation of the U.S.S.R. both have desirable characteristics which are peculiar to each. However, both of these formulae also possess undesirable characteristics which are likewise peculiar to each. (See Paragraph 3, following). Therefore, it is proposed that the following compromise formula be considered.

$$c_n = \frac{D}{C} \sqrt[2]{\left(\frac{a_n W_a}{\sum a} + \frac{b_n W_b}{\sum b} + \frac{c_n W_c}{\sum c} + \dots\right) \times \sqrt[k]{(1 + a_n W_a)(1 + b_n W_b)(1 + c_n W_c) \dots - 1}} \quad (1)$$

Where:

$a_n, b_n, c_n, \text{ etc.}$ = the values of factors $a, b, c, \text{ etc.}$ for any country "n".

$W_a, W_b, W_c, \text{ etc.}$ = the relative weightage of factors $a, b, c, \text{ etc.}$ respectively.

k = the total number of factors being considered.

$$C = \sum \sqrt[2]{\left(\frac{a W_a}{\sum a} + \frac{b W_b}{\sum b} + \frac{c W_c}{\sum c} + \dots\right) \times \sqrt[k]{(1 + a W_a)(1 + b W_b)(1 + c W_c) \dots - 1}}$$

Examination of Formula (1) reveals that the first term of the product is similar to the formula proposed by the Delegation of India and the second term is, as can be seen if it is expanded, a compromise between an arithmetic and a geometric mean. Thus, by taking the square root of the product of the two terms a thorough compromise is obtained. Although Formula (1) is a compromise between an arithmetic and a geometric mean it does not possess the undesirable characteristics of the purely geometric mean formula, which are pointed out in subparagraph 3b, following. It does have the undesirable characteristics of the arithmetic mean formula but to a much less degree.

2. Many delegations, in view of the obvious inadequacy of the number of channel-hours available, have expressed the opinion that there should be some upper limit to the number of channel-hours any one country may employ. It is felt no upper limit can be set arbitrarily. But, on the other hand, it is felt an upper limit based on the factors which have a bearing on the need for broadcasting for countries could be established. That is, the factors could be employed in a formula in which the rate of increase of the resultant weightage gradually decreases as the factors become larger. That consideration of such a formula is desirable can be seen when it is realized that if the formula proposed by the Delegation of the U.S.S.R. were employed and the factors area, population and number of languages were the only factors considered, one country (the U.S.S.R.) would be entitled to 14.8% of the total number of channel-hours, and three countries (the U.S.S.R., China and India) would be entitled to 33.6% of the total number of channel-hours. If under the same conditions the formula proposed by the Delegation of India were used the U.S.S.R. would be entitled to 11.7% of the total number of channel-hours, and the three countries (the U.S.S.R., China and India) would be entitled to 30.4% of the total.

In view of the above the following formula is proposed for consideration:

$$d'_n = \frac{D \sin \theta_n}{\sum \sin \theta} = \frac{D \sin 90d_n/d_L}{\sum \sin 90d/d_L} \quad (2)$$

Where:

D = the total number of channel-hours

d'_n = the number of channel-hours to which any country "n" is entitled.

d_n = the number of channel-hours to which any country "n" would be entitled by Formula (1) or a similar formula.

d_L = the number of channel-hours to which the country entitled to the greatest number of channel-hours would be entitled by Formula (1) or a similar formula.

$\sum \sin 90d/d_L$ = the sum of $\sin 90d/d_L$ for country one, two, three, etc.

Formula (2), being a sinusoidal or harmonic function provides the most natural decrease possible in the rate of increase of the resultant total weightage. Other possibilities of course exist for obtaining a gradual decrease in the rate of increase of the resultant

weightage. For example, an exponential function such as the hyperbolic tangent could be employed. However, of several possible functions which were investigated the simple sine function appeared to be the most logical and equitable. The value of d_n and of d_L to be employed in Formula (2) could be determined by the formula proposed by the Delegation of India or, if the relative weightage of all the factors to be considered were equal, by the formula proposed by the Delegation of the U.S.S.R. However, in view of the deficiencies of these formulae (see Paragraph 3, following) it is felt Formula (1) would be the most equitable for this purpose.

Calculations using the formulae proposed by the Delegations of India and the U.S.S.R. as well as by Formula (1) and (2) are contained in the Annex attached hereto. Examination of the results obtained by using Formula (1) alone show that the deficiencies of the formulae proposed by the Delegations of India and by the U.S.S.R., which are pointed out in Paragraph 3 are avoided to a considerable degree. Examination of the results obtained using both Formulae (1) and (2) show that the formulae proposed herein for consideration would entitle 73 of the 82 countries to more channel hours than would the formula proposed by the Delegation of the U.S.S.R., and would entitle 56 of the 82 countries to more channel-hours than would the formula proposed by the Delegation of India. A total of 5477 channel-hours was employed in each case. The data on area, population and languages that was used in all cases is the data which was used in making the calculations contained in Annex A, Appendix B, Geneva Report. This data provides a means of determining what to expect of the various formulae, although it is not entirely correct, particularly as regards languages. For example the number of languages for Brazil is given as 1 + 1 but in these calculations only one language was credited Brazil, as only one had been used in the Geneva calculations.

3. Brief comments on formulae previously proposed

- a. Arithmetic mean. The principal deficiencies of a formula based on an arithmetical mean are shown in Document No. 255. The examples used in Document No. 255 are for rather extreme cases. However, examination of the available data on area, population and languages for the various countries reveals that in the case of several countries the conditions are even more extreme.
- b. Geometric mean. A formula based solely on a geometric mean provides a perfect solution from the mathematical view-point. However, in allocating frequencies the practical view-point must be taken. Close examination of the formula proposed by the Delegation of the U.S.S.R. shows that if any one of the factors has a very small value the resulting weightage is relatively small even though the remaining factors are relatively large. Indeed, if one of the factors for a country were

zero that country would, from a mathematical view-point be entitled to zero channel-hours. Of course, it could be agreed that no factor having a value of zero would be included, but if this were done countries having factors less than one but greater than zero would suffer thereby. The following results which were obtained using the formula proposed by the Delegation of the U.S.S.R. should make this point clear. From the results thus obtained it is seen that country one having three factors equal to the corresponding factors of country two and of country three but with two factors equal to zero receives a total weightage almost twice as great as does country two. It is also seen that country one receives a total weightage equal to that of country three.

TABLE I

Country	<u>Factor</u>					
	a	b	c	d	e	d _n
1	2	100	10	0	0	4.57C
2	2	100	10	0.2	0.5	2.88C
3	2	100	10	1.0	1.0	4.57C

Another undesirable characteristic of the purely geometrical mean formula is that the kth root must be taken even though a country may have, say, only (k - 2) factors which are greater than zero. The reason why the kth root must be employed in such cases can be seen by referring to TABLE II, wherein the root taken in each case is equal to the number of factors which are greater than zero.

TABLE II

Country	<u>Factor</u>					
	a	b	c	d	e	d _n
1	2	100	10	0	0	12.6C
2	2	100	10	0.2	0.5	2.8C
3	2	100	10	12.6	12.6	12.6C

From TABLE II is seen that country one with two factors equal to zero would receive more than four times the total weightage of country two, and that country three would have to possess large values for the factors d and e in order to receive a total weightage just equal to the total weightage of country one.

Luther E. Johnson, Lt. Col.
Observer for the Supreme
Commander for the Allied Powers

COMPARISON OF FORMULAE. DATA FROM GENEVA REPORT. CHANNEL HOURS
EQUAL TO 5477

	<u>India</u>	<u>USSR</u>	<u>Formula 1&2</u>	<u>Formula 1</u>
Afghanistan	56.2	59.8	62.7	57.3
Albania.....	27.0	8.8	18.9	17.2
Argentina	65.3	75.3	80.6	73.8
Australia	131.0	84.6	121.3	111.5
Austria	19.5	18.5	22.2	20.1
Belgium	33.0	17.8	27.2	24.7
Bielorussia	38.5	40.8	43.8	39.8
Brazil	175.0	162.4	188.0	174.7
Bulgaria	19.3	18.9	22.6	20.5
Burma	48.0	60.2	59.0	54.0
Canada	165.5	131.2	159.0	146.8
Chili	27.8	34.4	36.4	33.0
China	552.0	508.6	440.0	512.6
Colombia	36.7	47.7	48.6	43.8
Belgian Congo	55.6	64.3	69.0	63.1
Costa Rica	14.2	7.8	14.0	12.7
Cuba	18.0	17.4	21.0	19.1
Czechoslovakia	38.8	33.4	39.8	36.1
Denmark (in				
Greenland)	16.7	12.3	17.4	15.6
Dominican Republic ..	15.0	10.0	15.1	13.7
Ecuador	51.4	41.8	51.6	47.1
Egypt	26.8	18.4	25.7	23.5
El Salvador	14.9	9.0	14.3	13.0
Ethiopia	55.2	35.1	53.6	49.0
Finland	33.4	29.7	35.6	32.3
France	55.4	62.8	66.9	61.4
French Colonies	202.0	217.8	219.5	208.0
Germany	82.6	88.7	97.4	89.3
Greece	21.0	21.9	24.8	22.8
Guatemala	30.0	20.2	28.0	25.6
Haiti	15.7	9.5	14.7	13.5
Honduras	15.4	11.5	16.8	15.3
Hungary	34.8	26.7	33.9	30.8
India	470.1	518.0	415.0	460.5
Netherlands	21.2	15.0	20.9	19.0
Indonesia	92.0	107.4	113.0	103.5
Netherlands W.Indies.	15.0	7.8	15.7	14.2
Iran	51.0	67.2	66.5	60.8
Iraq	21.1	24.7	31.1	28.3
Ireland	29.0	16.4	25.1	22.7
Iceland	14.4	4.9	14.3	13.0
Italy	56.4	54.0	62.8	57.4
Japan	82.8	71.9	88.0	80.3

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(Annex to Doc. No. 484-E)

	<u>India</u>	<u>USSR</u>	<u>Formula 1&2</u>	<u>Formula 1</u>
Korea	35.4	38.0	42.3	38.4
Lebanon	13.7	4.4	10.3	9.4
Liberia	15.6	12.3	17.3	15.7
Luxembourg	13.0	2.0	8.2	7.5
Mexico	60.4	78.4	78.7	72.3
Monaco	12.8	0.0	6.3	5.8
Mongolia	83.8	35.6	70.5	64.4
Morocco	26.2	34.0	34.6	31.6
New Zealand	18.0	16.8	21.6	19.6
Nicaragua	15.8	12.1	17.6	16.0
Norway	20.1	22.2	25.3	22.9
Pakistan	176.6	180.2	183.0	170.7
Panama	14.3	7.8	14.4	13.0
Paraguay	29.8	17.6	27.7	25.3
Peru	36.8	45.8	48.0	43.6
Philippines	35.7	35.7	39.7	36.2
Poland	37.6	43.4	46.3	42.4
Portugal	20.7	19.9	23.8	21.5
Portuguese Col. ...	52.3	62.7	66.0	60.2
Roumania	67.3	54.0	68.7	62.7
Saudi Arabia	59.0	65.7	72.0	65.7
Siam	33.6	44.7	44.6	41.0
South Africa	38.0	49.2	50.2	45.8
Southern Rhodesia .	19.8	19.3	24.0	21.9
Sweden	25.0	33.8	33.1	30.1
Switzerland	42.5	17.8	30.6	28.0
Syria	17.3	16.6	20.3	18.5
Ukrainian S.S.R. ..	68.0	79.9	80.0	73.3
U.S.S.R.	642.0	814.2	472.6	676.4
United Kingdom	58.2	58.4	66.6	60.8
U.K. Colonies	209.0	271.3	240.0	228.7
U.S.A.	263.4	239.2	269.0	260.2
U.S.A. Territories.	15.1	8.8	14.1	12.9
Uruguay	17.3	16.5	20.3	18.8
Tunisia	16.8	15.3	19.4	17.6
Turkey	38.6	52.6	51.8	47.1
Vatican City	13.6	0.3	7.8	7.2
Venezuela	15.2	7.0	12.8	11.6
Yugoslavia	54.0	49.2	55.7	50.8

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

- Document No. 485-E

15 January 1949

Original: SPANISH

Committee 1

REPORT OF COORDINATING COMMITTEE

Meeting of 12 January 1949

Mr. Miguel Pereyra, the Chairman, declared the meeting opened at 10:30 a.m.

Vice Chairmen: Dr. Metzler (Switzerland) and Mr. Bokhari (Pakistan).

Secretary: Mr. L. E. Dostert, Secretary of the Conference.

I. CONSIDERATION OF ITEM 1 OF THE AGENDA - Doc. No. 438 - "Approval of the final text of the draft amendment of the Rules of Procedure (Doc. No. 437)".

1-1 In discussing Document No. 437, containing the draft amendment to paragraph 8 of Document No. 354, Mr. Lalić (Yugoslavia) expressed agreement with the text thereof. He wanted to know what the final text of Article 14 was, since at the end of Document No. 437, under discussion, it was stated that Article 17 was cancelled because the provisions thereof were included in Article 14.

1-2 Messrs. Faulkner (U.K.) and Van den Broek (Netherlands) read in English and French, respectively, paragraph 2 of Article 14, the text of which is as follows:

"Proposals or amendments presented in Committee, or referred to Committee by the Chair of the Conference, shall be subject for purposes of discussion or voting to the provision of Article 16, excepting paragraphs 9 and 13, in regard to proposals or amendments presented to the Plenary Assembly."

1-3 Mr. Dostert, the Secretary, stated that at the last meeting of the Committee the text of Document No. 354 was adopted, with the exception of paragraph 8 of Article 16, which was amended. He also said that at the suggestion of the Delegation of India a slight amendment was adopted, consisting of adding the words "excepting paragraphs 9 and 13" to the text of paragraph 2 of Article 14, which had just been read. Articles 9 and 13 referred respectively to the quorum and to the secret vote in the Committees.

- 1-4 Mr. Lalić (Yugoslavia) replied that he did not find paragraph 13, but, in order not to prolong the discussion unnecessarily, he reserved the right to bring the subject into discussion again if he considered it necessary.
- 1-5 Mr. Sastry (India) suggested that not only should Document No. 354 be replaced but that Document No. 21 also should be reprinted so that there would be no confusion in numbering.
- 1-6 The Chairman replied that after final approval the new articles would be published in their entirety, in order to avoid any confusion that might arise.
- 1-7 There being no other observations, the Committee approved the text of paragraph 8 of Article 16 of the Rules of Procedure as contained in Document No. 437.

II CONSIDERATION OF ITEM 2 OF THE AGENDA.- Proposal of Brazil concerning the closure of the Conference (Document No. 433.)

- 2-1 Colonel Albuquerque (Brazil) made the following statement in support of his proposal contained in Document No. 433:

"The Delegation of Brazil, as author of Document No. 433, requests this Committee's permission to amplify its points of view on its constructive and analytical proposal, which fairly and equitably seeks to finish some of the work which is being indefinitely prolonged. This, Mr. Chairman, is not the first manifestation of impatience on the part of the various Delegations. As early as November the initial attempt at solution was rejected as inopportune. By December 15 a final pattern for the Conference's work was to be established; a Committee was to be appointed for the purpose of arranging the decisions of the Plenaries, and a frequency assignment Plan was to be drawn up for adoption by the various countries which comprise the ITU. The Argentine proposal, supported by only two other Delegations, Brazil and Colombia, was premature.

"During subsequent discussions there were demonstrations of anxiety as to the termination of the work; a completely effective method was also provided for the purpose of limiting the discussions in Committee 3. A few days ago the Delegation of the S.S.R. of Bielorussia presented a concrete proposal definitely to

end the Conference on February 1, which proposal was rejected by the Committee. Mr. Chairman, during the first few weeks of the Conference and ever since then, we have constantly worried about the successful conclusion of the Conference and the possibility of failing to reach a concrete understanding on the problems before us.

2-3 "Mr. Chairman and Gentlemen, the Delegation of Brazil returns with a concrete proposal for the closure of the Conference, this time with the arguments which we herewith present. It is obvious that the closing of the Conference has been postponed several times. Now we are concerned about continuing it until the 15th of March, with the probability of not reaching an agreement concerning this deadline. The deadlines previously established are of no interest to us because they were never faithfully observed. Now we are in a serious dilemma. In the present state of affairs, the Plan that must be drawn up by this Conference is still not in sight.

2-4 "Since it was formed, Committee 3 has discussed weighty problems but at such great length that up to the present time, after three months of intensive work, nothing concrete has resulted from its labors. The procedure followed by Committee 3 has resulted in delaying a decision concerning the general principles on which this Conference's Plan should be based. It is our opinion that not even with the successful coordination of the Replies to Document No. 265 will it be possible for Committee 3 to define the general principles so anxiously awaited by all the other Committees in order to conclude their labors. If it takes us two-and-a-half months to discuss only seven questions to be put to the Delegations, what can we expect now when we are faced with a considerable number of replies to other questions formulated as additions to the said Document No. 265? According to the calculations made, not even in two-and-a-half months more of continuous work would we arrive at any positive result, and all because the discussions are exceptionally long; statements are repeated with frightful consistency. There are Delegates who speak more than 20 times at a single Plenary Session. Mr. Chairman and Delegates, how shall we ever be able to decide on a Plan if we continue in this manner? We believe that the repetition of a statement by some of the Delegates may be necessary, but not so necessary as all that. We waste a great many useless words, which explains why we have been working fruitlessly for almost three months.

2-5

"It should be noted, further, Mr. Chairman and Delegates, that we are members of the public Administrations of our countries; we were appointed for a maximum period of two months, and we now have no prospect of finishing our work within 4 or 5 months. Other Committees which form part of this Conference have worked efficiently, but to what avail, if it is impossible to prepare any Plan without Committee 3's principles of priority?

"There is unquestionably a strong desire and anxiety to finish the work of this Conference. We are still searching for a plan which will end the present chaotic state of high frequency broadcasting. What have we done up to now, gentlemen? "Confusion worse confounded". We must extricate ourselves from this situation.

2-6

"We had a Plan prepared by the Soviet Delegation which still has not gotten beyond purely dialectical discussions and no categorical result or decision has been obtained. We are all convinced that the Soviet Plan is now in a position to be voted upon; the discussions in the Committees and the long arguments which took place have already given the Delegations wide knowledge of the said Plan. Why has it not been put to the vote, once and for all? With all due respect, Mr. Chairman, we believe an effective decision has not been possible because there exists a certain fear regarding the principles of priority, - a fear which up to now has prevented us from establishing those principles and which was present even during the first few days of the Conference when considerable apprehension was noticed at the very mention of principles of priority. This attitude makes it impossible to reach any conclusion. We must be decisive; we must act with despatch and sincerity. However, Mr. Chairman and Delegates, it is possible that at this very moment the Delegation of Brazil may be accused of error in proposing the measures contained in Document No. 433, because such a proposal by the Delegation of the Bielorussian S.S.R., fixing the closing date for this Conference, has been rejected. Document No. 381 had no realistic aspect. The limits set had no practical objective, because they were based upon one exclusive point, ignoring all plans which might later be submitted for the consideration of the Conference. We have before us now the formal promise of two delegations, those of the U.S.A. and of Portugal, that they are going to offer their collaboration. We hope this will be more than a promise, since it is not possible to continue wasting time. What, then, seems necessary? To limit the waiting time. To tell our colleagues that

if they wish to collaborate, they must do so promptly and present their plans, even though we have not yet the principles of priority. Let the Conference abandon the idea of general principles and examine concrete cases referring to each country. What is our main interest at the present moment? To know, with precise data, how many channel-hours are to be assigned to each country. That is the principal, primordial, primary objective. Let them tell us how many channel-hours we shall have according to each plan so that, upon that basis, we may make an analysis of the details. That was what happened when Prof. Siforov was questioned. Everybody wanted to know why he was assigned so many channel-hours; nobody asked why he had so many programs in such or such band, because this was a matter of detail.

2-8 So let us put the cards on the table. Let us make an initial study of the plans from the viewpoint of the number of channel-hours assigned to each country and let each delegation, using its sovereign right to vote, state if this or that plan satisfies its requirements. Once the plan has been approved, the first period of this Conference will be ended, and the technicians can continue their meetings in order to achieve a perfect distribution of the channel-hours assigned to everyone. You may ask: and if no plan is approved, what then? That would prove only that we are not yet capable of elaborating a plan which would solve the problem of high frequency broadcasting. Let us be sincere with ourselves. If necessary, we must be ready to acknowledge that our efforts have been in vain and that it is not possible to arrive at a practical result. And for this, Mr. Chairman and Delegates, so many expenditures and so many words? We believe we have said enough. Thank you, Mr. Chairman".

2-9 Mr. Sterling (U.S.A.) believed that the problem referred to in the Brazilian proposal was of basic importance, but in view of the fact that several other draft plans were being printed and about to be distributed, a reasonable term should be granted until they were in the hands of the delegations.

2-10 By the 15th the U.S.A. Delegation was going to present complete proposals and draft plans calculated for the June median. The other seasons would be presented as soon as possible, if the Conference thought they would be useful.

Once the delegations had been able to study these draft plans, the Committee would be in a better position to decide on the Brazilian proposal. For this reason he proposed that item 2 of the Agenda of the Meeting should be left for discussion in a later meeting, and should also be withdrawn from the Agenda for the Plenary Assembly of Friday, the 15th.

2-11 Dr. Andrada (Argentine Republic) then made the following statement:

"The Delegation of Argentina, in principle, seconds the Brazilian proposal (Document No. 433) so brilliantly explained by Col. de Albuquerque, head of the Brazilian Delegation.

In the opinion of the Argentine Delegation, this proposal represents a frank and valiant way of tackling and of solving the deadlock in which the Conference finds itself after almost three months of discussions and which is no less real simply because up to now, we have not aired it publicly. The Argentine Delegation has always been interested in accelerating as much as possible the work of the Conference in all its stages, so that once and for all we may arrive at a positive solution which meets with the general approval of the countries; but if the difficulty or the magnitude of the problems shows that we cannot arrive at this happy solution which all of us desire, then at least let us establish this fact as soon as possible with conclusive proof, so that we may avoid not only the considerable expenditures which the continuation of the Conference demands, but also the damaging psychological effects which successive extensions of its termination, with uncertain prospects, will produce on our respective governments.

We are not afraid of the truth, bitter though it may prove to be, and we do not employ the ostrich's tactics of burrowing its head in the sand to avoid seeing the danger, or to ignore the difficulties.

As to the details of the Brazilian proposal, we find that they may be improved and perfected, and we reserve the right to make pertinent suggestions when discussion is held on the subject. For the moment we only wished to state our general support of the proposal since the ideas which inspired it represent, in our opinion, an efficient contribution to the success of the Conference. Thank you, Mr. Chairman."

- 2-12 Mr. Dromojawski (Poland) said that he agreed with the opinions expressed by the Brazilian and Argentine Delegations. The Conference had come to a point where it was necessary to take a decision. The present situation could not continue indefinitely. He recalled that in the Committee Meeting of 5 January a concrete proposal was made by the Bielorussian S.S.R., and that it was rejected. During the discussion, several delegates had stated that they were ready to remain here indefinitely. However, the Polish Delegation had to make it clear that it was not in a position to do so, not only for financial reasons, but also because the members of the delegation are needed in their country for important reconstruction work. The number of human lives lost in Poland equalled the joint number of inhabitants of Cuba and Uruguay.
- 2-13 He also wished to remind Committee 1 of what had happened in Committee 3, which got off on the wrong foot. The U.S.S.R. proposal, inspired by a spirit of collaboration, and the result of an enormous effort, could have led to definite results. The Chairman of Committee 3 saw fit to eliminate that proposal. This elimination had been, in his opinion, a grave mistake which only caused more delay. There had been lack of system and changes of mood in the work of Committee 3.
- 2-14 Now, when a proposal of Brazil tending to accelerate the work of the Conference and to bring it to an end as soon as possible had been presented, it has been announced that the draft plans of the U.S.A. and of Portugal will be presented by the 15th. The U.S.A. plan had been announced ever since November 24. And even so, on the 15th a plan covering only two seasons was to be presented. While the others were being presented, there would be a lapse of time which nobody could foresee.
- 2-15 For all these reasons, the Delegation of Poland suggested that if the proposal of Brazil was not going to be voted on the possibility of re-considering the proposal of the Bielorussian S.S.R., contained in Document No. 381, should be studied.
- 2-16 Mr. Burian (Czechoslovakia) made the following statement:

"We are in complete agreement with the point of departure of the Delegation of Brazil, i.e., with the reasons which have moved that delegation to make the proposal contained in Document No. 433. It must be stated that the aforementioned reasons are known to all of us and have been discussed repeatedly in the course of various plenary meetings of the different Committees. Several delegations, and primarily the Delegation of the U.S.S.R., repeatedly, orally and in documents, have called the attention of the Chair to the fact that the sterility of this Conference demands, necessarily, a change in the working procedure.

2-17 Concerning the proposal itself, we are also in complete agreement that a date limit should be set, but we cannot clearly understand why this date should be postponed to 20 January. If the situation of the Conference is critical, it is useless to continue wasting time and only natural that the concrete work on the plan should commence today, making use of whatever documents may be available. The date of January 20 only signifies another week wasted.

2-18 As to point 2 of the proposal, we are in agreement that after the date limit a Plenary Assembly should be scheduled, but not by a decision proposed by the Delegation of Brazil. Unless I have misunderstood it, according to the Brazilian proposal, the draft plans are to be studied only from the viewpoint of the number of channel hours assigned to each country, and afterwards, possibly, it is to be decided by vote which plan should be accepted by the Conference. This procedure seems dangerous to me. I cannot imagine the situation and objective of our Conference if, for example, one of the plans presented should be accepted by a majority of fifty one percent. A matter of such importance for the whole world as is the plan for the assignment of channel-hours should not be decided by vote, but should be the result of a general agreement. It is not a case of number of votes, it is a case of moral responsibility of all of us, and, in the first place, of the Chair.

2-19 Furthermore, from the viewpoint of my Delegation, the total number of channel-hours assigned to my country does not correspond exactly to the possibilities of our shortwave broadcasts. For us, the assignments within the daily schedule of the bands in question, frequency sharing, protection, etc. are as important as the total number of channel hours assigned. For these reasons, we cannot agree with paragraphs 3 and 4.

These paragraphs are not sufficiently clear to us but, if I understand them correctly, the Brazilian proposal wants the Conference to end without arriving at any result and to confer authority as to future work and as to the results achieved by the various Committees on a completely new body, called Committee 10. I should like to call your attention to the fact that my Delegation has full powers to act, to vote and to sign on behalf of my government, exclusively for the International High Frequency Broadcasting Conference of Mexico, and that we find it absolutely impossible to apply these same powers to any sort of Committee after the end of the Conference. It is also necessary to bear in mind that the future plan consists not only of an adequate distribution of the channel-hours, but also of an introduction, an agreement and a decision concerning the time when said plan should come into force, and it seems to me that a Committee replacing our Conference would lack the necessary authority to decide this question. com-

2-20 For this reason, the Delegation of Czechoslovakia cannot accept the proposal of Brazil. From the viewpoint of this delegation, the only likely solution consists in initiating at once the work on the plan itself, using what concrete documents, directly related to the elaboration of said plan, may be available".

2-21 Mr. Stojanov (U.S.S.R.) stated that his delegation considered it indispensable to point out that it was not by accident that they were again discussing the continuation of the work of the Conference. This matter had already been brought up in November, when it was decided to continue the work in order to establish a final Plan.

2-22 Towards the end of December, 1948, the Delegation of the Bielorussian S.S.R. presented a concrete proposal describing very clearly the state of the Conference and stipulating at the same time that no new proposals or draft plans should be accepted.

2-23 As will be remembered, the U.S.S.R. Delegation seconded this proposal, which it saw as a proof of the efforts made by the Delegation of the Bielorussian S.S.R. to help expedite the work of the Conference. The present situation made it necessary to study future prospects.

- 2-24 The proposal of the Delegation of Brazil under discussion again made evident the truly difficult situation for which it was necessary to find an adequate solution.
- 2-25 From the beginning of the work of the Conference, the Delegation of the U.S.S.R. had been trying to get the Conference to concentrate its attention on the fundamental and important documents presented. Our delegation, which had prepared itself with great care for the work, presented a series of important and far-reaching documents: a plan (for median solar activity for each of the three seasons) as well as proposals concerning general principles.
- 2-26 Our delegation had stressed more than once the point that it would not be possible to lead the work to a successful conclusion without concentrating on the general principles for the elaboration of a plan.
- 2-27 The Delegation of the U.S.S.R. had been and still was doing everything possible to finish the work successfully; however, not many other delegations seemed to be making efforts in the same direction.
- 2-28 From the beginning of the work of the Conference, the U.S.S.R. Delegation had been trying, with perseverance and insistence, to obtain the adoption of just resolutions concerning the proposals presented, calling the attention of all delegations to the fact that the work could not be concluded properly unless our efforts were concentrated on the fundamental questions.
- 2-29 There were, however, delegations which, taking advantage of the majority and applying the "steam roller", did not want to open their eyes to the responsibility which is going to fall on them concerning the future of our Conference.
- 2-30 These delegations had been rejecting systematically the valuable and fair proposal of the U.S.S.R., sowing the seed of mistrust concerning the creation of an equitable plan. Some delegations made a great show of wishing to study and to adopt the U.S.S.R. plan, but in practice were doing everything possible to prevent its adoption, and were attempting to impose proposals which were not based upon any principle.
- 2-31 The fair and valuable proposals of the U.S.S.R. were being rejected. Thus, these delegations were undermining the basis and the spirit of cooperation of the Conference, creating

a feeling of uncertainty as to its success. We were advised not to take into consideration general principles, and there has been a desire to impose on us a plan not based upon general principles.

2-32 With the object of speeding up the work of the Conference, and desirous of obtaining positive results in our common work, the Delegation of the U.S.S.R. proposed to amend paragraph A (Doc. 433) replacing the words "after January 20" by the words "from now on".

2-33 Concerning paragraph B, how could the Conference adopt a quantitative assignment of channel hours without knowing what the frequencies were to be in what bands, in what directions and for what reception areas, and for what time of the day or night? To raise the problem of adopting channel-hours in an abstract manner would be equivalent to doing so blindfolded.

2-34 There was thus a good reason for raising, in paragraph 2 of the introduction to the proposal of the Delegation of Brazil, the question of principles of priority.

2-35 The Delegation of the U.S.S.R. had always maintained that only a plan based upon general principles could be established in a realistic manner and adopted.

2-36 Several of priority delegations were unwilling to state openly and frankly that, according to their opinion, the plan could not be established without adopting general principles. It was therefore proposed that the attention of the Conference should be concentrated upon the adoption of the general principles set forth by the U.S.S.R.

2-37 The proposal to create a Committee 10 or Revising Committee would really be equivalent to continuing the Conference, eliminating only some of the large delegations. Our delegations were authorized to participate in the Conference, but concerning participation in new organizations, we would have to have permission from our governments and administrations.

2-38 He wished to call the attention of the Conference to the fact that resolutions already adopted were being changed too readily, a statement that could be proven by the fact that the Rules of Procedure, adopted at the beginning of the Conference, had just been modified.

- 2-39 It was not strange, therefore, that the Delegation of Brazil should have suggested, in paragraph "C" of its proposal, that Committee 10 should make use "as much as possible" of the decisions of this Conference.
- 2-40 The Delegation of the U.S.S.R. wished to obtain concrete results from the work of the Conference, and proved this to all delegations by its own work.
- 2-41 The meeting was suspended at 12 p.m., and resumed at 12:30 p.m.
- 2-42 The Chairman said a vote would be taken on the U.S.A. proposal that Document No. 433, containing Brazil's proposal, should be considered in a later meeting of the Committee.
- 2-43 Mr. Dromojawski (Poland) thought that the U.S.A. proposal was out of place, because Brazil's proposal was already under discussion and, furthermore, there was a third one, of the U.S.S.R., introducing an amendment to paragraph a) of the Brazilian proposal.
- 2-44 The Chairman pointed out that the U.S.A. proposal excludes the proposal of Brazil. Therefore, if the former was approved, the debate would be ended.
- 2-45 Mr. Lalić (Yugoslavia) thought that the fact that seven delegates had already spoken on the subject, and that eleven more had asked for the floor to take part in the discussions, proved the great importance attributed to the problem. He therefore believed that the U.S.A. proposal should not yet be submitted to vote.
- 2-46 After some brief remarks on the subject of procedure by Mr. Fontaina (Uruguay) and Mr. Gross (Roumania), the Chairman decided to ascertain through a vote whether the Committee wished to continue the discussion or if, on the contrary, the U.S.A. proposal should be submitted immediately to a vote.
- 2-47 The result of this preliminary vote was forty (40) votes FOR deciding about the U.S.A. proposal and eight (8) AGAINST it.
- 2-48 Mr. Stojanov (U.S.S.R.) protested against the procedure. On the agenda, he said, was Brazil's proposal. It was therefore natural that the delegates wished to express their viewpoints. Refusal to cede the floor to delegates who had asked for it constituted discrimination among the delegations. He insisted that the discussion of the proposal of Brazil should be continued.
- 2-49 Mr. Sastry (India) suggested an amendment to the U.S.A. proposal, by fixing the date on which the document presented by the Delegation of Brazil would again be taken into consideration, and asked the U.S.A. Delegation if it would agree to state in the

proposal: "in the next Meeting of Committee 1, 19 January 1949". This amendment was accepted by the U.S.A. Delegation.

- 2-50 Mr. Gross (Roumania) proposed that paragraphs A and B of Document No. 433 should be considered immediately, leaving paragraphs C and D for a later meeting.
- 2-51 Dr. Metzler (Switzerland) proposed that the discussion of Document No. 433 should be delayed until the announced draft plans had been received.
- 2-52 The Secretary, Mr. Dostert, stated that the Swiss proposal, being the furthest from the original proposal, as it does not fix a date for the consideration of the document, should be voted on first.
- 2-53 Mr. Corteil (Belgian Congo) stated that his delegation would like to see the Conference end as soon as possible, but with tangible and practical results, i.e., by an agreement amongst the delegations on a plan accepted by a majority, if not by all.
- 2-54 The Brazilian proposal should not be considered for the present, especially taking into account that within the immediate future highly important documents, such as the draft plans of the U.S.A. and of Portugal, were going to be submitted to the consideration of the Conference.
- 2-55 He suggested the convenience of merging the Swiss proposal with that of the U.S.A., as amended by India and, in case this should not be possible, his Delegation would support the Swiss proposal with the following amendment:
- "Five days after the publication of the two plans and on 24 January at the latest, Committee 1 shall hold a meeting to discuss Document No. 433, of Brazil."
- 2-56 Dr. Metzler (Switzerland) expressed his agreement with the amendment proposed by Mr. Corteil.
- 2-57 Mr. Bokhari (Pakistan) stated that the U.S.A. proposal, as amended by India, held first place and suggested that the Delegation of Switzerland should withdraw its proposal in order to decide first on that presented by the U.S.A.
- 2-58 Dr. Metzler (Switzerland) pointed out that the U.S.A. Delegation would present its draft on 15 January and that the Secretariat would need time for its translation and publication, wherefore he insisted on his proposal, with the amendment suggested by the Delegate of the Belgian Congo.

2-59 Mr. Dostert stated that the Portuguese draft plan had already been delivered to the Secretariat, which was working on it. As to the U.S.A. draft, if it was handed over by the 15th, it would be ready by the 19th or, in other words, that the Committee could discuss Document No. 433 on the 24th.

2-60 Mr. Stojanov (U.S.S.R.) recalled that he had presented a proposal to amend Document No. 433 in paragraph A. He thought that his proposal was the most divergent one and should be voted on first of all.

2-61 The Secretary made a brief analysis of the proposals submitted and stated that, in his opinion, they should be voted on in the following order:

1. The Soviet proposal, which fundamentally amends paragraph A of Document No. 433, so that instead of reading "after the 20th of January ..." it should read "from this date on, no draft plan shall be accepted by the Conference";
2. The proposal of Roumania, consisting of taking into consideration only paragraphs A and B of the document, and leaving discussion of paragraphs C and D for a later date;
3. The Swiss proposal, as amended by the Belgian Congo, which tends to consider Document No. 433 on 24 January, provided the U.S.A. proposal has been distributed by the 19th; and
4. The original U.S.A. proposal with the amendment proposed by India.

2-62 Mr. Stojanov (U.S.S.R.) once more stated his disagreement which he already had expressed, with the procedure of a preliminary vote to ascertain whether the Committee wanted or not to decide on the U.S.A. proposal. He added that, on the other hand, in the last Plenary Session it had been decided that in Committee 1 no delegation should have the right to more than one vote, and that he had been observing that several delegations had been casting two votes. He called the attention of the Committee to paragraph 2-45 of Document 420 and stated that, for this reason, he considered the preliminary vote as null and void.

2-63 Mr. Fontaina (Uruguay) stated that he, too, wished to insist on this point, since he has power of proxy from another delegation and therefore could vote twice.

2-64 The Secretary then called the Committee's attention to paragraph 2-50 of Document No. 420 stating that although said document had not been discussed and approved by the Plenary Assembly, it

should be made clear that in the paragraph referred to it is expressly stated that in Committee I the delegations shall be entitled to only one vote "excepting those which have power of proxy from another delegation".

2-65 The meeting was suspended at 1:40 and resumed at 4 p.m.

2-66 Mr. Sastry (India) declared himself in favour of the Belgian Congo proposal, of merging the Swiss and U.S.A. proposals into a single one, tending to postpone the discussion of the Brazilian proposal.

2-67 Mr. Van den Broek (Netherlands) proposed that since Committee I had a Working Group composed of the chairmen and vice-chairmen of the different Committees, the matter should be submitted to said Working Group, which would make the proper report.

2-68 The Chairman thought that this suggestion was interesting, but that it did not fall within the agenda, and that it should be presented when item 4 of the agenda came under discussion.

2-69 Mr. Egorov (Bielorussian S.S.R.) wished the following statement to be included in the report:

"The Delegation of the Bielorussian S.S.R. protests energetically against the arbitrary suspension of the discussion and against the fact that at least 11 delegations have been denied the floor, as a consequence of the acceptance of the proposal of Brazil referring to the prompt termination of the work of the Conference of Mexico.

2-70 We consider this a flagrant violation of the rights of the delegations and of the Rules of Procedure and as a discrimination which prevents our delegation from expressing its viewpoint, as other delegations represented at the International High Frequency Broadcasting Conference have done, concerning the matters mentioned in Document No. 433.

2-71 We consider that the act of preventing or suspending indefinitely, by means of a vote, the discussion of proposals and the acceptance of decisions capable of speeding up the work of the Conference leads to the obstruction of the work of the Conference, and it therefore must be considered as a matter of conscience by the majority which accepted such a resolution. We propose that all resolutions of similar character should be submitted to a roll-call vote".

2-72 The Chairman argued that this had not been an arbitrary decision, but the result of a vote with an overwhelming majority (40 votes against 8) in favour of voting on the U.S.A. proposal.

- 2-73 Mr. Albuquerque (Brazil) stated that he accepted the date (24 January), proposed by Switzerland and supported by various delegations, for the consideration of the Brazilian proposal, but he fully opposed the suggestion of the Delegation of the Netherlands, that it should be remitted to the Working Group.
- 2-74 The Chairman called for a vote on the four proposals before the Chair, beginning with that of the U.S.S.R., in accordance with the order previously outlined by the Secretary.
- 2-75 The proposal of the U.S.S.R. for the introduction of an amendment to paragraph A) of Document No. 433, was put to a roll-call vote with the following result:
- FOR, 11 votes
AGAINST, 47 votes
ABSTENTIONS, 1
- 2-76 The proposal of the U.S.S.R. was rejected
- 2-77 The proposal of Roumania, to consider paragraphs A and B of the Brazilian proposal and to leave paragraphs C and D for the next meeting, was then put to a roll-call vote.
- The result was as follows:
- FOR, 10 votes
AGAINST, 49 votes
ABSTENTIONS, none
- 2-78 The proposal of the People's Republic of Roumania was rejected.
- 2-79 Finally, by the same roll-call procedure, the Swiss proposal as amended by Mr. Corteil was voted on, with the following result:
- FOR, 49 votes
AGAINST, 10 votes
ABSTENTIONS, none
- 2-80 With the approval of the proposal the Committee decided that Document No. 433, which contains the proposal of Brazil, should be taken into consideration in a Meeting to take place five (5) days after the draft plans of Portugal and of the U.S.A. had been distributed to all delegations.

2-81 Since the foregoing decision covered the U.S.A. proposal, the discussion was closed in order to take up item 3 of the agenda.

2-82 Mr. Gross (Roumania) rose to make the following statement:

"Countless times, during the last meetings, the grave situation in which we find ourselves due to the slow progress made up to this moment has been held before the Conference like a mirror. The great expenditures caused by the prolongation of the work have also been mentioned.

2-83 Proposals to accelerate the work of the Conference also have been presented several times, but in each of these cases, although the seriousness of the situation has been lamented and acknowledged, our meetings have rejected all attempts to speed up the work.

2-84 Today, we have again confronted a proposal of this type: that of Brazil, which tends to shorten the duration of the Conference. This proposal might or might not have been accepted but, in any case, its discussion would probably have cleared up several important points. However, our meeting, true to form, preferred to reject even the discussion of that proposal.

The discussion has been postponed for two weeks, a period of time which signifies not only an increase in the expenditures of the Conference of more than 200,000 Swiss francs, but also a great waste of time, which for many of us becomes very important and very expensive. In view of this situation, the Delegation of the People's Republic of Roumania formally protests against this procedure and calls the attention of the Assembly to the grave responsibility assumed by adopting such a decision."

III. CONSIDERATION OF POINT 3 OF THE AGENDA (Approval of the Agenda for the Session of the Plenary Assembly, Friday, 14 January). (Document No. 441).

3-1 In accordance with the decision taken previously, item 4 of the Agenda of the Plenary Assembly, referring to the consideration of Document No. 433, is automatically eliminated.

3-2 Mr. Sterling (U.S.A.) recommended that item 7 (Various Matters) of Document No. 441 should also be eliminated, because the inclusion of that item always produced unjustifiable delays in plenary sessions.

3 No objections having been raised, item 7 of Document No. 441 was eliminated.

3-4 The Committee approved the other points of the Agenda of the Plenary Assembly contained in Document No. 441.

IV. CONSIDERATION OF ITEM 4 OF THE AGENDA (Various Matters)

- 4-1 The Secretary, Mr. Dostert, stated that it had already been decided to use the 21 and 22 of January for Sessions of the Plenary Assembly, with the object of taking into consideration the Reports of Committees 4 and 3, in order. Working Group 2 of Committee 1 would have to meet at least during the first four days of the week. Saturday had been considered a normal working day, but he should like the Committee to rectify or ratify this decision.
- 4-2 The Committee decided that Saturday 22 January should be considered a normal working day.
- 4-3 At the request of the Chairman, the Delegations of Italy, Portugal, Vatican City and Turkey stated their willingness to form part of Working Group 2 of Committee 1, charged with editing the draft agreement which was to accompany the plan.
- 4-4 Mr. Sastry (India) stated that he would like to see included in the working schedule for the coming week morning and afternoon meetings for Committee 4. He also recalled that the Plenary Assembly had decided to consider the Report of Committee 4 on the 22nd and not on the 21st.
- 4-5 The Secretary pointed out that various Committees wished to meet in the course of the coming week but that, at any rate, Committee 4 would be given as much time as possible. As to the second point, the Plenary Assembly had decided to consider the reports of the Committee in reverse order, i.e., first that of Committee 5, then that of Committee 4 and finally that of Committee 3, the work of which was delayed most.
- 4-6 After these explanations, the Secretary asked the Committee to establish a definite ruling as to whether the Secretariat could or could not furnish to the delegations documents or information which had not yet been published.
- 4-7 After a brief discussion, in which the Delegations of the U.K., the U.S.S.R., Portugal and Cuba voiced their opinions, the following decision was approved:
- "Committee 1 decides:
- That the Secretariat shall not give out to any delegation any document submitted to the Conference before such document has been printed and generally distributed in all languages."
- 4-8 The meeting was adjourned at 6:10 p.m.

The Secretary

L. E. Dostert

The Reporter

E. Sanchez La-Faurie

APPROVED

The Chairman

Miguel Pereyra

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 486-E

17 January 1949

Original: ENGLISH

Committee 5

REPORT OF THE REQUIREMENTS COMMITTEE

10th Meeting

13 January 1949

The Committee met at 10:15 with Mr. Faulkner, U.K., in the chair.

The Chairman proposed that the order of the Agenda contained in Document 436-E be reversed, so that the Report of the Requirements Committee to the Plenary Assembly could be considered first.

The Committee agreed.

The Report was approved with a slight amendment to the text of Appendix A concerning Siam, which did not submit a supplementary Form 4, as indicated in Appendix A. In this regard it was decided that a special footnote would be added to the Appendix, explaining that Siam had submitted only general observations concerning her program requirements, in Document 383, and not supplementary requirements.

Moreover, in the case of Vatican City, it was agreed that a copy of its letter concerning time changes should be referred to Committee 6 for consideration.

The Turkish delegate then pointed out that two hours had been omitted in the Form A of his country, and asked whether this Form could be corrected.

Mr. Aurini, Chairman of Working Group 5-A, said that this could be done quite easily.

The Committee then passed on to consideration of the Minutes of Meetings 5, 6, 7, 8 and 9, as contained in Documents 421, 422, 423, 424 and 439-E.

Document 421 (Minutes of 5th Meeting).

The delegate of the French Overseas Territories made the following statement:

"Referring to Document No. 421, Minutes of the 5th Meeting, bottom of page 2 of the English text, the delegate of France Overseas, on behalf of the delegate of Morocco and Tunisia, formally protests against the fact that the Delegation of the Bielorussian S.S.R. has included Morocco and Tunisia in the list of countries which have increased their high frequency requirements in relation to the requirements appearing on Form 4.

"He wishes to state specifically that, contrary to this assertion, Morocco and Tunisia have set a good example at this Conference by reducing their original frequency requirements by 2 channel-hours.

"Furthermore, he requests the Delegation of the U.S.S.R. to be kind enough to ask the Delegation of the Bielorussian S.S.R., which is absent from this meeting, to make the necessary rectification."

The delegate of the U.S.S.R. agreed to bring this statement to the attention of the B.S.S.R. delegate so that the necessary corrections could be made.

The Document, as amended above, was approved.

Document 422 (Minutes of the 6th Meeting) was approved.

Document 423 (Minutes of the 7th Meeting) was also approved.

Document 424 (Minutes of the 8th Meeting).

The U.K. delegate pointed out that the words "and receivers" in paragraphs 5 and 7 of the Document should be replaced by "in use and projected".

The U.S.S.R. delegate wished to have his statement on page 5 amended as follows: "Group 5 did not have sufficient technical data to carry out recommendations for bands below 6 Mc/s, and therefore, for short distances, recommended in the majority of cases, frequencies from the High Frequency Broadcasting Bands. Committee 5, etc., etc."

The delegate for Canada then amended the 4th paragraph of his statement (page 4) as follows: "With regard to point 4 raised by Mr. Smirnov, I should like to point out that Working Group 5-B did not make any recommendations when the OWF curve fell below 6 Mc/s. The procedure adopted in the Working Group was merely to indicate the range of frequency through which the OWF curve actually passed".

The delegate for the French Overseas Territories pointed out that the words "Working Group 6-B" in his statement on page 4 should read "Working Group 6-D".

The Committee approved Document 424, as amended.

The Chairman then asked the Committee to consider the Minutes of the 9th Meeting, contained in Document 439, in spite of the fact that this Document was not mentioned in the Agenda. It was agreed.

The U.S.S.R. delegate then made the following correction to his statement on page 4:

"The delegate of the U.S.S.R. supported by the delegate of Roumania, proposes that Committee 5, or a joint meeting of Committees 5 and 6, should consider and discuss the Report of the Soviet Delegation concerning the question of how this Delegation has taken into consideration the requests of the various countries when working out its plan. He considers that such a discussion will be very useful to individual delegations as well as to the work of the Conference itself".

The Committee approved Document 439, as amended.

The Chairman then requested the views of the delegates concerning the future work of the Committee.

After a short discussion on this subject, especially as regards the remaining seasons to be calculated by Group 5-B, the Chairman suggested that a Working Party consisting of the Chairmen of the Working Groups and himself be formed in order to study the problem. He invited other members of the Committee to participate in this Working Party. A meeting was scheduled for 3:30 p.m. this afternoon.

The Committee adjourned at 11:20.

The Rapporteurs:

A. Blanchette
A. Wolf

The Chairman:

H. Faulkner

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 487-E

17 January 1949

Secretariat

INSERTION OF STATEMENTS IN THE MINUTES

Article 19 of the Rules of Procedure, regarding the insertion of statements in the minutes, is reproduced below for all useful purposes:

- "1 - The minutes of Plenary Sessions shall be drawn up by the Secretariat of the Conference.
- "2 - (1) As general rule, the minutes shall contain only the proposals and conclusions, with the chief reasons for them in precise terms.
- (2) However, each delegate, representative or observer shall have the right to require the insertion in the minutes, either summarized or in full, of any statement which he has made. In such case, he must himself supply the text to the Secretariat of the Conference, as soon as possible after the end of the meeting. It is recommended that this right should only be used with discretion."

As a matter of information, the General Regulations of Atlantic City, from which the Rules of Procedure of the Conference are derived, fixes the period within which the text of statements should be supplied to the Secretariat as two hours.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 488-E

17th January, 1949

Original: ENGLISH

Committee 5

AGENDA

11th Meeting of the Requirements Committee

to be held at 10.00 a.m., the 18th January, 1949

1. Consideration of the future methods of work of Committee 5
(see Document No. 487).
2. Any other business.

The Chairman

H. FAULKNER

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 489-E

17 January 1949

Original: FRENCH

Committee 3

REPORT OF THE GENERAL PRINCIPLES COMMITTEE

31st Meeting

7 January 1949

1. The meeting was declared open at 10:15 a.m. by Mr. H.J. van den Broek, Chairman, assisted by Mr. Jacques Meyer, Vice-Chairman.

The Chairman drew the attention of the Committee to the following documents which had been distributed: No. 333, Report of the 22nd Meeting and Document No. 406, of which he was the author. The agenda called for a discussion of Document 292, Report of the 19th Meeting, and Document 303, Report of the 20th Meeting.

These documents were approved without comment.

Consideration of Document 333 was deferred until the morning meeting of 8 January.

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2. The Chairman proposed to discuss Appendix B of the conclusions of the Geneva and Mexico City Reports.

Note was taken of those speakers wishing the floor.

The Delegate of the USSR requested the text of the agenda. The Chairman pointed out that the Delegate of Yugoslavia had taken note thereof at the last meeting. Mr. Lalić then read:

"Discussion of Appendix B of the Geneva and Mexico City Reports, including the general principles of the Soviet Plan."

3. The Delegate of Czechoslovakia made the following statement:

"I have requested the floor in order to voice the opinion of the Czechoslovak Delegation with regard to the general principles constituting the basis of the Soviet Plan.

"The Czechoslovak Delegation has very carefully studied the Soviet Plan and it has listened very attentively to the explanations of Professor Siforov. The conclusion which the Czechoslovak Delegation reached is the following:

"We all know that the difficulties encountered by our Conference are extremely great. High-frequency broadcasting has been developed in an entirely different manner in each country. Chaos has resulted therefrom, and it is the task of our Conference to remedy this situation. It is not possible to work successfully to this end without predetermining the situation of a given country with respect to the other countries, i.e., its position in the world. Were this place not to be determined, it is obvious that the problem of the plan would become so complicated that it would be impossible to achieve an equitable result.

"The position of a country with respect to other countries may be determined only by certain factors. The importance of factors characterizing a country from a geographic, sociological and demographic point of view, is primary, constant and indisputable. Obviously, these correspond to the following three factors: area, population, and number of official languages. This is why it is impossible to ignore these factors when seeking a basis for the work necessary for drafting a channel-hour assignment plan. All the other factors are so variable that they may not be taken into consideration, or if they are to be considered, may be used only as supplementary factors.

"As the Czechoslovak Delegation wishes the Conference to achieve a positive result, it would prefer to adopt, as the basis of our future work, a plan that is based on factors which are prime, constant, and characterize the various countries in a just and convincing manner; in other words, the Soviet Plan. But principles are one thing, and their application is another. The Czechoslovak Delegation would like to emphasize the great merit which the Soviet Delegation has shown by proposing the just and reasonable idea expressed by the mathematical formula which forms the basis of the Soviet Plan. By means of this formula, the Soviet Delegation has succeeded in solving the greatest difficulties and has found a way to accomplish successfully the task of this Conference by drawing up an acceptable plan. In the light of the figures of the Soviet Plan and after hearing

the excellent explanations of Professor Siforov, it is clear that the use of the Soviet formula--a just formula based on general principles and accompanied by fair additional criteria--will give us a just, satisfactory and acceptable result for large countries as well as for countries of lesser area, such as my own country.

"This is why the Czechoslovak Delegation joins those delegations for which the Soviet Plan represents one of the most important documents of this Conference and one enabling not only the acceleration of our work but also the achievement of a desirable result. This is why the Czechoslovak Delegation hopes that this excellent work--the Soviet Plan--will become the basis for the work of all the Committees whose responsibility it is to draft a channel-hour assignment plan.

"As has already been noted, it is impossible to draft a plan which would meet the overall requirements of all the countries. But proposals may be amended on the basis of just and indisputable principles, applicable to everyone. This is precisely what the Soviet Plan does. To ignore it would be an inexcusable error and would represent a considerable waste of time."

The Delegate of India pointed out that the general principles of the Soviet Plan and those contained in the Geneva and Mexico City documents might be usefully discussed concurrently with the conclusions of Working Group 3C. Documents 265 and 375 should therefore be discussed.

The Delegate of Albania objected to this idea.
The Chairman took note of his objection.

The Delegate of the U.K. recalled his statement of the preceding meeting and requested that it be put to a vote.

"Committee 3 considers that 1) the general principles on which the Soviet Plan is based, as well as those contained in Annex B of the reports of the Geneva and Mexico City Sessions of the Planning Committee, are to be found in the questionnaire distributed as Document 265; 2) a discussion of these principles might be of value if it were to be based on a discussion of the report of Working Group 3C, Document 375; and 3) a discussion of Document 375 should be undertaken immediately."

The Delegate of Albania felt that it was not proper for delegations to make proposals which have no relation to the agenda.

8. The Chairman proposed to finish the list of speakers having requested the floor and then to discuss the U.K. proposal.

9. The Delegate of New Zealand supported the opinion of the U. K. Delegation; discussions should be resumed where they had been suspended at the preceding meeting.
10. The Delegate of Yugoslavia pointed out that no objection had been made when the agenda was accepted; he therefore supported the Chairman's proposal.
11. The Delegate of the U.S.A. pointed out that the last meeting had adjourned in a state of confusion: the Chairman had actually read a proposed agenda, note of which had been taken by the Delegate of Yugoslavia, but the Committee had not decided on it either affirmatively or negatively. Also, the U.S.A. Delegation had proposed at the last meeting an amendment in favor of accepting the U.K. proposal, with the reservation that Committee 3 continue today the consideration of the Soviet Plan and defer consideration of the conclusions of Working Group 3C until Saturday.
12. The Delegate of the USSR stated that the agenda had been adopted. He did not understand why the Delegates of the U.K. and New Zealand were opposed to having useful work accomplished.
13. The Delegate of the U.K. stated that he had not accepted the proposed agenda and that he had protested; he also stated that he accepted the proposed amendment of the U.S.A.
14. The Chairman admitted that a certain state of confusion existed at the close of the last meeting, which explained the contradictory statements now being made; nevertheless, he believed it worthwhile to continue granting the floor to delegates having so requested, without proposing that a decision on the U.K. proposal be taken immediately.
15. The Delegate of the U.S.A. wished to know whether the Soviet Plan would continue to be discussed, as he had proposed, or whether the Committee would take up the suggestion of the Delegate of India dealing with the discussion of Appendix B.
16. The Chairman pointed out that the Delegate of India had proposed not to discuss Appendix B; but it was nevertheless necessary for the Committee to give its opinion on this Document. He invited the Delegate of the U.S.A. to repeat his amendment. He observed that there was no appreciable difference between the point of view expressed and his own; he proposed, therefore, the adoption of the U.K. suggestion as amended by the U.S.A. Delegation. This proposal was accepted by a show of hands, 38 votes for, and none against.

17. The Delegate of Yugoslavia objected and requested that the text just voted be read.
18. The Delegate of the U.K. reread the text of his proposal (given in paragraph 6).
19. The Delegate of the U.S.A. stated that his amendment of the above proposal consisted of replacing "immediately" with "at the next meeting of Committee 3."

The present meeting of Committee 3 should be devoted to a continued discussion of the principles of the Soviet Plan.

The Delegation of Yugoslavia stated its objection to these two amendments.

20. The Delegate of France requested that it be recorded in the Report that 46 minutes were wasted in discussing the agenda.
21. The Delegate of the Bielorussian S.S.R. speaking also on behalf of the Ukrainian S.S.R. Delegation, made the following statement which he wished recorded in the Report:

"The Delegations of the Soviet Socialist Republics of Bielorussia and the Ukraine wish to thank Professor Siforov, Delegate of the U.S.S.R. for his magnificent explanation and for the detailed information which he has furnished in answer to various questions.

"The Delegations of the Soviet Socialist Republics of Bielorussia and the Ukraine consider quite proper the method adopted by the U.S.S.R. Delegation in drafting its plan and the general principles according to which channel-hours would be assigned to the various countries. They believe that the above-mentioned method and principles provide a faithful representation of the high-frequency broadcasting requirements of the various countries.

"In fact, there are two methods, two ways in which a plan might be drawn up. One method--an arbitrary one--is based on technical experience, called "rational". The other is based on general principles allowing the determination of the total number of channel-hours to be distributed among all countries, without exception, taking into account the real needs of each.

"The first method, i.e., the attempt to establish a plan based exclusively on technical principles, could not lead to a just, equitable and comprehensible distribution of channel-hours

to all countries. In fact, it results rather in an arbitrary and unintelligible distribution of the total number of channel-hours, and would thus be unacceptable to most countries.

"This attempt had been made at Geneva. It resulted in Annex A of the Report of the Planning Committee (Geneva Session), which embodies a channel-hour distribution based not on principles, but rather on so-called "rational" technical experience. It is a draft plan drawn up on no principles at all. This plan was entirely unsuccessful. The countries rejected it by an overwhelming majority.

"Previously, when considering the documents of the Planning Committee, first of the Geneva Session, then of the Mexico City Session, we came to the realization that it was not possible to draft a high-frequency assignment plan except by means of general principles. The work of Committee 3 shows that most countries consider that a plan can be based only on technical principles. This conclusion is drawn from the report of Working Group 3C, which contains a summary of the answers of the countries to the questionnaire in Document 265.

"Further, most countries feel that a plan should be drafted on the basis of a general and uniform method, which would equitably take into account the high-frequency broadcasting requirements of the countries.

"What is to be construed by this, if not that Committee 3 ought to draft general principles, to determine the factors which would permit ascertaining the position of each country in relation to the others, with the purpose of working out an equitable assignment of channel-hours to the various countries? Only this second method calling for the establishment of a plan on the basis of general principles appears equitable.

"What are the factors by means of which it would be possible to determine the actual high-frequency broadcasting requirements of the countries?

"A very great number of factors relative to broadcasting might be taken into consideration. For example, the annex to the report of Working Group 3C lists approximately fifty factors. It would, nevertheless, be advisable 1) to work out the inalterable basic factors, the influence of which remains constant for all countries; and 2) to work out such factors as would permit ascertaining the actual short-wave broadcasting requirements of the countries.

"What are the basic factors which define the high-frequency broadcasting requirements of the countries?

"Before answering this question, I should like to draw certain parallels. It is known that broadcasting plays a primary role in cultural, moral and educational fields. This is why I refer here to teaching.

"How many teaching institutions should a country establish for the purpose of educating the masses? Everyone will easily understand that the greater the area, the population and the number of official languages of a given country, the greater will be the number of teaching institutions needed in that country. These three factors ascertain the needs of a country as regards schools, text books and teaching personnel.

"Second example:

"How should a country's total number of daily newspapers and other periodical publications, as well as their circulation, be determined? Always on the basis of number of inhabitants, area and number of languages spoken in that country.

"In the same way it is possible to determine the real Rhf requirements of a country, according to its area, population and number of official languages spoken.

"Reception zones are larger, if the area of the country is larger. The number of programs to be transmitted and, consequently, the number of channel hours, increases in proportion to the density of the population and to the number of official languages spoken.

"These are fundamental factors, objective in the case of each country, unchangeable and of constant influence.

"As far as I am concerned, I believe that several delegations think that these factors are correct. Furthermore, most delegations which rely on other factors have not failed to mention the elements to which we are referring.

"The Soviet plan has been established, and rightly so, on the basis of these three fundamental factors.

"The opponents of these factors acknowledge that they permit the establishment of the requirements of the countries for broadcasting, not only for national, but also for international service.

"The Delegations of the Bielorussian S.S.R. and of the Ukrainian S.S.R. believe that we should proceed to assign channel-hours to the countries on a basis of the actual broadcasting requirements of each, determined according to the three fundamental factors: area, population, number of official languages.

"How can the true requirements of each country be evaluated, if only its requirements for international transmissions are studied?

"Evidently, every country, whatever its area, large or small, is entitled to present requirements for short wave transmissions intended for all the countries of the world and in all the languages of this earth. But would these requirements give an exact picture of the true requirements of this country in the matter of high frequency broadcasting?

"Certainly not. Let us go back to the analogy of the newspaper circulation. The circulation of the newspapers which appear in a country depends upon the number of inhabitants and the number of languages in use. Here we have the real needs of the country in question. It could not be determined on the basis of the figure of the total population of our planet, or of the number of languages which are spoken in the whole world. And if that country demanded that its requirements should be defined with the help of these last factors, nobody would take it seriously.

"In the same way, the high frequency broadcasting requirements of a country can be determined only by the position of that country in relation to the others, that is, with the help of the fundamental factors which characterise it: area, population number of official languages. Each country should be assigned a number of channel-hours for short wave transmissions in accordance with its particular position. The concrete assignments within such and such a band, for such and such reception zone, that is, for national or international broadcasting, must be made in accordance with the requirements submitted by the interested country.

"That is why, in our opinion, it seems inappropriate to elaborate any general method based upon the countries' international broadcasting requirements. It is a fact that no delegation has proposed such concrete, clear and stable factors as those presented by the Soviet Delegation in its plan. They have not been proposed, because it would have been impossible to do so.

"It must thus be recognised that the factors on which the plan of the U.S.S.R. is built are correct and fundamental, that they allow the evaluation of the real requirements of each country for high frequency broadcasting.

"The value of the Soviet plan consists precisely in the fact that it proceeds to make a preliminary allotment of channel-hours to the countries on the basis of a general method, which can be applied uniformly and equitably to all countries in the matter of broadcasting.

"It may also be justly said that, aside from the fundamental factors, an effort has been made to reconstruct the means of communications of the countries which have suffered incalculable damage during the war and which have incurred great losses in their contribution

to the victory over the Fascists, in accordance with the spirit of mutual assistance, and in direct conformity with the resolutions adopted at the Atlantic City Conference, specially included in the International Telecommunication Convention.

"It seems to me that no delegation will oppose, or rather, ought to oppose the principle of bringing relief to the countries which have been ravaged by the last war.

"The Delegations of the Belorussian S.S.R. and Ukrainian S.S.R. believe that the principles from which the U.S.S.R. plan originates should be adopted by the Mexico Conference and should serve as a basis for the establishment of an assignment plan for high frequency broadcasting."

27 The delegate of Switzerland made the following statement:

"The Swiss Delegation has studied the proposals of Appendix B and has followed with great interest the discussions of the Soviet plan. This plan constitutes a pioneer's work, with all the merits and all the disadvantages which are inherent in such work. By this very fact, it represents an important contribution to the final success of the Conference. But, together with the constructive proposals of India, it shares the fate of all pioneer work: the final work must be constructed on a new basis, taking into account the experience and the mistakes of the forerunners.

"While it is true that the three so-called permanent factors, on which the Soviet plan has been based, are important factors for the evaluation of the interest of a country in its national broadcasts, they do not allow the evaluation of a country's interest in broadcasting beyond its frontiers. Prof. Siforov himself has had to admit this, in his reply to a question raised by the Delegate of the Netherlands.

"Furthermore, high frequency broadcasting is, above all others, the best means of international information, of cultural exchange, and of mutual understanding.

"As such, it is even the only instrument to surmount political frontiers or international seas. Thus, above all, it serves ends which cannot be calculated mathematically. There is no mathematical formula which can be universally applied to it. That is precisely what makes our task so difficult, and one of the great merits of the Soviet plan is precisely that of having proven this to us once more.

"The Soviet Delegation itself has admitted, in the introduction to its plan, the importance of international broadcasting for cultural exchange and for mutual understanding among peoples. Implicitly, it admitted the complexity of its nature. Nevertheless, it seemed to deem it more important to arrive as soon as possible at

a practical result. It attempted to omit the idealistic imponderable factors, while searching for a solution based upon mathematically measurable factors. From the beginning this basis, too narrow, threatened the efforts of the authors of the plan with failure. Very soon, in the course of their work, they must have become aware of it. One result after the other required corrections. They looked for them admitting a series of other factors, most of which could not be measured mathematically. It then became necessary to resort to subjective appreciations.

"What then does the Soviet experience and the discussions of the past weeks show us? First of all, the impossibility of regulating on a purely materialistic and mathematical basis, the use of an instrument which, above all, serves a spiritual end. Next, that such regulations can be drafted only in full daylight, in the open, making of each delegation a witness and a collaborator.

"The Delegation of Switzerland takes the liberty of asking Committee 3 to put an end to discussion of a subject which has been exhausted. Let us begin the practical work without any further delay, drawing from the replies to the questionnaire the conclusions which will allow us to submit to the next Plenary Assembly the results of our work in the form of criteria which should govern the final distribution of the available frequencies.

"Then, let us propose that the Plenary Assembly invite each delegation to restudy its requirements and to reduce them voluntarily in the light of the principles accepted by the majority of countries.

"After the maximum of a week has elapsed, a committee to be created by the Plenary Assembly would begin its work, which would consist of interviewing individually all the delegations with the purpose of discussing the result of this initial voluntary reduction. This committee shall strive to obtain additional concessions wherever the requirements appear to exceed the actual needs such as they have been outlined by the delegations themselves. This Committee No. 10 should be of limited membership but should have undisputable authority, by virtue of the delegates chosen to take part in its work.

"If the efforts of this new committee are not successful in achieving the desired result, a board of arbitration shall undertake to do so, at the same time respecting the pride and the objective interests of each country. This board of arbitration shall also interview the delegations individually and such interviews shall be held in strictest confidence.

"Only then, and as a last resort, could a reduction of a certain percentage of excess requirements be expected.

"None of this precludes introducing new plans within reasonable periods of time or their study by the competent committees. Let us hope that these new plans will take into account the experience of

the pioneers. Thus, as with all pionner plans, they shall become the efficient aides of Committee No. 10, enabling the latter to complete its tedious task successfully.

"And only in this manner, Mr. Chairman and Gentlemen, do we believe a solution of our problems possible within a reasonable space of time, a solution which would respect the sovereignty of peoples while taking into account the complex nature of high frequency broadcasting."

28. The Chairman informed the Swiss delegate that he might resume his proposals later on.

29. The delcgate of Pakistan made the following statement, which he requested to be recorded in the Report:

"Mr. Chairman, in the name of the Delegation of Pakistan I have requested the floor in order to pay tribute to the clear explanation of the basic general principles contained in the Soviet Plan, which was given with such infinite patience in the course of many meetings of this Committee. Although I am a far less brilliant luminary than Professor Siforov, I have, nevertheless, the honor of belonging to the same noble profession as the learned professor to whom we have recently had the pleasure of listening, and I am especially proud that a member of our fraternity has been entrusted with the task of seeking a solution to one of the most difficult problems in the world and has exerted such great and intense effort to this end.

"In this respect, I wish to make a personal explanation relative to the part which the Delegation of Pakistan took in a recent discussion concerning the procedure and agenda to be adopted by the Committee for today's meeting. I believe that it was about two days ago, when I proposed that we immediately discuss the report of Working Group 3C. Discussion ensued a little later, and it appears that certain delegations were under the impression that such a proposal on my part precluded any possibility of a complete and free discussion of the general principles of the Soviet Plan. Nothing was farther from my mind, Mr. Chairman, than such a thought. Our purpose in proposing the immediate discussion of Working Group 3C's report was based on the well considered opinion that a discussion of the general principles put forward by the Soviet delegation would inevitably entail taking into consideration several points of view (including those in agreement with, as well as those which are not in complete agreement with, the Soviet general principles) outlined in the summaries of the report of Working Group 3 C, and that, consequently, it would be more advantageous to discuss this report, which would automatically have furnished ample opportunities to discuss the general principles of the Soviet Plan concurrently and completely. This opinion, which is mine, has been supported by the statements made by the two honorable delegates who preceded me today. It found particular support in the statement made by the

Delegate of the Bielorussian S.S.R. who, while discussing the principles of the Soviet Plan, found it necessary to refer several times to the contents of the Working Group's report, whereas this report was the first, and not the last, to enter officially into discussion. I am now speaking of the general principles of the Soviet Plan in order to demonstrate my good will and to erase the erroneous impression--wherever it may yet persist--that there was, on our part, any intention to put aside the Soviet Plan or to avoid complete consideration of the principles which constitute the basis thereof.

"It was with particular care and undivided attention that I listened to the magnificent explanation of Professor Siforov concerning the three basic factors--area, population and languages--which form the foundation of the Soviet system of frequency assignment. I took the trouble to revive the meager knowledge of mathematics which I had acquired in my youth, in order to follow closely the meaning of the symbols, calculations and formulas with which Professor Siforov had covered the blackboard for our enlightenment. The opinion of the Delegation of Pakistan is now well known to all delegations which have had the time to scrutinize carefully the document containing the answers of the various delegations to the questionnaire drawn up by my Working Group: genuine criteria for a just and equitable assignment of high frequencies to a given country are the needs of that country. I do not claim to speak on behalf of other delegations which are perfectly capable of describing their own situation far better than I could; but speaking on behalf of my own country, I wish to point out to this assembly that, as may be seen from our answers, the three basic factors adopted in the Soviet Plan are, without the slightest doubt, among those which reflect the needs of Pakistan. In no way are they the complete reflection thereof; but they do have a connection and considerable importance in respect to our national requirements. Far from rejecting them, I welcome them heartily, and out of love for my country at least, I am happy that the Soviet Plan takes note of these factors and attributes primary importance to them.

"But it would be a mistake to presume that these factors alone represent our needs. Professor Siforov, himself, has explained that after taking into consideration these three objective, calculable and stable factors, in accordance with strictly mathematical rules, the Soviet Delegation found itself obliged to resort to several other factors--at least, as far as some countries contained in its list are concerned. Some of these "other factors" are mentioned explicitly; others, I confess, remain obscure. But they all play an appreciable role in the final assignments, a role which, furthermore, as we understand it, does not correspond to the result of strictly mathematical calculations. Among the "other factors", some explicit--as I have said--and others obscure, there is one which emerges prominently: the factor of "war damages". It should be recalled that a certain number of delegations did not entirely

accept the manner in which the attribution of "war damages" had been made among the antifascist countries; but in relation to the overall problem with which I am now concerned, this is but a minor point.

"At the present time, Mr. Chairman, there is not a single one among us who could doubt that through the struggle and the victory of the last war, the world has been spared the greatest menace to democracy and to the liberty of humanity. Who among us, then, would dare to underestimate the sacrifices made by certain nations in order to deliver us of the fascist menace, or who would not deeply sympathize with them for the heavy losses they have sustained for this great cause? It is the duty of any international organization, even of a conference which has met in order to deal with intangible and ethereal questions such as high frequencies, to take all desirable measures whenever and wherever possible, with a view to rehabilitating these devastated countries, and no one among us should begrudge the special treatment given these countries by the Soviet Plan or any other plan.

"But, Mr. Chairman, there are two points to which I should like to draw the attention of the Soviet Delegation as well as that of my other colleagues.

"It is true that Providence has been very kind to my country in sparing us some of the worse ravages and horrors of the war, the effects of which have been felt by many other countries. But my people, too, have also had the honor of playing their humble role in the struggle for liberty. The wounds inflicted on my country in this titanic struggle cannot have been so painful or so obvious as in the case of certain other nations, but is it possible to say at the same time that we have escaped their more lasting and profound effects, or that we rest in complete security? Again I state that when my people shed their blood, it was not as a free nation, but as one enslaved. This, Mr. Chairman, made their sacrifice not less, but far more poignant. Would it, consequently, be fair to keep my country entirely off the favored list, simply because it had no choice other than to enter into the less glorious battle of a nation struggling to obtain its own liberty, rather than to be one of those more fortunate nations which, having achieved their liberty a long time ago, were now simply endeavoring to defend it?

"But let us put this question aside, and let us begin to consider the factor of war damages from an even broader point of view. What is war? War, Mr. Chairman, is a violent manifestation of historical events which are demonstrated inexorably throughout all eras, either by means which horrify the world by their dramatic expression or by means which are not so dramatic but which are no less insidious or devastating. To what extent

therefore, is it justified to take into account a phenomenon such as war and to ignore other historical events of equally terrible importance but which are not manifested in so evident and palpable a manner? It is in this respect that I am slightly disappointed in the approximation of the needs of the various countries as established by the Soviet Plan. It is in this respect that the plan, in my opinion, shows a total lack of broad more than a quarter of a century, Mr. Chairman, intelligent people throughout the world have devoted the best of their thinking and their attention to the ideology of the Soviet people. And that which has struck them above all else in their study has been the historical importance upon which the Soviet evaluation of the problems of humanity has so often laid stress. And this very historical sense which supplies a unique angle to Soviet perspective appears to be wanting in the elaboration and expression of this plan. How is it still possible that one can, in all fairness, so extraordinarily emphasize war damages and ignore far more profound losses sustained by several other nations, owing to the same historical events which, from time to time, are more violently manifested in the form of wars? It is not generally known that in my country the average life-expectancy does not exceed 30 years of age at the most, that the death-rate is one of the highest in the world, and finally that only 7 to 10 percent of the population can barely read and write? Is it our fault, Mr. Chairman, that the situation is thus? Are these enormous handicaps any less deserving of world-wide attention than the losses inflicted on some other nations by the scourge of war? Simply because they are not accompanied by the noise of explosives, is an account of them to be considered negligible? Shall this be the case, when the sufferings they have wrought have been perpetuated, not for a number of years, but for a number of centuries? Have we fully appreciated the fact that large countries such as mine, with enormous areas and populations, are among the most backward in the world? And has this fact raised the problem of what is to be done to aid these countries to assume their place on the front line of progress among other nations more favored by history? Mr. Chairman, the country which I have the honor to serve ranks fifth in the world in area, but I should not be surprised were there some delegations here which were not yet acquainted with the correct spelling of its name. If such be the case, it is not their fault. No more than it is our fault if our State has existed for slightly less than two years. We are no less the victims of history than those nations which achieved their liberty in peril and which fought a terrible war in order to preserve it. There would certainly have been shown a more profound knowledge of the problems of nations and a greater feeling for history, had the backward state of my country and of other nations similar to mine occupied a preëminent position among the "other factors" envisaged by the Soviet Plan. If my country is bombarded each day by propaganda broadcasts emanating from all directions (not so much because it occupies a place in the conscience of the world but because of the consideration it merits as the fifth largest nation of

the world) and if it does not have sufficient facilities at its disposal to counter-act them, then in order that it may contribute to universal understanding by offering to other nations the best of its culture and thinking, it should be of the greatest import to international organizations, whose task is to create a better and more orderly world, to help us rid ourselves of these inequalities and to follow the peaceful path of progress, thanks to the better instruments which nature has placed in the hands of man. Consequently, Mr. Chairman, while I willingly admit that the three basic factors adopted by the Soviet Plan as its foundation reflect some of our important needs, the Soviet Plan reveals in its expression of "other factors" its limitation and restricted perspective and shows its lack of sympathy with regard to other equally important needs of large, backward nations which are struggling to attain an honorable place in the concert of nations. Once again, I express my respectful appreciation of the monumental work accomplished by the Soviet Delegation in formulating this plan. But while I have the deepest admiration for its indisputable competence, for its constructive qualities and for its sincerity, I wish I could say as much for its broadness of outlook and for its allocation of the requirements of countries such as mine.

"I thank you, Mr. Chairman."

30. The Delegate of Roumania, speaking for himself and for Hungary, put forth his point of view concerning the Soviet Plan, thanking Professor Siforov in particular.

The formula found in the Soviet Plan was acceptable to both large and small countries. Professor Siforov had made clear the necessity of basic principles, and that the same result might be arrived at by giving individual consideration to each country, but that in 99% of the cases these principles, which always had to be considered, would allow a more rapid attainment of the desired result.

31. Relative to the objections made to the Soviet Plan, he remarked that no one had even objected to basic principles. The Delegate of India and other delegates had indicated that the plan did not take certain factors into account. It was the corrected results of the formula which were contested. But the Soviet Delegation itself had said that its plan was not unalterable and that it could be corrected.
32. Certain delegations, however, considered that high frequency broadcasting was primarily intended for international transmissions, and they declared that the Soviet Plan, based on national broadcasting was unacceptable. But if the relative importance given each country by the Soviet Delegation were not admitted, a plan would not be elaborated. It was unnecessary to discuss the results of the plan, but the justice and necessity of the principles should be recognized, and it was for these reasons that the Delegations of Roumania and Hungary proposed that the Committee accept and forward the general principles of the Soviet Plan to Committee 6.

33. The Delegate of Brazil congratulated the Soviet Delegation but wished to put forward his observations on Document No. 382.
34. Wishing to avoid discussion of this document which was intended for Committee 5, the Chairman asked the speaker to limit himself to the general principles.
35. The Delegate of Brazil observed that this document contained new factors of consideration, for certain countries, with regard to the principles of the Soviet Plan. It was an extremely serious matter. If the Brazilian Delegation were not allowed to refer to Document No. 382, it would prefer to give up the floor and submit its conclusions in writing.
36. In reducing by 90% the high frequencies assigned to Brazil, the Soviet Delegation based itself on tropical channel-hours which might possibly be allocated to Brazil. He was surprised that Brazil alone, of all the countries comprising the tropical zone, had encountered this reduction. Moreover, he wished to note that Documents Nos. 265 and 375 of the Working Group proved it to be untrue that the replies had shown that the general principles of the Soviet plan had been accepted, as the Delegate of Roumania had declared.
37. The Delegate of the U.S.S.R. said that an overwhelming majority of countries had recognized that the plan should be established on the basis of a common, universal and just method. The Soviet Delegation felt that this method should be based on the determination of the relative importance of each country. The basic factors were area, population and number of languages. There were no other permanent factors which were common to all countries. So far as exports and imports were concerned, doubtlessly such factors were not permanent, since they varied considerably.
38. In the same manner, geographical or topographical factors could not lead to solid conclusions.
- The consumption of electrical energy was also not constant. Obviously it was not a common factor. The same was true of the number of transmitters.
39. The Chairman asked the Delegate to limit his comments to the Soviet Plan. The U.S.S.R. Delegate considered that his explanation was part of the defense of the Soviet Plan. He brought up factors on this subject which were known to him and which had been examined. The question of the number of transmitters did not take into account the situation resulting from the war, particularly for small countries.

40. The conclusion was that the Soviet method was the one and only equitable method.

With regard to international broadcasting, the Soviet method was applicable because the relative importance of each country was established by the only possible method. Each country was sovereign and had the right of broadcasting to all the countries of the world; as he understood it. After the distribution of channel-hours according to the formula, a concrete study of the requirements of countries had been made, account being taken of the technical aspect. It was for this reason that the Soviet Delegation had taken tropical broadcasting into account as far as Brazil was concerned. It was untrue that Brazil alone was on the list of countries which had to use tropical frequencies. Document 98 clearly showed the U.S.S.R.'s position in this respect.

41. In the course of this study account had been taken of destruction and of the role played in the struggle against fascism. The Soviet Delegation considered that the task of the Conference was to examine each country's case thoroughly and in this way to correct those errors which might arise in a preliminary evaluation, i.e., as in the instance of Pakistan.

42. The Soviet Delegation wished the Committee to recommend the adoption (by the Committee) of the general principles contained in the Soviet plan.

43. The Delegate of Albania made the following statement, which he requested be inserted in its entirety:

"Before stating the opinion of my Delegation on the general principles of the Soviet Plan, I should like to take this opportunity to express once more my appreciation to the Soviet Delegation for the immense work which it has accomplished in establishing this plan. I should also like to thank Professor Siforov for the very detailed clarifications which he has given us. The Delegation of the People's Republic of Albania has assiduously studied the general principles contained in the Soviet Plan, and has listened with great attention to the clarifications given by Professor Siforov as well as to the replies which he has made to the questions put by the different delegates. We feel that the basic criteria on which the Soviet plan is based, i.e. area of territory, population and number of official languages, criteria of equal importance, are common and permanent factors for all countries and consequently just and equitable ones. These three basic factors, in being applied according to the mathematical formula laid down by the Soviet Delegation, would determine, in the most just and objective manner, the status of a country in relation to others, and would make it possible for us to make, as far as possible, a rational and equitable distribution of the available channel-hours.

"The Albanian Delegation, moreover, is in complete agreement that for the establishment of the plan our Conference should also take into consideration other particular complementary factors for each country, especially the damage to certain countries resulting from the last war. In this respect we feel that our Conference should consider the destruction and damage existent in the field of radio-communications, the fact that in countries which underwent the fascist occupation the development of broadcasting was impeded by the war, destruction and general human losses, material and intellectual.

"The Albanian Delegation does not agree with the opinion expressed by certain delegations that all countries which participated in the war against fascism on the side of the United Nations should be placed in the same bag, i.e. considered as being on an equal footing.

"No one can dispute the fact that the participation in the war and the consequences thereof were quite different for the various countries. Not only does there exist a great difference between those countries which were submitted to fascist occupation and those which were engaged in the struggle without having their territory occupied by the fascist forces, but there is even a difference among those countries submitted to fascist occupation. There are countries which, owing to varying circumstances, did not offer great resistance during the invasion and for the duration of the occupation and, consequently, suffered less damage than those countries which resisted and struggled heroically and relentlessly. It is clear that the fascist occupation forces caused much damage and destruction in those countries where the opposition was greatest.

"With reference to the opinion emitted by certain delegations that a distinction should be made between losses caused by fascist troops and those caused by the liberating armies, I consider that not only is it impossible to draw such a distinction but also that it would be unjust to do so, inasmuch as damage incurred by the liberating armies was not done voluntarily but in struggling to liberate people from fascism.

"My delegation feels, therefore, that it would be neither fitting nor proper to consider the countries engaged in the war against fascism on an equal footing but that we should examine the case of each country individually and that those countries having suffered much damage should receive priority.

"With respect to international broadcasting, my country also believes that priority should be granted to national broadcasting, but it recognizes the importance of international broadcasting, which is essential for cultural exchanges and friendship among peoples. But we feel that the formula and the three basic factors of the Soviet Plan take international broadcasting into account and that the establishment of separate criteria for international broadcasting is impossible. To grant priority to international broadcasting would be improper not only because national broadcasting is

of much greater importance but also because it would be impossible to allocate frequencies on the basis of international broadcasting and without having criteria. In this case, as regards international broadcasting, a small country would have the right to claim the same number of channel-hours and in the same directions as a larger country-- which is not fair. Furthermore, under such conditions, it would prove impossible to draft a plan, in view of the limited number of available channel-hours. Whereas under the Soviet formula, based on the three fundamental factors and also taking into account other additional factors of a peculiar nature, each country receives a number of frequencies in accordance with its geographic, sociological, and demographic rank in respect to other countries. It remains for the individual country to use these frequencies in accordance with its needs and desires as reflected in its requirements for national as well as for international broadcasting.

For all these reasons, my Delegation strongly supports the general principles of the Soviet Plan and considers that these principles and the Soviet Plan should be adopted as the basis for drafting a frequency-assignment plan. My Delegation is convinced that in adopting the general principles of the Soviet Plan and in making the necessary improvements and corrections of errors which might have slipped into this plan, we may successfully conclude our work within the space of time allotted to our Conference. Such is the result which all the peoples of the entire world are impatiently expecting of us."

45. The Delegate of Canada expressed the wish that speakers would avoid repeating the statements of preceding speakers.

46. The Delegate of Uruguay was unable to find among the answers of Professor Siforov the totality of principles towards which a Soviet Plan would be oriented. The Soviet principles seemed to be inherited from the past, handed down by ancestors, and they were being put forward with irritating ostentation.

Uruguay had socialist principles, as had most Latin-American countries. It wished to eliminate class distinctions and to give to the poor what they rightfully deserved. It could not accept the concepts of the Soviet Union, which would make that country an arbiter of the necessities and needs of peoples. What would hold true for the distribution of water or for the construction of schools could not apply to transmitters. The Soviet formula did not take the actual needs of the peoples into account, and Uruguay therefore could not accept it.

47. The Delegate of Chile wished to point out to the U.S.S.R. Delegate that only the extreme North of Chile is in the tropical zone and that in this zone there are not high-frequency transmitters; therefore, Chile could not make use of tropical frequencies.

In Documents 39 A and 218, Chile had published its opinion on the plans, and it had studied 10 or 12 alternatives of known formulas, deciding that no formula acceptable to Chile would be acceptable to other countries. His Delegation thus rejected the principles of the Soviet Plan and requested that the meeting proceed to deal with the report of Working Group 3C.

48. The Delegate of the Argentine stated that he would submit his comments on the Soviet plan in writing.

49. The Representative of the People's Republic of Mongolia, an observer, reserved the right to enter into the discussion of the Soviet Plan when the questionnaire was to be discussed.

50. The Delegate of India pointed out that, in answer to the question of the Indian Delegation, Professor Siforov had stated that one of the essential considerations leading to a reduction in channel-hours for India was that it was necessary, for technical reasons, to allocate India frequencies in the tropical bands, inasmuch as this country was located in the tropical zone. The Delegation of India did not know on what technical data these observations were based, but it wished to point out that some of these very necessary frequencies have been used for more than ten years. Their use results from studies made of the ionosphere in several specialized stations set up throughout the country, and on sound technical considerations. The Indian Delegation was not interested in using or requesting frequencies which would not give satisfaction in the zones they were to serve.

The Indian Delegation was of the opinion, furthermore, that the use of tropical bands could not replace the use of high frequencies in any country of the world.

51. The Delegate of France wished to submit the point of view of France. He paid tribute to the Soviet Delegation, but he had two general criticisms to make:

"1) The Soviet Plan does not take sufficiently into account the possible bases which should apply to international broadcasting. The needs for external broadcasting have been too greatly subordinated to those of internal broadcasting. France believes that area and population factors too obviously favor the great powers. Furthermore, it would be contradictory to take the languages of the broadcasting country into account as regards international broadcasting, whereas it would be more a question of the languages of those countries for which the transmissions were intended.

"2) It is undoubtedly important to remedy the inequalities which exist among the countries, especially when they have been due to destruction resulting from fascist aggression, but the application of this principle in the Soviet Plan is arbitrary and it is difficult to explain the appreciable differences which are

noted in the treatment of the various countries in this respect."

The Delegate of France considered that the concrete data of the Soviet Plan should be objectively and rapidly compared with the other data which would be submitted, in order to complete the elaboration of a concrete preliminary draft by Working Group 6B.

52. The Chairman stated that the discussion of Appendix B was concluded. He expressed his satisfaction with the appreciation shown to the Soviet Plan.

The Delegation of the U.K. submitted a draft resolution relative to a vote of congratulations to Professor Siforov. This proposal was endorsed by general applause.

Professor Siforov thanked the Committee and gratefully accepted the expression of appreciation, which he transmitted to the Soviet Delegation. He considered that the honorable Delegate of Uruguay who had spoken of the political structure of his country had dealt with a subject completely irrelevant to the purpose of the Conference and that the Soviet Delegation had taken into account the needs of the peoples and not the political structure of the countries.

Answering the Delegate of India, he considered that the latter's calculations were not correct.

He concluded by requesting that the basic principles of the plan be adopted and that they be forwarded to Committee 6.

The Chairman proposed that the meeting be adjourned.

The next meeting was scheduled for the same day at 4 p.m., at which time a general discussion could be undertaken concerning Documents Nos. 375 and 384, Reports of Working Group 3C.

The Delegate of Brazil pointed out that no resolution had been made regarding the Soviet proposal.

The Chairman confirmed this to be quite true and stated that no decision could be made prior to subsequent discussions.

The meeting was adjourned at 1:45 p.m.

The Reporter:

J.M. Leproux

The Chairman:

H.J. van den Broek

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 490-E

18 January 1949

Original: ENGLISH

Committee 4

REPORT OF THE TECHNICAL PRINCIPLES AND STANDARDS COMMITTEE

This report of the Technical Principles and Standards Committee is submitted for the consideration of the Plenary Assembly of the International High Frequency Broadcasting Conference. Mexico City.

M. L. SASTRY

CHAIRMAN

TECHNICAL PRINCIPLES AND STANDARDS

COMMITTEE

Chapter 1.	Introduction.
Chapter 2.	Terms of Reference.
Chapter 3.	Plan of Work.
Chapter 4.	Data and References.
Chapter 5.	Definitions.
Chapter 6.	Technical Standards and Principles.
Chapter 7.	Recommendations.
Chapter 8.	Economy in the use of High Frequencies for Broadcasting.
Chapter 9.	Future lines of development of High Frequency Broadcasting.
Chapter 10.	Subjects to be studied on a World-Wide Basis.
Chapter 11.	Other items of work of the Committee.
Chapter 12.	Concluding Remarks of the Chairman.
Annex 1.	List of Participants.
Annex 2.	Reservations.

Chapter 1.

INTRODUCTION:

The Technical Principles and Standards Committee was constituted by the High Frequency Broadcasting Conference, Mexico City, at the Plenary Session held on the 25th October 1948, when India (Mr. M. L. Sastry) was elected to the chairmanship of this Committee. U.S.A. (Mr. G. Sterling) and U.S.S.R. (Professor Siforov) were elected to the 1st and 2nd vice-chairmanships respectively, of the Committee.

Mr. P.N. Parker of the U.K. Delegation was appointed as the Reporter of this Committee.

The Committee had the benefit of the advice of the expert, Dr. Van der Pol, now Director of the C.C.I.R. during the initial deliberations. Mr. Hernandez Cata, the I.F.R.B. member attended the sessions of this Committee in a consultative capacity.

Chapter 2.

TERMS OF REFERENCE:

The terms of reference, as approved by the Plenary Assembly of the Conference, were:-

1. To study and recommend the Technical Principles and Standards which should be applicable in drafting a High Frequency Broadcasting plan or plans taking into account:
 - a) Those principles and standards upon which the countries have agreed, specifically the final acts of the International Telecommunications and Radio Conferences of Atlantic City 1947.
 - b) The report of the High Frequency Broadcasting Conference at Atlantic City 1947.
 - c) The reports and documents of the Planning Committee (Geneva and Mexico Sessions, 1948).
 - d) Other existing applicable data such as are contained in documents of the various organs of the I.T.U.
 - e) Comments submitted by the various countries and the documents of the Conference which contain points of view or information on the subject.

2. To study and recommend to the Conference, for adoption, technical principles and standards which it seems necessary to the successful operation of a plan or plans.
3. To study the means of ensuring co-ordination, on a world scale, of the technical questions and other questions bound up with the solution of technical problems concerning high frequencies which are within the scope of the International Telecommunications Union.

Chapter 3.

PLAN OF WORK:

In order to fulfil the above terms of reference, the Chairman outlined the main tasks before the Committee as follows and prepared the list of subjects to be studied:

Main tasks as outlined by Chairman:

- a) Technical principles and standards which should form the basis of the High Frequency Broadcasting assignment plan or plans.
- b) Technical principles and standards necessary for the successful operation of the plan and plans.
- c) Technical problems which have to be co-ordinated and/or studied on a world basis.
- d) Future lines of development of High Frequency Broadcasting and technical methods of exchanging programmes.

Technical Principles to be studied:

I. Technical standards:

- a) Frequency tolerance.
- b) Non-linear L.F. distortion caused by the process of modulation.
- c) Depth of audio modulation.
- d) Bandwidth of emission.
- e) Channel separation.
- f) Harmonic radiation.

PLAN OF WORK continued.....

- II. Receiver characteristics.
- III. Directional antennas.
- IV. Minimum protection ratio taking into account:
 - a.) Atmospheric noise.
 - b.) Interference from unwanted stations (co-channel, adjacent channel and second adjacent channel).
 - c.) Industrial interference.
- V. Minimum signal to be protected.
- VI. Power required for long and short distance transmissions.
- VII. Number of frequencies required for:
 - a.) Long distance circuits.
 - b.) Short distance circuits.
 - c.) Circuits passing through the Auroral zones.
 - d.) Circuits with high contrast conditions.
 - e.) Transmission of the same programme to various areas of reception.
- VIII. Propagation problems.
- IX. Simultaneous channel sharing possibilities.
- X. Methods of economising the use of high frequencies.
- XI. Technical problems that have to be studied or co-ordinated on a world basis.
- XII. Consideration of future lines of development of high frequency broadcasting and technical methods of programme exchange in the light of the latest technical advances.

To facilitate the work of this Committee, three Working Groups were formed as follows:

WORKING GROUP 4A: Chairman - Canada (Mr. Richardson).

This Working Group was charged with studying the following points:

- (1) Propagation Problems.

PLAN OF WORK Continued.

- (2) Minimum Protection Ratio, taking into account:
 - a) Atmospheric Noise.
 - b) Interference from unwanted stations, co-channel, adjacent channel and second adjacent channel.
 - c) Industrial Interference.
- (3) Minimum Signal to be protected.
- (4) Power required for long and short distance transmissions.
- (5) Simultaneous channel sharing possibilities.

The Reports of this Working Group are contained in documents Nos. 111, 133, 136, 300, 335, 336, 378, 379 and 380.

WORKING GROUP 4B: Chairman - Switzerland (Dr. Metzler).

This Working Group was charged with studying the following points:

- (1) Directional Antennas.
- (2) Receiver Characteristics.
- (3) Technical Standards for:
 - a) Frequency Tolerance.
 - b) Harmonic Radiation.
 - c) Non-Linear L.F. Distortion caused by the process of modulation.
 - d) Bandwidth of emission.
 - e) Channel separation.

The Reports of this Working Group are contained in Documents Nos. 66, 173, 174, 356 and 410.

WORKING GROUP C: Chairman - France (Mr. Mercier)

This Working Group was charged with studying the following points:

- (1) Technical Problems that have to be studied or co-ordinated on a world basis.

PLAN OF WORK continued.....

- (2) Consideration of future lines of development of high frequency broadcasting and technical methods of programme exchange in the light of the latest technical advances.
- (3) Methods of economising the use of high frequencies for broadcasting.
- (4) Methods of Standardisation of recordings.

Item (4) was suggested at a late stage of the Committee's work to the Working Group, and as the study of this problem does not directly affect the work of drawing up an assignment plan, the Working Group is studying the problem in detail and proposes to present a report on this subject at a later stage.

The Report of this Working Group is contained in Document No. 408.

It was agreed by the Committee that the following three points would be taken up in the main Committee itself:

1. Data and Comments offered by Dr. Van der Pol.
2. Number of Frequencies required for:
 - a) Long distance circuits.
 - b) Short distance circuits.
 - c) Circuits passing through Auroral Zones.
 - d) Circuits with high Contrast Conditions.
 - e) Transmission of the same programme to various areas of reception.
3. Definitions of "Region of Reception".

Committee 4 held.....meetings in all between the 29th October 1948 and 21st January 1949.

Chapter 4.

DATA AND REFERENCES

1. Radio Regulations of the Final Acts of the Atlantic City Conference 1947.
2. Report of the International High Frequency Broadcasting Conference. Atlantic City 1947.
3. Reports of the Planning Committee, Geneva and Mexico Sessions, 1948
4. Documents of the P.F.B. Geneva, 1948, such as were available for reference to this Committee.
5. Curves of OWF for the three seasons and three epochs of the sunspot cycle, as prepared by the U.S.A. Delegation.
6. Information received from the different countries in reply to a telegram of the 16th October 1948 of the Planning Committee Mexico City, relative to broadcasting receivers.
7. Report of the C.C.I.R., 5th Meeting, Stockholm 1948.
8. Document No. 187 of the Radio Administrative Conference of Atlantic City 1947.
9. Documents Nos. Rhf 13, 27 and 79 of International H/F B/C Conference, Atlantic City 1947.
10. Documents Nos. 45 and 56 Geneva Planning Committee 1948.
11. Document No. 79, Appendix I, Mexico City Planning Committee 1948.
12. Newbern Smith and M. B. Harrington "The Variability of Sky Wave Field Intensities at Medium and High Frequencies". Report CRPL-1-6, U.S. Department of Commerce, National Bureau of Standards, Washington D.C.
13. F.C.C. Report "Report and Recommendations of Committee 1 as to what Constitutes a Satisfactory Signal", Part 1, 14 January 1946.
14. U.S.A. Bureau of Standards Circular No. 462.
15. Document Rhf 149 of the International H/F B/C Conference, Atlantic City 1947.
16. Proposal of the Mexican Delegation with respect to the Spacial Distribution of the Vectors of Field Intensity which exists in the principal radiation lobe of a Rhombic Antenna. Mexico City H/F B/C Conference, Annex Document No. 410 and Appendix A.

17. Information on atmospheric noise measurements for the Technical Committee. Furnished by the U.S.A. delegation Mexico City H/F B/C Conference, Annexes A, B and C of Document No. 380.
18. The technical principles on which the plan for the assignment of high frequencies for broadcasting submitted by the USSR Delegation is based. Document No. 277 Mexico City H/F B/C Conference 1948/49.
19. Documents Nos. 26, 37, 40, 41, 58, 66, 78, 89, 92, 93, 95, 102, 111, 117, 119, 133, 134, 151, 158, 173, 174, 192, 219, 237, 261, 273, 274, 277, 294, 295, 300, 317, 322, 330, 335, 336, 356, 357, 365, 378, 379, 380, 387, 389, 393, 396, 398, 403, 408, 410, 416, of the Mexico City H/F B/C Conference.

Chapter 5.

DEFINITIONS:

1. Receiver Characteristics:

- a) Standard Receiver: In the present state of technical development, the receiver considered most suitable for the use of the average radio listener from the point of view of performance and cost is a superheterodyne receiver, which is basically made up of:

xx

- 1 radio frequency amplifier stage
- 1 mixer stage with local oscillator
- 1 intermediate frequency stage
- 1 detector stage (usually of the diode type with a separate diode for A.G.C.)
- 1 voltage amplifying stage
- 1 power stage

(xx in this respect see the information received from the different countries in reply to telegram of 16th October, 1948 of the Planning Committee, relative to broadcasting receivers)

The receiver possesses band spread control and an automatic gain control which, whenever possible, should have a delay voltage. (Delayed A.G.C.)

- b) Principal characteristics of the receiver: The following are its characteristics: 1) Receiver noise; 2) Sensitivity, 3) Selectivity; 4) Stability of the local oscillator; 5) Elimination of image frequency; 6) Fidelity; 7) Automatic gain control.

2. Antennas;

- a) Designations: The following designations are recommended:

Curtain arrays H or V RA/m/n/h λ .

H = Horizontal

V = Vertical

m = Number of half-wave elements in the horizontal plane.

n = Number of rows in the vertical plane

h λ = Height above the soil of the lowest row of the array, expressed in terms of the working wavelength.

RE = Active reflector.

RP = Passive reflector.

RA = Reversible antenna

O = Steerable

f = Working Frequency.

a = Azimuth, the angle of the centre axis of the beam measured East of true North.

X = Rotating field dipole (Turnstile array).

- b) Simple Dipole Antenna:

A simple dipole antenna is a straight radiator, in free space, generally fed in the centre, the maximum radiation of which is in the plane normal to its axis. The specified length is the total length expressed in terms of the Working Wavelength.

- c) Frequency Range;

Frequency range of an antenna is the range of working frequencies over which the antenna is able to approximately preserve the gain, coefficient of directivity and efficiency.

d) Angular width of beam:

The width of the main beam of an antenna is the angle which is formed by the two directions from the antenna for which the field is half the maximum value of the main field.

e) Directivity diagram of an antenna:

- (i) The directivity diagram of an antenna is the graphical representation of the gain of this antenna in the different directions of space.
- (ii) The horizontal directivity diagram of an antenna is the representation of the gain in the different directions of a horizontal plane, or, if necessary, in the different directions of a plane slightly inclined to the horizontal.

f) Efficiency:

The efficiency of the antenna is the ratio of the power radiated by an antenna to the power supplied to it.

g) Gain:

The gain of an antenna in a given direction is the ratio, expressed in decibels, of the square of the field intensity radiated in this direction by the given antenna 1/ to the square of the field intensity radiated in its median plane by a perfect half-wave antenna isolated in space, where the fields are measured at a distance sufficiently great. 2/ It is assumed that the real antenna and the perfect half-wave antenna are supplied with equal power.

(1/ When not specified otherwise the figure expressing the gain of an antenna refers to the gain in the direction of the main beam.

(2/ The Technical Committee interprets the expression "sufficiently great" to mean a distance of ten times the maximum dimension of the antenna and in no case less than ten wavelengths).

h) Coefficient of Directivity:

The coefficient of directivity of an antenna 3/ in a given direction is the ratio, expressed in decibels, of the square of the field intensity radiated in this direction to the mean of the squares of the field intensity radiated in all directions in space, where the fields are measured at a distance sufficiently great. 4/

(3/ When not specified otherwise, the figure expressing the coefficient of directivity refers to that in the direction of the main beam. When it is not necessary to take into account antenna and earth losses, the coefficient of directivity as defined above is 215 decibels higher than the gain of the antenna as defined in paragraph 65. (Radio Regulations of the Atlantic City Conference, 1947).)

(4/ The Technical Committee interprets the expression "sufficiently great" to mean a distance of ten times the maximum dimension of the antenna and in no case less than ten wavelengths).

3. Difficult Circuits:

A circuit longer than 4000 kms when OMF changes within one hour to approximately double (or half) of the frequency which is being utilized, is a difficult circuit.

4. (i) Intended Area of Reception:

Intended area of reception is the area over which broadcast coverage is contemplated by a country.

(ii) Area served by a transmission:

The area served by a transmission is that area which lies within the principal radiation beam (horizontal as well as vertical) of an antenna and receives the desired signal consistent with the standards for good reception, as determined by the protection ratios for signal to atmospheric and industrial noise and for wanted signal to unwanted signal on the same channel as well as on adjacent channels.

(iii) Geometric area:

Geometric area is a term applied to part of the surface of the globe situated in relation to the transmitter as indicated in paragraphs 7 (IV and V) of Chapter 7 of this Report.

5. Simultaneously Shared Channel:

A simultaneously shared channel is a channel used simultaneously by two or more transmitting stations on the condition that the protection ratio of 40 db between the median values of desired and undesired fields is maintained.

In the case of simultaneous sharing of more than two stations, the resulting interfering field will be calculated by the R-S-S-value of the median values of the individual interfering fields.

Chapter 6.

TECHNICAL STANDARDS AND PRINCIPLES:

1. Channel Separation:

The separation between assigned frequencies must be 10 kc/s.

2. Frequency Tolerance:

- i In principle, the frequency tolerances must be such that the simultaneous multiple assignment of frequencies is not restricted thereby.
- ii Frequency tolerances for simultaneous multiple assignment of frequencies shall provisionally be ± 50 cycles per second and, in future, must be ± 20 cycles per second.
- iii Frequency tolerances for frequencies operated without simultaneous multiple assignments must be such that the possible variation in a 10 kc/s separation between assigned frequencies shall not exceed 100 cycles.

3. Bandwidth of Audio Modulating Frequencies:

It is proposed, in accordance with the conclusions presented by the C.C.I.R. in Opinion No. 28, Stockholm Meeting, 1948, that the audio frequency modulating bandwidth be 6,400 c/s, while allowing a channel separation of 10 kc/s.

4. Non-linear Distortion:

With an audio-frequency modulation bandwidth of 6,400 c/s, the non-linear distortion on leaving the transmitter must not exceed 5% at 90% modulation for modulating frequencies between 100 and 5,000 c/s; moreover, it shall not exceed 5% at 50% modulation for modulating frequencies between 5,000 and 6,400 c/s.

5. Depth of audio modulation:

Recognising the harmful effects of overmodulation of transmitters, it is recommended that measures should be taken to limit the depth of modulation of Broadcast transmitters to a maximum value of 95% on negative peaks.

An appropriate means of attaining the above would be the use of a limiter amplifier in the audio chain.

6. Radiation of radio-frequency harmonics:

The intensity of radio-frequency harmonics must not, in principle, exceed the values stipulated by Appendix 4 of the Radio Regulations of the Final Acts of the Atlantic City Conference, 1947.

Unwanted radiation must be kept at the lowest level allowing satisfactory reception.

7. Industrial Interference:

For the purpose of laying down Technical Standards and Principles at this Conference, industrial interference shall be taken into consideration.

8. Percentage time for protection of signal against atmospheric and industrial noise in presence of fading:

Protection should be provided for at least 80% of the total time or for 90% of the hour and 90% of the days.

9. (i) Ratio of steady carrier to average atmospheric noise under non-fading conditions:

With respect to steady signal carrier to average atmospheric noise in a radio frequency bandwidth of 4,000 c.p.s., the voltage ratio should be at least 80 to 1 (38 db).

(ii) Ratio of steady carrier to peak industrial noise under non-fading conditions;

With respect to steady signal carrier to peak industrial noise in a radio frequency bandwidth of 9,000 c.p.s., the voltage ratio must be at least 10 to 1 (20 db).

(iii) Effect of varying ratios of protection on the percentage of satisfied listeners.

In view of the possible difficulties in achieving such standards it is also considered advisable to indicate for the information of other Committees, how the percentage of satisfied listeners is liable to diminish if the protection ratios are reduced below the recommended value. Graphs showing variation of percentage of satisfied listeners with protection ratio are given in Annex C, Doc. 380.

10. (i) Atmospheric noise protection ratio in presence of fading:

Based on a ratio of 38 db for steady carrier to average atmospheric noise in a 4 kc/s radio frequency band, the ratio of median carrier to average atmospheric noise in a 6 kc/s radio frequency band should be 46 db to include all types of fading.

(ii) Industrial noise protection ratio in presence of fading:

Based on a ratio of 20 db for steady carrier to peak industrial noise, and using the same considerations with respect

to the fading signal as in the case of atmospheric noise, the ratio of median carrier to peak industrial noise should be 34 db. Since the industrial noise is not subject to fading, only the signal fading corrections were taken into account to provide the 20 db ratio for 90% of the hour and 90% of the days.

11. Minimum protection ratio for interference from unwanted stations operating on the same channel with steady fields.

The ratio of wanted to unwanted signal shall be 23 db in the absence of fading.

12. Allowance for short and long term fading:

It was decided that the total allowance for short and long term fading should be 17 db.

13. Minimum protection ratio for interference from unwanted stations operating on the same channel taking fading into account:

The ratio of median wanted carrier to median unwanted carrier shall be 40 db to provide a steady state ratio of not less than 23 db for 90% of the hour and 90% of the days.

14. (i) Protection Ratio for steady carrier on adjacent channels:

(a) For an audio frequency modulation bandwidth of 6400 c.p.s. the ratio between the values of the desired and the interfering signal for constant field should be at least 1.2 (-6 db).

(b) Limiting the audio frequency modulation bandwidth with a low pass filter with an attenuation of 6 db at 5300 c.p.s. and of at least 25 db at 6000 c.p.s. the ratio between the values of the desired and undesired signal for constant fields should be at least 1.11.2 (-21 db).

- (ii) Fading

It was decided that the total allowance for short and long term fading should be 17 db.

- (iii) Protection ratio in the presence of fading.

(a) ~~Without limiting the audio frequency modulation band-width~~ of emission to a value less than 6400 c.p.s. the ratio of the median values of desired to undesired signals shall be at least 3.5:1 (11 db).

(b) While it is desirable to maintain a maximum audio modulation band-width of 6400 c.p.s., it is recognized that due

to the congestion in the High Frequency Broadcasting Bands, a more favourable adjacent channel ratio may be necessary in some cases.

(c) If the adjacent channel ratio stated in (a) above cannot be maintained, it may be necessary for the transmitter concerned to employ an audio-frequency low-pass filter with an **attenuation** of 6 db at 5300 c.p.s. and at least 25 db at 6000 c.p.s.

(d) If the audio-frequency modulation bandwidth is limited in accordance with the filter characteristics proposed in (c) above, the ratio of median values of desired to undesired signals shall be at least 1:1.6 (-4 db).

(iv) Second adjacent channel protection ratio:

The ratio of desired to undesired signals on second adjacent channels 20 kc/s removed is unimportant and no recommendation will be needed for this Conference.

15. Power required for long and short distance transmissions:

The maximum power for transmissions for long and short distance circuits shall be limited by the power necessary to establish a median field intensity value in a reception area which should not be more than 6 db higher than the minimum median field intensity which is to be protected. The limit of maximum carrier power of the transmitter shall be 120 kW; however, in exceptional cases of especially difficult circuits a deviation from this value shall be permitted so that the maximum power of the transmitter shall not exceed 240 kW.

16. Minimum Signal to be Protected:

The median field intensity of a signal which must be protected in any zone of a service shall be 250 microvolts/metre for frequencies below 10 Mc/s and 150 microvolts/metre for frequencies above 10 Mc/s.

17. Number of frequencies most appropriate for each programme requirement:

- (i) Normally only one frequency will be used for the transmission of one programme to a given reception area.

- (ii) Nevertheless, it will be admissible to depart from this general rule in the case of circuits longer than 4,000 kms when the OWF changes within one hour to approximately double (or half) of the frequency which is being utilized, in which case the simultaneous use of two frequencies could be authorised for one hour.

Chapter 7.

RECOMMENDATIONS

1. Curves of OWF

That the Winter, Summer and Equinox OWF curves for the three epochs of the sunspot cycle, as prepared by the USA delegation, are recommended for mass calculations that do not require great accuracy.

2. Receiver Characteristics

- (a) It is recommended that the image frequency be considered as an interfering signal on the same channel, as recommended in Point 1, "Technical Information Bulletin" of Committee 12 of the International High Frequency Broadcasting Conference, Atlantic City, 1947, and therefore, based on the Final Report of said Conference, Chapter V, Point 9, paragraph a), the ratio of the wanted signal to the image signal should when possible, be 100 or 40 db. This is easy to attain in receivers having a high frequency amplifying stage preceding the mixer stage, as set forth in the comments appearing in the above-mentioned "Technical Information Bulletin".
- (b) In making a draft plan for the assignment of frequencies, the interference caused in receivers by the image frequency should not be taken into account, in accordance with the Final Report of the International High Frequency Broadcasting Conference, Atlantic City, 1947, Chapter V, point 9, paragraph c).
- (c) With respect to Receiver fidelity and automatic gain control, it would be desirable for the various countries to carry out studies in order to arrive at a future agreement on typical curves which represent the required characteristics.
- (d) Since it is impossible to establish exact standards for short-wave broadcasting receivers, it is recommended that the various countries send to the CCIR as soon as possible the documents relating to the problem we are dealing with and that the Conference request the CCIR to take up the matter of formulating exact standards, once it is in possession of all necessary data.

RECOMMENDATIONS (Continued)

3. Directional Antennas

- (a) The maximum radiation in the horizontal plane and the angle of elevation of the maximum radiation shall be chosen in such a manner as to provide the most efficient transmission to the intended area of reception.
- (b) Radiation in the unwanted directions shall be kept as low as possible.
- (c) In the case of short distance broadcasting services the radiation in the vertical plane shall be restricted to that angle necessary to provide reception in the intended area of service, and radiation at lower angles of elevation shall be kept at a minimum.

4. Consideration of the most Commonly employed Types of Antennas

The Technical Committee refers to the enquiry made by Working Group 3-A of the Planning Committee (Mexico City Session), the results of which, appearing in PC-Rhf Document No. 79, Appendix 1, are as follows:

"The analysis related to some 500 antennas and was based on information provided by 20 out of the 34 countries submitting full antenna data on Forms 4. The following approximate proportions were obtained:

Curtain arrays	60%
Rhombic antennas	20%
Other types	20%
(including V	
antennas, single	
wire antennas and	
special types)	

5. Methods of Determination of the various electric parameters of Antennas.

For the calculation of the gain and of the angular width of the beam radiated by antennas arrays the Technical Committee recommends the method suggested by the U.S.A. Delegation in Document No. 18121 - 2/48 entitled "Determination of High Frequency Broadcasting Antenna gain and width of beam", the U.S.A. Delegation having made a correction of 3 decibels in diagram 4 during the discussions of Working Group 3-A of the Planning Committee (Mexico City Session) at the instance of the U.S.S.R. Delegation.

RECOMMENDATIONS (continued)

With a view to speeding up the work, the Technical Committee recommends resort to the table prepared on the basis of this method, by the Delegates of the U.K. and India, which appears in Appendix I, D of PC-Rhf Document No. 79 of the report of the Planning Committee (Mexico City Session) 1/

The Technical Committee directs attention to Document No. 151, submitted by the U.K. Delegation, containing calculations of rhombic antenna radiation diagrams and further recommends the following methods of calculation and charts:

- (I) Calculation of the gain of rhombic antennas, with angle of incidence 15° , semi-side angle $2\theta = 140^{\circ}$, as given in the curves appearing on page 5 of PFB Document No. 231, Annex 2, submitted by the U.S.A. Delegation.
- (II) Chart to determine the angular width of the major lobe in the horizontal plane, showing the width of beam for seven types of rhombic antenna (each with a different angle θ), as proposed by the U.S.S.R. Delegation in Appendix I, C of PC-Rhf Document No. 79.
- (III) Proposal of the Mexican Delegation with respect to the Spacial distribution of the vectors of Field intensity which must exist in the principal radiation lobe of a Rhombic antenna. 2/

In cases where complete data are not available as to the exact form of principal radiation lobe of a rhombic antenna and only the gain of the same at the elevation angle of the principal radiation is known, the following will be the characteristics of the lobe:

- (a) The principal radiation lobe will be considered as a solid of revolution whose axis is determined by the direction of maximum radiation.
- (b) The angular width of the principal radiation beam will be 1.33 times the angle of elevation, i.e., it is considered as representative of a sinusoidal distribution of the radiated field.
(100% of the maximum field in the direction of the elevation angle, 86.6% for an angle which is $2/3$ of the elevation angle, 50% for $1/3$ of this same angle, and 0% for 0°).

The Group is of the opinion that the information made available on the subject of rhombic antennas is still incomplete and proposes to study the subject further.

RECOMMENDATIONS (continued)

1/ See also Prof. Dr. Van der Pol in Appendix I. A of Document RP-Rhf No. 79.

2/ See also Appendix A of Document 410.

6. Recommendation of Electric Parameters for adoption as bases for the elaboration of a plan or plans for the assignment of frequencies.

The Committee regrets to have to record that there is very little in the way of documentary material or calculations in the case of other types of antennas specified in the lists of requirements, and that it is not easy therefore to make recommendations in regard to them. Where no specific information is available as to the directional characteristics of such antennas, they may be taken for the purposes of the assignment of frequencies to be Omni-directional.

As regards simultaneous sharing, it is to be assumed that the power radiated by a directional antenna is equal to the power of the transmitter, except in the direction of the major lobe. However, in the case of certain antennas the power radiated in any other direction may attain as much as one-tenth of the power radiated in the direction of the major lobe.

7. Intended area of Reception, Area served by a Transmission and Geometric Area.

(I) General definitions

(a) Intended area of reception is the area over which broadcast coverage is contemplated by a country.

(b) The area served by a transmission is that area which lies within the principal radiation beam (horizontal as well as vertical) of an antenna and receives the desired signal consistent with the standards for good reception, as determined by the protection ratios for signal to atmospheric and industrial noise and for wanted signal to unwanted signal on the same channel as well as on adjacent channels.

(c) Geometric area is a term applied to part of the surface of the globe situated in relation to the transmitter as indicated in paragraphs IV and V below.

(II) The area served by a transmission must be determined by the radial distance from the transmitting station as well as by the azimuthal direction.

RECOMMENDATIONS (Continued)

- (III) However, as first approximation and for practical application the following readily applicable rules are recommended:-
- (IV) Geometric rules referring to the radial distance:-
- (a) The first geometric area is that from 0 to 800 kms from the transmitter.
 - (b) The second geometric area is that from 800 to 2000 kms from the transmitter.
 - (c) The third geometric area is that from 2000 to 4000 kms from the transmitter.
 - (d) The fourth geometric area is that which is more than 4000 kms from the transmitter.
 - (e) If the intended reception area is situated between two or more of the above areas it is to be considered as one area if the ratio of the maximum to the minimum distance does not exceed 2.5, and as two areas when the ratio is greater than 2.5.
- (V) Geometric rules referring to the azimuthal direction:-
- (a) For distance of 0 to 800 kms the geometric area is determined by an angle of 360° .
 - (b) For distance of 800 to 2000 kms the geometric area is determined by an angle of 65° .
 - (c) For distances of 2000 kms to 4000 kms the geometric area is determined by an angle of 35° .
 - (d) For distances of more than 4000 kms the geometric area is determined by an angle of 18° .
- (VI) The above definitions are given from the technical point of view only, and do not reflect such factors as the boundaries between States, difference of languages, etc. which have to be taken into account when considering the concrete directions of broadcast.
- (VII) For short distances up to 4000 kms Mercator map projection will be used while for longer distances Great Circle projections are necessary.

RECOMMENDATIONS (Continued)

8. Necessity for Simultaneous Channel Sharing:

Although simultaneous channel sharing is not desirable from the point of view of the possibilities of interference among stations the need for such channel sharing comes about because of the fact that the number of channel hours in the requirements submitted by all the countries is much greater than the number of channel hours assigned to broadcasting service by the Atlantic City Conference.

9. Simultaneous Channel Sharing Possibilities

- (i) The exact extent of simultaneous channel sharing possibilities can be obtained only on the basis of an analysis of concrete cases of co-sharing by stations.
- (ii) The Committee hopes to submit in due course for the consideration of the Plenary Assembly curves of field intensity that are being prepared by Mexican Engineers in collaboration with the delegation of the U.S.A. and based on Bureau of Standards Circular No. 462.

10. Proposal regarding the use of frequencies in the 26 Mc/s broadcasting band.

That recognizing the necessity for encouraging the use of the 26 Mc/s broadcasting band with a view to relieving congestion in the lower bands in the future, and bearing in mind that the 26 Mc/s band is 500 kc/s wide and unlikely, in any event, to be fully utilized during the life of the Plan to be adopted by the present Conference, Committee 4 recommends:

- (a) that Committee 6 may as an exception to the general rule for the assignment of one frequency to one programme to one reception zone, allocate an additional frequency in the 26 Mc/s band, when so requested by the country concerned and when the additional frequency is likely to prove useful in conjunction with an already technically justified assignment in the 15, 17 or 21 Mc/s bands.
- (b) These exceptions to the rule will be considered acceptable only during the life of the Plan accepted by the present Conference.

CHAPTER 8

METHODS OF ECONOMIZING IN THE USE OF HIGH FREQUENCIES FOR BROADCASTING:

It is recommended:

- 1. To avoid, as much as possible, transmissions during periods of very rapid change in ionospheric conditions (in accordance with the decision taken by Committee 4), if there is no strong reason for continuing the transmissions:

(2) Subject to objections which may be submitted by interested countries, to 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. In each particular case, Committee 5 will propose the most appropriate technical solution, taking into account the preceding suggestions:

(3) To begin by meeting only the requirements representing such communications as are assured by satisfactory reception conditions all other requirements to be reconsidered after seeking possibilities of improving reception conditions.

(4) Wherever technically and economically possible, to use frequencies other than those in the high frequency broadcasting bands (low, medium, very high frequencies, tropical bands).

(5) To take advantage of every practical possibility offered by the utilisation of point-to-point circuits (when such practice is acceptable to the interested services) and of transcriptions, in order that exchanges of programs between local or regional stations may lead to reductions in the use of high frequencies.

(6) That the Conference lay down general rules leading to the prompt standardisation of recording methods.

() That, as much as possible, to make an effort in the construction of receivers to prevent their characteristics from limiting the potential output of all high frequency and tropical broadcasting bands.

Detailed comments on the above recommendations may be found in the Report of Working Group C as contained in Document No. 408.

CHAPTER 9

Consideration of Future Lines of Development of High Frequency Broadcasting and Technical Methods of Programme Exchange in the light of the latest technical advances.

This question is closely bound up with the problem arising in connection with the economy of frequencies. The recommendations already made on the economy of frequencies (Chapter 8) are accordingly recalled, and attention is more particularly directed to the following suggestions:

The development of telephone circuits (cables or point-to-point radio circuits), especially in the interior of large countries should lead to a greater use of local stations for the transmission of programmes which are at present broadcast on high frequencies for lack of any other possibility:

The standardisation of methods of transcription should allow a limitation of the requirements in high frequencies by facilitating the exchange of programmes, and by the retransmission, under improved conditions, of an important part of artistic programmes by the local broadcasting networks.

An improvement in the construction of receivers should facilitate a more rational use of the highest frequency bands allotted to broadcasting:

Attention is called to the study entrusted to the C.C.I.R., concerning the possibility of employing the system of single sideband transmission. The advantages of using this system are numerous (see Document of the C.C.I.R., Stockholm 1948, attached to Question 24). It is desirable that the work done by manufacturers with the collaboration of the administrations should be coordinated to facilitate the study of the C.C.I.R. and contribute as much as possible to the practical application of this system, particularly in the case of new services to be established where transmitting and reception techniques can be coordinated:

CHAPTER 10

TECHNICAL PROBLEMS THAT HAVE TO BE STUDIED OR COORDINATED ON A WORLD BASIS.

1. Scientific or general technical problems concerning basic data useful in the formulation of recommendations when preparing or modifying a plan.

All the problems concerning broadcasting submitted to the C.C.I.R. for study and listed by Prof. Van der Pol (see document C.C.I.R. Stockholm of 1948, List of Questions for Study).

2. Problems more directly concerning the implementation of a plan and the daily operation of transmitters.
 - a) Analysis of reports concerning sunspot activity and ionospheric phenomena in order to have the necessary information for ascertaining and forecasting the propagational conditions for radio waves, and for putting into operation frequency assignment plans;
 - b) Analysis and coordination of the monitoring reports of high frequency broadcasting stations received from various sources, in order to check on the operation of the plan. Organisation of listening or trial test (for example on the practical possibilities of simultaneous sharing, on the importance of interference, etc.) for the purpose of determining the most efficient means of using that part of the spectrum space allocated to high frequency broadcasting.

Various measurements regarding transmission (especially measurements of frequency and field intensity) wherever useful in tracking down the cause of interference experienced, or in adding to our knowledge of propagation. The methods of measurements used should be standardised.

- c) The study of information obtained from countries after the implementation of the plan and the necessary recommendations to be made to ensure orderly and efficient use of high frequencies for broadcasting.
- d) Study of all technical and practical questions in relation to the subjective aspect of the quality of reception (modulation band-width, fading and distortion) with particular reference to the total correction that is needed to take into account short term as well as long term fading in the case of:
 - (1) a single broadcast signal
 - (2) two broadcast signals and
 - (3) a broadcast signal and atmospheric noise.
- e) Study of questions concerning the practicability of exchanging programmes (research of the standardisation of recording methods exchange of information on characteristics of recording methods used by different countries, publication of information concerning programmes and time tables, transmitter operation, all data on possibilities of using radio circuits for relaying programmes);
- f) Publication of a bulletin, or of documents giving the results of observations or work on the problems enumerated above. It is recommended that the preceding conclusions be forwarded to Committee 7.

Chapter 11

OTHER ITEMS OF WORK OF THE COMMITTEE.

As a result of the recommendation of the Coordinating Committee, three joint meetings of Committees 4 and 6 were held to hear an explanation of the technical principles underlying the Soviet Plan. It must be mentioned here that Prof. Siforov of the USSR delegation gave an excellent exposé of the technical principles underlying the Soviet Plan. The reports of the joint meetings are contained in Documents 295, 445 and 446.

Chapter 12

CHAIRMAN'S CONCLUDING REMARKS.

The Chairman most sincerely thanks all the members of the Committee who had all along shown good will, mutual understanding and spontaneous and whole hearted cooperation. The Chairman would like to specially thank the two vice-chairmen, Mr. George Sterling and Prof. Siforov, the Chairman of the Working Groups, Mr. W.G. Richardson, Dr. Metzler and Mr. Mercier. The Chairman also thanks the reporter, Mr. Parker of the United Kingdom delegation, who worked extremely hard throughout and produced accurate and excellent reports of the minutes of the meetings. Further, the

Chairman will be failing in his duty if special mention is not made of the very valuable and extensive information provided by the delegations of U.S.A., Mexico, U.S.S.R. and United Kingdom. In addition, on behalf of the Committee, the Chairman thanks the delegations of Mexico and U.S.A. as well as the authorities of Broadcasting Station XEX for preparing the recordings and arranging the listening tests in connection with co-channel and adjacent channel interference and atmospheric and industrial noise. Special mention has to be made of the excellent way in which the members of the interpretation service all along helped the Committee in its work. It may be pointed out in this connection that the task of the interpreters of this Committee was an extremely difficult one in view of the complicated and technical terminology used in its proceedings. The Chairman wishes to thank the Secretariat and in particular the translation staff who had all along been most helpful and cooperative in the documentation work of this Committee. It may be pointed out here that translation of highly technical matter calls for a very high standard of work. Finally the Chairman would like to congratulate and thank the Secretariat for the almost impossible achievement of bringing out the text of this report in four languages in a period of just over twenty four hours.

The present report of the Technical Committee covers the study of most of the subjects entrusted to this Committee. However, it is to be stated that the Committee is still continuing its work and a supplementary report will be submitted to the Plenary Assembly in due course.

M. L. Sastry
Chairman

ANNEX I

LIST OF PARTICIPANTS

Delegations

Albania	El Salvador	Panama
Argentine	Ecuador	Paraguay
Australia	U.S.A.	Poland
Austria	Finland	Portugal
Belgium	France	Morocco and Tunisia
Bielorussian SSR	Guatemala	Yugoslavia
Bolivia	Honduras	Ukrainian S.S.R.
Brazil	Hungary	Southern Rhodesia
Bulgaria	India	Roumania P.R.
Burma	Indonesia	United Kingdom
Canada	Iran	Siam
Chile	Iceland	Sweden
China	Ireland	Switzerland
Vatican City	Italy	Syria
Colombia	Luxemburg	Czechoslovakia
Portuguese Colonies	Mexico	U.S.A. Territories
U.K. Colonies, Pr. etc.	Monaco	Turkey
Belgian Congo	Nicaragua	French Overseas Territories
Cuba	Norway	Union of South Africa
Denmark	New Zealand	USSR
Dominican Republic	Netherlands	Uruguay
Egypt	Pakistan	Venezuela

Experts

I.F.R.B.
Dr. Van der Pol

Observers

Outer Mongolia
IRO
UNESCO
UNO
SCAP

A N N E X 2

R E S E R V A T I O N S

FRANCE

1. Definition of a difficult circuit (Chapter 5, paragraph 3).

The definition adopted is not satisfactory; as a matter of fact, it leads to very different conditions of application according to whether the initial frequency belongs to the lowest or the highest broadcasting bands. Further, it is not logical because the variation in the OWF in the course of an hour (which gives the slope of the OWF curve) should not be expressed by a constant multiplying coefficient applied to a frequency but rather, by a differential coefficient (either a given number of megacycles or, in a more practical manner, by a given number of broadcasting bands (intervals.)) In short, this definition does not take into account all cases of difficult circuits actually met in practice. The French Delegation makes reservations as to the consequences which would be incurred by the use of this definition when determining the most appropriate frequencies for a given circuit (Chapter 6, paragraph 16).

2. Power Necessary for long and short distance transmissions (Chapter 6, paragraph 14).

The first part of the proposal, as it limits the field in the desired reception area, is not acceptable to the French Delegation. Its practical application is, in fact, impossible on account of the considerable daily or hourly variations in field intensity for a given circuit; it is equally absurd to imagine that one might be persuaded to vary the transmitter power used for a certain circuit, according to the propagation conditions. It is furthermore out of the question to limit, a priori, the field in a desired reception area to 500 or 300 uv/m if, within the 120 kW power limit for transmitters, the propagation conditions allow better reception.

The French Delegation makes reservations as from now as the practical consequences of the modifications to the installations and the operational complications which would result from the first part of the proposal, if adopted.

I N D I A

The delegation of India does not agree with the decisions of Committee 4 on the following items and reserves its right to present its point of view in the Plenary Assembly.

1. Minimum signal to be protected
2. Co-channel protection ratio.
3. Adjacent channel protection ratio.
4. Power limitation for Broadcasting service.

P O R T U G A L

The Delegation of Portugal, not being in agreement with the decisions contained in paragraphs 3, Chapter 5, and 14 and 16, Chapter 6, of Document No. 479, reserves the right to submit these questions again to the consideration of the Plenary Assembly.

PEOPLE'S REPUBLIC OF ROUMANIA

I. Chapter 6, paragraph 2 (Frequency tolerance)

The frequency tolerances specified in this document (viz, ± 50 c/s for frequencies used on shared channels, and ± 100 c/s for the exclusive channels) are excessively strict, and we propose the adoption of a tolerance of 0.003% of the frequency assigned, for the following reasons:

a) The tolerance of 0.003% is recommended in the Radio Regulations (Atlantic City, 1947, Appendix 3, Page 226).

b) This tolerance does not limit the possibility of frequency sharing.

c) For countries like ours, which suffered considerable destruction during the war and whose reconstruction is still in progress, it is very difficult to obtain equipment with tolerances as strict as those contemplated by Chapter 6, paragraph 2.

II. Chapter 6, paragraph 7 (Industrial noise)

The wording of this paragraph should be completed by a recommendation on appropriate measures for the suppression of industrial noise. The introduction of suppression measures is extremely important, taking into account the fact that this problem is relatively easy to solve from the technical point of view, but that in cases where it was not given any consideration, the quality of the reception would suffer a great deal and in the very near future; the noise field -- especially in the large industrial cities -- would reach proportions which would make all broadcasting reception impossible.

III. Chapter 6, paragraph 9 (Ratio of steady carrier to average atmospheric noise in the absence of fading)

The ratio of 38 db proposed by this paragraph is much too high and it is advisable to go back to the ratio for the steady carrier/average atmospheric noise of 34 db adopted by Working Group 4 A, for the following reasons:

- 1) This ratio is more in accord with the recommendations of the HFB Conference of Atlantic City and with the Report of the Planning Committee (Geneva).
- 2) The listeners to the recordings, who were in favor of this figure, were highly qualified radio specialists and their appraisalment was certainly equivalent to that of a very much larger number of average listeners.
- 3) The method used and the percentages deduced from the tests made with the recordings can be used only as a first approximation in tackling the problem and not as absolute values.
- 4) The tendency of unduly raising the protection ratio without notably improving the quality of reception, only leads to a considerable increase of power, thus placing the smaller countries with limited financial possibilities which do not allow them to construct extremely powerful transmitters, at a disadvantage.

IV. Chapter 6, par. 10, point 1 (Atmospheric noise protection ratio in presence of fading)

Taking into account the following considerations:

- 1) The figure of 34 db for the ratio of steady carrier to average atmospheric noise represents a satisfactory technical minimum to ensure acceptable reception.
- 2) For taking into account the effect of both long term and short term fading, an additional 8 db is considered ample.

We consider that a protection ratio of 42 db against average atmospheric noise in the presence of fading should be adopted. This figure, moreover, has also been adopted by Working Group 4A (Document No. 300) and is approximately the same as those recommended by the Conferences which preceded this one (HFBC, Atlantic City, 1947; Planning Committee, Geneva, 1948).

V. Chapter 6, par. 10, point 2 (Industrial noise protection ratio in the presence of fading).

Based on a ratio of 20 db for steady carrier to peak industrial noise, which was adopted after listening to recordings, and taking into consideration that, in accordance with our experience and with theoretical and practical investigations submitted to the Conference by Prof. Siforov, that a margin of 10 db is amply sufficient to take care of both short term and long term fading, we consider that an overall protection ratio of 30 db against peak industrial noise should be accepted as a standard to ensure entirely satisfactory reception.

VI. Chapter 6, par. 12 (Allowance for short and long term fading)

The decision of Committee 4 to adopt a total allowance of 17 db as the arithmetical sum of the figures of 9 db (correction for fading within the hour) and 8 db (correction for day to day fading) is not acceptable for the following reasons:

- 1) No explanation or serious mathematical and physical basis has been given for this method.
- 2) On the other hand, well founded scientific reasons have been presented by Prof. Siforov in support of the combination of both types fading by the root sum square method when he showed that in 83% of existing circuits, the combined fading does not exceed 12 db.
- 3) Committee 4 has admitted that it was not in possession of sufficient and well founded information concerning the total percentage of the time during which the figure of 17 db would be exceeded, and it was suggested, that the problem be sent to the C.C.I.R. for study.

Thus, there seems to be no reason for adopting the figure of 17 db, which does not correspond to the general case in practice, but only to especially difficult circuits and hours; we consider that an overall figure of 12 db would be more justifiable and better adapted to the majority of cases.

VII. Chapter 6, par. 14, points a & b. (Protection ratio for interference from a transmission on an adjacent channel).

In our opinion, the ratio of desired to interfering signal between one channel and the adjacent channel (modulation bandwidth 6400 c/s) including fading, should be 2 to 1 (6 db).

If the audio frequency modulating bandwidth is restricted by the use of the proposed filter, the ratio should then be 1 to 2.8 (-9 db).

The reasons for this are:

- 1) A ratio of -6db has been approved as satisfactory by Working Group 4A, for steady signal values, by 60% of the listeners (modulation bandwidth 6400 c/s).
- 2) If long and short term fading are taken into account, 12 db must be added, thus bringing the final figure up to 6 db (2 to 1).

(An. to Doc. 490-E)

- 3) If the improvement of 15 db, obtained by the use of the filter, is taken into consideration, the result would be -9db (1 to 2.8).
- 4) The fact that all undue increase in protection ratio must lead to a decrease in the number of channel hours available, and so have an unfortunate influence on the final plan of our Conference.

VIII. Chapter 6, par. 17, point 2. (Number of frequencies most appropriate for each programme requirement)

The contents of this paragraph seem too rigid in their application and we believe that the conception of difficult circuits contained therein should be worded as follows: ".....in the case of circuits longer than 4000 km and passing through the night-day boundary, when one of the control points is in daylight and the other is in darkness, in that case the simultaneous use.....". This definition would be more in accordance with the idea of a difficult circuit, and only in this case would there be a plausible reason for allocating a second frequency.

IX. Chapter 7, par. 7, point IV e (Geometric rules referring to the radial distance).

Concerning point "e" we consider that limits should be imposed on intended reception areas which cover two or more geometric areas and which are to be considered as two areas (distance ratio greater than 2.5). We suggest that a minimum distance of 800 km between the transmitter and the reception area referred to above should be established.

This would lead to a more rational allocation of frequencies and also to a justified economy in channel hours.

X. Chapter 7, par. 7.

In our opinion, the respective recommendations should be taken into account only to check the requirements presented, and that they may not constitute a justification for an increase in the allocation of channel hours. Committee 5 should bear this in mind.

U.S.S.R., UKRAINIAN S.S.R. AND BELORUSSIAN S.S.R.

(An. to Doc. 490-E)

(Document No. 479, 15 January 1949)

After a study of the Report of the Technical Principles and Standards Committee, our delegations wish to formulate reservations with reference to the following points:

1. Difficult circuits and number of frequencies most appropriate for each programme requirement (Document No. 490, Chapter 5, paragraph 3; Chapter 6, paragraph 16 (2); Document No. 237, paragraph 13).

The definition adopted by Committee 4 on the subject of difficult circuits and the decision referring to the number of frequencies to be used for the transmission of a single programme over difficult circuits will lead to the result that Committee 5, after a study of the requirements of the countries, will recommend, in a number of cases, a single frequency for really difficult circuits, while for other much easier ones, it will recommend two frequencies. Thus for difficult circuits, over great distances where rapid changes in the ionospheric conditions exist (for example, the night-day boundary) it will allocate a considerably smaller number of frequencies than the number foreseen for cases of easy circuits over distances of between 300 and 1000 km, or between 400 and 1200 km. For these circuits Committee 5, by a strict application of a decision of Committee 4 (Document No. 274, paragraph 20), recommends two frequencies.

Consequently, our delegations reserve the right to submit a proposal concerning difficult circuits and the number of frequencies to be used for the transmission of a single programme, to the Plenary Assembly of the Conference.

2. Frequency Tolerance; (Document No. 490, Chapter 6, paragraph 2, and Document No. 119, paragraph 17)

The frequency stability standards adopted by the Committee are too rigorous. They would necessitate considerable modifications to all existing installations. This would mean great expenditure, which would be a heavy load for many small countries, especially those which have suffered from the war. The undersigned delegations believe that it is essential to establish the standard tolerance for the frequencies of transmitters at 0.003%, whether it be a case of frequency sharing or not.

3. Industrial Noise (Document No. 490, Chapter 6, paragraph 7; Document 336, Annex A, point 3).

Our delegations consider it their duty to indicate that it is impossible to provide modern masses with a short wave broadcasting

(An. to Doc. 490-E)

service even over moderately distant circuits, without applying appropriate protective measures against industrial noise.

4. Ratio of steady carrier to the average atmospheric noise under non-fading conditions. (Document No. 490, Chapter 6, paragraph 9 (1); Document No. 403, paragraphs 5 and 30).

a) The experts who took part in the work of Group 4A have adopted after a long and detailed study of the problem, the signal / noise protection ratio standards referred to in the fourth Report of that Group.

b) The adoption of an increase in the signal/noise protection ratio standard made at the instigation of the U.K., from 34 to 38 db, without taking fading into account, is entirely wrong, from a technical standpoint. It is based only upon a unilateral interpretation of experiments made by listening to recordings, without taking into account, on the one hand, all the questions linked to the problem of protection ratio nor, on the other hand, the resolutions adopted by the Atlantic City Conference and the Planning Committee (Geneva Session).

5. Industrial noise protection ratio in presence of fading. (Document No. 490, Chapter 6, paragraph 10 (1); Document No. 300, paragraph 5).

To our delegations, the resolution to increase the industrial noise protection ratio from 42 to 46 db, adopted by Committee 4 in spite of the unanimous decision of Group 4A, is a mistake and has no technical basis.

Our delegations consider that the decision taken by Group 4A to establish the protection ratio of 42 db is based upon a detailed and conscientious study of the question, and that it agrees to a considerable extent with the recommendations adopted by the Atlantic City Conference and by the Planning Committee (Geneva Session) as well as with the experience acquired in this field by engineers. For this reason, our delegations are in favour of a standard of 42 db, as an acceptable ratio for a median signal to average atmospheric noise, taking into account all types of fading.

6. Protection ratio for steady carrier on adjacent channels: (Document No. 490, Chapter 6, para. 14)

Our delegations are not in agreement with point III(a) of paragraph 14, according to which the "wanted to interfering" signal ratio has been fixed at 3.5:1 or 11 db, for an audio frequency modulating bandwidth of 6,400 c/s.

This increase in the standard has been obtained as an overall correction of 17 db to take into account both short and long term fading.

In considering that the effect of all types of fading can be allowed for by 5 - 10 db, our delegations consider that the useful to interfering signal ratio for adjacent channels should be 1:1 or at the most 2:1, i.e. 6 db.

If the audio frequency modulating bandwidth be reduced to 5,000 c/s, the useful to interfering signal ratio should be 1:28, i.e. - 9 db, and not 1:1.6 (-4db) as was agreed by the Technical Committee at its 41st meeting.

7. Ratio of steady carrier to peak industrial noise under non-fading conditions. (Document No 490, Chapter 6, paragraph 9 (2); Document No. 300, Annex B).

a) The results of listening to recordings of industrial noise have shown that the necessary protection ratio for the median value of the signal to peak industrial noise is 20 db not taking fading into account. Group 4A has adopted this protection ratio as the result of a vote.

b) Experience collected in the U.S.S.R., over a number of years, has shown that the effect of all types of fading can be allowed for by 5 to 10 db, according to distance, frequency and other conditions.

c) The Delegations of the U.S.S.R., of the Bielorussian S. S.R. and of the Ukrainian S.S.R., based upon the data mentioned concerning points 1 and 2, believe that the protection ratio for a "median signal intensity to peak industrial noise" should be 30 instead of 34 db, the latter figure having been adopted by a majority, but without any valid reason, by Committee 4.

8. Minimum protection ratio for interference from unwanted stations on the same channel. (Document No. 479, Chapter 6, paragraphs 10, 11 and 12).

The above-mentioned delegations unconditionally support the standard of 40 db which they consider necessary as the protection ratio for wanted to unwanted signal for median values of field intensity, taking into account fading, and for transmissions made on the same frequency. Consequently, they reject categorically the resolution of Committee 4 as to the methods of adding protection ratios for taking into account short and long term fading.

In the opinion of our delegations, the method adopted by majority vote by Committee 4, of adding arithmetically the maximum corrections necessary for taking short and long term fading into account, is erroneous. This method corresponds to the most unfavourable conditions, the simultaneous occurrence of which is highly improbable.

The method of arithmetical addition is inaccurate, since it does not take into consideration the variety of conditions under which fading, observed on all radio links on the earth, occur; thus it leads to a total figure of 17 db, which is obviously exaggerated.

Our delegations consider that Committee 4 had no right to alter the resolution adopted at the 30th Meeting, which established 12 db as the total value of supplementary protection ratio, taking into account both short and long term fading. The necessity for altering this figure has not been shown by mathematical or other proofs of any kind.

9. Curves of OWF. (Document No. 479, Chapter 7, paragraph 1; Document No. 334).

The experience acquired in the course of the work of Committee 5 shows that the frequencies recommended by Committee 5 in accordance with the OWF curves submitted by the U.S.A. Delegation, and the frequencies required by the countries differ from one another to a considerable extent. According to the conclusions of the U.S.S.R. experts, these differences are due, on the one hand, to the inaccuracy of the OWF curves and, on the other hand, to the fact that Working Group 5-B has not applied these curves very correctly because it has followed a too conventional method and has ignored a whole series of important factors.

These considerations impel us to formulate the following conclusions:

a) It is absolutely necessary to search for and to use all necessary information for a more exact determination of the frequencies, once the method of using this information is completely established.

b) If it is impossible to obtain this information within a short time, if, in other words, we are restricted to using only the documentation available to date, Group 5-B -- taking into account the factors enumerated in Section B of Document No. 334 -- must recommend the figures required by the countries whenever they do not differ by more than the interval separating two adjacent broadcasting bands from the frequencies deduced from the curves.

c) In the case where the difference between the frequencies in question is greater than this interval, Group 5-B should consult the countries concerned.

Committee 6 (Plan Committee) must assign only the frequencies agreed to by the country concerned.

10. Recommendations on the subject of the electrical parameters of antennas to be adopted to serve as a basis for the establishment of a Plan or Plans for assignment of frequencies.

(Document No. 479, Chapter 7, par. 6;
Document No. 396, par. 10 and 15, P. 1 and 2)

In the course of its 23rd meeting (18 December 1948), the Technical Committee concluded the discussions concerning the Report submitted by Working Group 4-B on the question of directional antennas. This report is based on the text compiled by the U.S.S.R. Delegation, which has been partially modified during discussion in Working Group 4-B and again at three meetings of the Technical Committee. The principal modifications relate, on the one hand, to the electrical characteristics of antennas which it is advisable to recommend to serve as a basis for the establishment of a frequency assignment Plan and, on the other hand, the manner in which to consider the power radiated by the antenna in the case of transmitters broadcasting on a shared channel. The Planning Committee (Geneva Session), Working Group 3-A thereof (Mexico City Session), and finally the present Conference have studied these problems. At the end of each stage, the discussions have led to resolutions the increasing tendency of which has been to adopt incomplete electrical parameters for antennas in the Plan for the assignment of high frequencies. This tendency cannot but influence the number of shared channels which it is possible to obtain.

The opinion of the U.S.S.R. Delegation concerning these problems has been expressed many times during the discussions thereof. Furthermore, this opinion is particularly reflected in paragraph 3 of Document No. 72 of the Plan Committee (Mexico City Session), dated 19 October 1948.

1. The Delegations of the U.S.S.R., of the Ukrainian S.S.R., and of the Bielorussian S.S.R. consider it their duty to state that in establishing a Plan for the assignment of frequencies, it is of the highest importance to consider the ideal electrical characteristics corresponding to certain antennas, for the reasons set forth in the above-mentioned Document No. 72.

2. Our Delegations consider it necessary to calculate simultaneous sharing so that the power radiated by a directional antenna in all directions, except in the direction of the main lobe, is equal to the power of the transmitter. Consequently, the last sentence of paragraph 6, Chapter 7 of Document No. 479 must be deleted.

11. Intended Area of reception and area served by a transmission.

(Document No. 479, Chapter 7, paragraph 7;
Document No. 274, paragraph 20, and Document
No. 387, paragraph 3, point C and paragraph 22).

Experience shows that Committee No. 5 often applies the recommendations of Committee No. 4 in a purely mechanical manner without in any way taking into consideration the propagation conditions. The formal application of the rules set out in paragraph 20 of Document No. 274, without making a complete analysis of doubtful cases, is contradictory to the directive appearing in point 3 of the same paragraph, where it is stated that these rules are given only as a first approximation and for practical application. The result of the mechanical application of the recommendations made by Committee 4 is that Committee 5 suggests the employment of two frequencies for transmissions directed to reception areas the size of which is insignificant, when from all the evidence these areas could be served by a single frequency.

Our Delegations consider that the recommendations made by Committee 4 in Document No. 274 for the use of Committee 5 should not in any case serve as a basis for increasing the number of frequencies above the number requested by the countries. Such a procedure, in fact, would lead to a large increase in the Requirements for channel-hours, already highly exaggerated by certain countries.

Because of these conditions our Delegations consider it absolutely necessary, in order to make the text more exact, to add a sentence at the end of point IV of paragraph 7, Chapter 7 of Document No. 479, to be worded as follows:

"on condition that at least 800 km separate the transmitter from the reception area".

It is also necessary to advise Committee 5 that the recommendations in Chapter 7, paragraph 7, points IV and V of Document No. 479 relating to geometric areas of reception are intended only to confirm the exactness of the Requirements for frequencies submitted by such and such a country and must not under any pretext serve as a basis for increasing the number of frequencies above the number indicated in the Requirements of the countries.

12. Other questions relating to the work of the Committee

(Document 479, chapter 11)

Our Delegations are not satisfied with the work accomplished by the joint Committee (Committee 4 and 6), whose mission was to consider the technical principles underlying the U.S.S.R. Plan, as recommended by the Coordinating Committee.

The recommendation of the Coordinating Committee was ignored and it was decided by a majority vote not to discuss the technical principles underlying the U.S.S.R. Plan.

Our Delegations consider that the practice of limiting the discussions and not even hearing the minority opinion is in contradiction to the principle of cooperation operating at all international conferences.

It is the deep conviction of our Delegations that only by mutual understanding and genuine cooperation among all Delegations without any exception whatsoever can a happy solution of the problems before us be attained.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 491-E

18 January 1949

Original: ENGLISH

Committee 1

COORDINATING COMMITTEE

Working Group I of Committee 1 is composed of the Chairmen of Committees and the Vice-Chairmen of Committees 4 and 6. The meeting scheduled for Wednesday, 19 January, in the Chairman's office will begin promptly at 10:00 o'clock in order not to delay unduly the work scheduled for the Committees.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 492-E

18 January 1949

Committee 1

SOUTHERN RHODESIA

Proxy

The following communication has been received
by the Chairman of the Conference:

"I have to inform you that I am now leaving
Mexico City, and shall therefore be unable to
attend any further meetings of the Conference.

"I wish to state that I confer full power
of proxy upon the Delegation of New Zealand to
represent the interests of the Delegation of
Southern Rhodesia in all instances in my absence
and to vote on my behalf.

(Signed) D. J. Rodgers"

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 493-E

18 January 1949

Committee 2

DOMINICAN REPUBLIC

The Secretary of the Conference has received the following communication:

In accordance with the instructions received from the Chancellery of the Dominican Republic, I have the honor to inform you that my Government has appointed Captain Francisco Medal as representative of the Dominican Republic at the High Frequency Broadcasting Conference, to replace Mr. Rafael Damirón Díaz, who has left Mexico City to take another post.

Captain Francisco Medal will have the same powers granted Mr. Rafael Damirón by the Government of the Dominican Republic.

(Signed) Joaquín Balaguer
Ambassador Extraordinary and
Plenipotentiary

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Document No. 494-E

17 January 1949

Mexico City, 1948/49

C O R R I G E N D U M

The Soviet Socialist Republic of Bielorussia and the Soviet Socialist Republic of the Ukraine have been designated simply by the name "Bielorussia" or by "Ukraine" in a certain number of documents, among others, Documents Nos. 391, 448, etc. . These names are incorrect and must be replaced by the following designations, respectively:

Soviet Socialist Republic of Bielorussia, instead of "Bielorussia";

Soviet Socialist Republic of the Ukraine, instead of "Ukraine".

L.E. DOSTERT
Secretary of the Conference

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 495-E

17 January 1949

Original: FRENCH

Committee 5

SWISS CONFEDERATION AND IRAN

Recommendation concerning the Future
Work of Committee 5

A.

The consideration of the frequency Requirements by Working Group 5 B for the month of June, during periods of maximum, medium and minimum sunspot activity, has required a month and a half of work. Group 5 B proceeded in this manner although Committee 6 requested consideration only of the month of June during a period of medium sunspot activity.

The definitions of the terms "difficult circuit" and "reception area" were placed at the disposition of the Working Group at the beginning of December 1948. The consequence of the application of these definitions by Working Group 5 B has been an increase in the number of Requirements of about 30%.

The complete and judicious implementation of the results obtained in Committee 5, with a view to the preparation of a Plan, would be a tremendous task for Committee 6 and would take so much time that in our opinion it is necessary to abandon the project.

B.

For the June season of average sunspot activity, Committee 6 has available today the following documents:

1. The Requirements of the countries on Form 4.
2. The Requirements of the majority of the countries, reexamined by Group 5 B and submitted on Form B-2.
3. The Report of the Planning Committee, Geneva Session.
4. The Plans submitted by the U.S.S.R. and by the U.S.A.
5. The formulae submitted by India and Portugal.

With the aid of these documents, Committee 6 should be in a position to draw up a frequency assignment plan for the season mentioned, capable of being put into effect in May, 1950. We believe that by this same date it should be possible to make the changes which have become necessary in the transmitters and antenna systems.

C.

1. The seasons of December and the equinoxes remain to be considered.
2. Once this work is undertaken by Committee 5, it would take a minimum of two months to complete it, which would excessively prolong the Conference.
3. Admitting that the determination of the frequencies for a period of average sunspot activity is postponed until after the end of the Conference, this work would then be done by the countries jointly with the I.F.R.B. and with the General Secretariat of the Union, taking as a basis the Plan prepared by Committee 6 for the month of June.
4. If, however, the present Conference itself decided to consider also the seasons of December and the equinoxes, it would be advisable:
 - a) either to have this work done by the delegation of the respective countries;
 - b) or else to charge the Secretariat of the Conference with the work, for which purpose it would be able to secure technical assistance.
5. In any case, the obvious thing to do would be to determine only the strictly necessary frequencies, viz., to establish the frequencies only for the period of time which would elapse from the effective date of the Plan up to 1954 at the latest, taking into account the fact that the Administrative Conference to be held at Buenos Aires in 1952 will make changes in the assignment of frequency bands.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 496-E

18 January 1949

Original: ENGLISH

Committee 5

CONSOLIDATED RECOMMENDATIONS OF THE
FUTURE WORK OF THE REQUIREMENTS COMMITTEE.

1. Committee 5 shall continue its work starting with the December season (Overseas Territories of the French Republic).
2. Propagation curves for December and the Equinox are to be reproduced immediately by the Secretariat in sufficient number to permit their use by all delegations. (Roumanian P.R., USSR, Chairman of Committee 5).
3.
 - a) Committee 5 shall organize its work so as to insure that each group shall comprise a sufficient number of participants and have sufficient work.
 - b) Working Group 5 B shall continue its work according to the method applied so far for the June Median, under Mr. Walker and Mr. Mather, and with the assistance of local engineers, which may be recruited by the Conference if necessary, and with the help of delegates willing to volunteer for the work of this group on a full time basis. (Overseas Territories of the French Republic).
 - c) A number of technicians should be engaged by the Conference to work full time on the calculation of the O.W.F.'s and the completion of Forms B2. The number engaged should be sufficient to complete the work within two weeks. It is estimated that _____ technicians will be required, and if this proposal is adopted, they should be engaged immediately.
4.
 - a) Committee 5 shall exclude all additional frequencies recommended. (USSR).
 - b) In view of the excessive number of requirements submitted, Committee 5 shall take into account only the frequencies actually requested by the countries themselves, even if by the curves, whose accuracy is only relative, and the stipulations of Committee 4 should give a greater number of frequencies. (Roumania P.R.)

5. a) Frequencies requested by the different countries being generally well founded, Committee 5 will recommend such frequencies in all cases where the difference between them and the frequency recommended on the basis of propagation curves is not greater than one frequency. (Roumanian P.R.)
- b) Committee 5 should reconsider its recommendations taking into account the USSR proposals contained in Document 534, the most important of which is that Group B should recommend the frequency requested by a country if the frequency calculation according to the curves used by the Group does not differ from the frequency requested by a country by more than the distance between adjacent bands. (USSR).
- c) In case there is a divergence between the frequency as determined by Committee 5 from the O.W.F. curves and the country's requirements, the former shall be taken as the correct frequency, except:
- a) When the country has determined its OWF on the basis of actual ionospheric measurements.
- or
- b) When the difference between two frequencies is not greater than the separation between two adjacent H. F. Broadcasting bands (India).
6. Committee 6 in correcting the plans should take into account only those recommendations of Committee 5 which have been approved by the countries. (USSR).
7. a) The delegations should reconsider their own requirements for the equinox and December seasons in consultation with Committee 5. (USSR).
- b) The work for the December season should continue on the same basis that was adopted for the June season, with the exception that experts like Messrs. Walker, Mather and Axon should guide the Group's work which may be entrusted to the local technicians who are to be employed for the purpose. (India).
- c) Working Group 5 B will not make the calculations for the December and equinox seasons as it has done for the June season (Chairman of Committee 5).
- d) 1. Forms B should be handed out to individual delegations each of which will complete its own form and make its own calculations from the O.W.F. curves.

2. The frequencies entered in the "recommended" column will conform to the Atlantic City and Technical Committee directives as regards the use of more than one frequency for any given programme.
3. The forms as completed by the delegations shall be checked by an expert of Working Group B before being passed on to Working Group C.
4. The country will indicate whether it is prepared to accept the calculated frequency or not. (Chairman of Committee 5).
8. Working Group 5 B will work in close liaison with Working Group 6 B and calculate for that Committee the OMF values for such circuits as it is proposed to include in the plan. (Chairman Committee 5)
9. Whatever Rules are applied by Committee 5, this should be done uniformly and consistently (India).
10. To deal effectively with short distance services, the Committee should obtain the necessary information on Vertical Incidence Critical Frequencies.
11. Request the Technical Committee to reconsider its decision concerning difficult paths and reception areas.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 497-E

18 January 1949

Original: ENGLISH

Committee 6

PLAN COMMITTEE

Agenda for the 19th Meeting

to be held at 3:30 p.m., 19th January 1949

1. Approval of the Report of the 15th Meeting of the Committee (Document No. 452).
2. Conclusion of the discussion on Section III of Document No. 470, and consideration of the proposals from Working Group 6-B concerning the practical arrangements in connection with the interviews of delegations.
3. Consideration of First Report of Working Group D (Document No. 460).
4. Miscellaneous.

GUNNAR PEDERSEN,

Chairman of Plan Committee

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City 1948/49

Document No. 498-E

18 January 1949

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Committee 6.

REPORT OF THE PLAN COMMITTEE.

16th Meeting

13 January 1949

1. The sixteenth meeting of Committee 6 was opened at 1550 hours by the Chairman Mr. Pedersen, assisted by the first Vice-Chairman, Mr. Arkadiev.
2. The agenda for the meeting (Document 454) was then approved by the Committee.
3. Regarding Item 1 of the Agenda, the Chairman reminded the Committee of the decision taken at the 14th meeting to request Committee 4 to appoint members of Committee 4 to act in a co-ordinating capacity with Working Groups 6B and 6D. He had received the following letter from Mr. Sastry, Chairman of Committee 4 in reply to this request:-

"Dear Mr. Chairman,

In reply to your letter dated 3rd of January 1949, I have the honour to state that Committee 4 decided to nominate the honourable delegates Mr. Luigi Sponzilli and Mr. S.A. Aziz of Italian and Pakistan Delegations respectively to represent Committee 4 as co-ordinators between Committees 4 and the Working Groups 6B and 6D. It was further agreed that whenever it is possible to find time the Chairman and the Vice Chairman of Committee 4 will also be happy to co-operate with the Working Groups of Committee 6B and 6D.

I trust the above arrangements will meet your requirements and give you the assistance that is needed.

M.L. Sastry,
Chairman, Technical Principles Committee."

The Chairman said that he wished to thank Mr. Sastry for the prompt and helpful action of his Committee, and to welcome Mr. Sponzilli and Mr. Aziz to the two Working Groups concerned.

He continued by saying that in his opinion the success of the Conference depended to a large extent on the exploration of all possible technical means directed towards achieving the greatest number of reasonably good quality channels. If there was no plan forthcoming, then the total number of good quality channel-hours would be very small. However, we had the opportunity in the Committee, by making use of the results of the Technical Committee, to find the highest number of channel-hours of good quality. It was in the light of these opinions, that he welcomed this further co-operation between the two Committees.

4. Point 2 of the Agenda was the verbal report of Working Group A, given by the Chairman, Mr. Arkadiev. He said that firstly, in accordance with the directive given to the Working Group at the last meeting, the Group had discussed the future work of the Committee, and had a number of proposals to make. However, he considered that these would be more appropriately deferred to Item 5 of the present Agenda. Secondly, regarding Document 399, the comments submitted by the various delegations would be summarised and published in document form, and he suggested that consideration of these comments be deferred until this document was available.

4.1 The Chairman thanked Mr. Arkadiev for his report and obtained the Committee's agreement to defer the discussion on the proposals of the Working Group until Item 5 of the Agenda was reached. Regarding the second point, he agreed that no discussion should take place until the first document was available.

4.2 The delegate for Argentine submitted the following statement for inclusion in the report:-

"In accordance with the reservation made at the previous meeting, the Delegate of the Argentine states that he would be in agreement with the information appearing on Page 3 of Annex A of Document No. 399, relating to his country, providing that the account appearing on Page 1 of the said Document, after the words 'submitted for the consideration of the delegations', were changed as follows:

"... .As a resumé of the opinions which were taken from the reports submitted by the different countries, for the purpose of inserting corrections, if necessary".

4.3 The Chairman agreed that this clarification would be useful, and as there was no objection from the Committee, it would

be added as a preamble to the first page of the Annex to document 399.

5. Regarding Item 3 of the Agenda, the report of Working Group B; as Mr. Trimmer was unable to be present at the meeting, the report was given by Mr. Stirling of the U.S.A. delegation. He said that he consulted Mr. Trimmer before the meeting, and he had been informed that Working Group B had nothing to report. He wished to add that the U.S.A. proposed plan for the period June median sunspot activity, was now in the hands of the Secretariat, and the country by country summary of this plan would also be available shortly.

5.1 The Chairman had one proposal regarding the interviews of delegations, which Working Group B had been instructed to make. He suggested that the delegation of Egypt be added to the membership of this Group, in order to have all the four Atlantic City regions represented on the interviewing board. This proposal was agreed by the Committee.

6. Item 4 of the Agenda was the report of Working Group D by the Chairman, Mr. Navatta. He stated that a written report had been handed to the Secretariat for publication but unfortunately, this was not yet available; he therefore, proposed to read to the Committee a draft copy of the report. (This is now published as document No. 460). Mr. Navatta stated that concerning the question posed by Sub Group 6D1, regarding the frequency to be used in this statistical analysis, that the Group was anxious for the full Committee to reach a decision on this point. He pointed out that if the frequency allocated by Working Group 5B was taken, then in some cases relevant antenna data would not be available. Concerning the revised text of Document 318, the U.K. proposal, which had been passed to Working Group D by Working Group B, he had communicated the decision of his Group to the Chairman of the Committee.

6.1 The Chairman thanked Mr. Navatta for his report, and proposed that any discussion on the zones etc. be postponed until the published document was available, with the supplementary map illustrating the zones proposed.

6.2 The delegate for China requested that the Group reconsider the proposed division of his country into two zones for frequency sharing purposes, as this may create technical difficulties.

6.3 It was agreed that this division would be reconsidered in the Sub-Group concerned.

6.4 The Chairman then requested the Committee to consider the question of which frequency would be taken into consideration by Sub-Group 6D1 in the statistical analysis of the 6 and 7 Mc/s bands. There were at present two proposals:-

- (a) To take the frequencies requested by the country
- (b) To take the frequency allocated by Working Group 5B.

However, he wished to add a compromise proposal to the above,

- (c) That the Group take the frequencies allocated by Group 5B, if these have been agreed by the country concerned, if not agreed then the frequencies requested by the country should be taken.

6.5 Mr. Navatta said that the main reason for raising this question was because the Group did not wish to make an analysis which would prove worthless, if a subsequent decision on this question reversed the procedure which might be adopted in the Working Group. He felt that the frequency obtained from the prediction curves should be supported, however, he would agree to the Chairman's proposal if this enabled the Committee to avoid a long discussion.

6.6 The delegate for Belgium asked Mr. Navatta if it was possible to say how many countries had so far agreed with the frequencies allocated by Group 5B.

6.7 This question was referred to the Chairman of Sub-Group 6D1, Mr. Axon, who said that no analysis had yet been made but he estimated that approximately 60 or 70% of the allocated frequencies had been agreed, although this percentage was possibly much lower with regard to frequencies allocated in the bands below 6 Mc/s.

6.8 In reply to the delegate of the U.S.A. the Chairman made it clear that his proposal only concerned frequencies in the 6 and 7 Mc/s bands, and that the Sub-Group was only collecting the information for statistical purposes. When Group 6B commenced work on a plan, then each case would have to be dealt with on an individual basis.

6.9 The delegate for the U.K. requested that Group 6D should separately list all the frequencies allocated which had not been agreed by the countries, unless this information

was to be contained in the final report of Committee 5.

- 6.10 The Chairman did not think that this additional task should be given to Group 6D. Committee 5 had offered to provide any statistical data required by Committee 6, and could therefore be requested to supply this information.
- 6.11 The Chairman's proposal regarding this question, was then agreed to by the Committee.
- 6.12 Regarding the last item of Working Group D's report, which concerned Document 318, the Chairman stated that the letters from the Chairman of Groups B and D would be published as a separate document, and could be discussed at the first meeting after the publication.
- 6.13 The delegate for the U.K. wished to draw the Committee's attention to the long delay between the original discussion of the document, and the submission of the redrafted version to the Committee for discussion. He pointed out that the first version of the proposal, Document 318, has now been revised and published under Document 397. This was in order to overcome the procedural objections raised at the 13th meeting.

7. Under Item 5 of the Agenda, the Chairman requested Mr. Arkadiev to put forward the findings of Working Group A on the subject of the future work of the Committee.

- 7.1 Mr. Arkadiev then read a draft report of the Working Group, regarding this subject. (This report is now published in document No. 470). He explained that these points listed were a resumé of the discussions which had taken place, during which the Acting Chairman of Group B had also been present. However, as this was only a verbal report, he would be grateful if any members of the Group would amend or supplement his report if they felt it necessary to do so.
- 7.2 The Chairman thanked Mr. Arkadiev for the report which contained many interesting points. He understood that as no members of the Group had requested the floor, that the report was an accurate summary of the discussions.
- 7.3 Mr. Arkadiev in reply to the delegate for Egypt explained that the Group would put forward no specific recommendations

regarding short and long distance requirements without the assistance of the Technical Committee. However, he pointed out that there were recommendations on this problem in the Atlantic City Documents. Secondly, regarding the question of the nature of the interviews with delegations, the Working Group wished to draw attention to the fact that it was necessary to explore all possible means of reducing the requirements.

- 7.4 The delegate for Argentine proposed that regarding the first part in the section concerning the number of programmes on Forms 5A, that these be dealt with by Committee 6 in the same way as the previous agreement regarding the frequencies allocated on Forms 5B (See paragraph 6.4 (c) of this report).
- 7.5 This proposal was agreed by the Committee.
- 7.6 The delegate for Argentine then requested an explanation of item six mentioned, concerning the joint working of Groups C and D.
- 7.7 Mr. Arkadiev explained that the reason for this division of the interviews was because it was felt that the volume of work was too great for one Group only, and that as Group D was dealing with a statistical analysis of requirements in the 6 and 7 Mc/s bands, it would be advantageous to so divide the work.
- 7.8 The delegate for Roumania said that after study of the nine points given, he was in full agreement that they should be accepted, and work commenced along the lines proposed.
- 7.9 The delegate for the U.K. felt that it would be necessary to have these proposals in writing, in order that careful study could be given to them. If this was the general feeling of the Committee, then he would refrain from further comment at the moment.
- 7.10 The Chairman agreed that this would probably be necessary, and suggested that the points be documented and available for a meeting on Saturday next, January 15th.
- 7.11 The delegate for Morocco and Tunisia proposed that the interviewing Groups should be split up and constituted on the I.F.R.B. pattern; that is, one representative from each Atlantic City region, as this would speed up the work.
- 7.12 The delegate for the U.S.A. supported the proposal of the delegate for the U.K. that the report should first be available in written form before discussion. However, he had a question

regarding item 4. Would this proposal exclude the consideration of the replies to plans and bases other than those of the U.S.S.R. and India? Also what would be the nature of these proposed interviews?

- 7.13 Mr. Arkadiev replied that the interviews would not only be with regard to possible reductions in requirements, but also with regard to the concrete plans available, i.e., the U.S.S.R. and U.S.A. plans. However, there might be difficulty concerning the U.S.A. plan, as this had only just been submitted to the Secretariat, and delegations would require time to study it before giving comments.
- 7.14 It was then suggested that Working Group B should meet on January 14th next, and decide the nature of the interviews; however, this was not possible in view of the Plenary Session arranged for that day.
- 7.15 The delegate for Canada supported the proposal of the delegate for the U.K. to postpone further discussion until the report was available in document form.
- 7.16 The delegate for Morocco and Tunisia in reply to the delegate for the U.S.A. said that the interviews would concern the points set out in Document 67 and also the U.S.S.R. and U.S.A. plans, in order to obtain maximum clarity on the number of channel hours acceptable. He considered that Document 67 and the first part of Document 217, with the agreed decision to primarily consider the season June sunspot median solar activity, would form a good working basis for these interviews.
- 7.17 The Chairman then proposed that the Committee should decide at the meeting scheduled for January 15th, the nature of the interviews, and that these interviews should begin on January 17th next. The Chairmen of Groups B and D should make the arrangements necessary, including the posting of a notice calling certain delegations for interview.
- 7.18 The delegate for Portugal felt that a great deal of time had been wasted in discussing this question. His delegation would be prepared to answer any possible questions at any time the Groups wished to request them for interview.
- 7.19 The delegate for the U.K. stated that if the Chairman's proposal was agreed by the Committee, then any discussion to be held regarding the interviews would be prejudged. It was essential to know more of the nature of the interviews and also the composition of the Groups to carry out these interviews.

- 7.20 The delegate for Morocco and Tunisia proposed that the Working Groups concerned should meet on January 17th and that interviews should begin on January 18th.
- 7.21 The proposal was supported by the delegate for Indonesia, who also considered it necessary for the Working Groups to discuss the methods for interviewing before they commenced.
- 7.22 The delegate for Argentine considered it was advisable to form one interviewing body from Groups B, C and D to consult the delegations regarding all the frequency bands. He wished to know who had the final forms from Committee 5, and also whether these were yet in a complete form.
- 7.23 The delegate for the U.K. thought it would be advisable to have the U.S. plan available before the interviews took place, otherwise it would be necessary to have two interviews with each delegation.
- 7.24 The Chairman said that he understood it was the feeling of the Committee that detailed discussion should now be postponed until the meeting of the 15th January next, and unless there was anything forthcoming under Item 6 of the Agenda, he would close the meeting.
8. As there was nothing forthcoming under Item 6 the meeting closed at 19 00 hours.

The Reporter
Richard A. Craig

The Chairman
Gunnar Pedersen.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 499-E

18 January 1949

Original: ENGLISH

C A N A D A

Change in the Status of Newfoundland

The following is brought to the attention of the Conference, and, in particular, of the technical committees.

Notification of the imminent change in the status of Newfoundland and representation of its interests at this Conference by the Canadian Delegation was given to the Conference in a letter dated October 27, 1948, and signed jointly by the Chairmen of the United Kingdom and Canadian Delegations.

By a plebescite held in July, 1948, the people of Newfoundland decided to enter Confederation as the tenth province of Canada. The agreement was formally signed in Ottawa by representatives of Canada and Newfoundland on December 11, 1948.

On Information Sheet No. 18, statistics regarding the area, population and number of transmitters were included for Newfoundland as well as for Canada. The remainder of the relevant data concerning Newfoundland is to be found in the Form 4 furnished by the United Kingdom for Overseas Colonies, Protectorates, Territories and Territories under the sovereignty or mandate of Great Britain.

The purpose of this document is to draw the special attention of the Conference and its committees to the fact that the requirements of Newfoundland and its allocation of high frequencies in the assignment plan, should be added to the Canadian figures.

INTERNATIONAL
HIGH FREQUENCY BROADCASTING
CONFERENCE

Mexico City, 1948/49

Document No. 500-E

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Committee 6

Request for Comments by the Plan Committee

At the 17th meeting of Committee 6 the recommendation contained in the Report of Working Group 6-A (Document No. 470) Section II, Point 3, last paragraph, was approved by the Committee with one small amendment. The text of this paragraph, which refers to Document No. 217, now reads:-

"This latter text should be applied in the same manner to the draft plan of the Delegation of the U.S.A."

In view of this decision, Committee 6 submits the following questionnaire to the Heads of all Delegations:-

In order to ensure the fullest discussion on the draft plan for the allocation of frequencies, submitted by the U.S.A. Delegation, Committee 6 has decided to ask for the opinion of all delegations attending the Conference as to the extent to which the practical results of the draft plan, submitted by the U.S.A. Delegation for the period June sunspot median, satisfies the different countries in respect of:

- a) Directional broadcasting, or reception area.
- b) Allocated frequencies and time for broadcasting.
- c) The total number of channel-hours assigned per band to the country in question.
- d) Simultaneous frequency sharing.

With regard to (d) any delegations requiring assistance on this point should apply to the Chairman of Working Group C (Mr. Esping).

The replies and comments to this proposal should be submitted to the Chairman of Committee 6, if possible, not later than Thursday, January 27th, 1949.

Gunnar Pedersen,

Chairman