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The Administrative Radio Conference

(Geneva, 17 August-21 December, 1959)

by A. Henry

(Concluded)

(Translation)

4. Committee 1 (Steering Committee)

Under the chairmanship of Mr. C. J. Acton, Chairman of the Conference, the Steering Committee, consisting of the Chairmen and vice-Chairmen of the other Committees, met each week. Their main task was to draw up the programme of meetings for the following week and to follow the development of each Committee's work so as to fix the most probable date for the signature of the Final Acts of the Conference. Because of the large number of Sub-Committees, Working Groups and Sub-Groups, it soon became clear that the Steering Committee would have to be enlarged to obtain the opinion of the responsible Chairmen on the probable progress of their work. From 16 October 1959, meetings of the Steering Committee of the Administrative Radio Conference were combined with those of the Steering Committee of the Plenipotentiary Conference so that the programme of work could be drawn up, under the authority of the Chairmen of both Conferences, taking into account interpretation and document reproduction possibilities, and the accommodation available. It cannot be denied that the co-existence of the two Conferences gave rise to difficult problems which could only be solved thanks to the understanding of the delegates and the unstinted efforts of the staff of the Union; it would however appear desirable in future to avoid the simultaneous meeting of these two Conferences, since both delegates and Union staff are necessarily overworked and there is a resulting danger of inefficiency in the treatment of such extensive and complicated problems.

It was only as a result of very considerable effort that the signature of the Final Acts of the Administrative Radio Conference took place on 21 December, 1959, thus enabling delegations from countries far from Geneva to go home for Christmas and the New Year.

5. Committee 2 (Credentials)

Under the chairmanship of Dr. F. NICOTERA (Italy) and the vice-chairmanship of Dr. L. O. de MIRANDA (Brazil) and Mr. I. M. TRIFONOV (Bulgaria), Committee 2 had to examine the credentials sub-

mitted by delegates conferring the right to vote at the Conferences and sign the Final Acts.

At the end of the work of the Credentials Committee, the 86 delegations present were provided with the necessary powers to sign the Final Acts of the Conference; it is interesting to note that 84 delegations actually signed the Final Acts of the Conference.

6. Committee 3 (Finance Control Committee)

Under the chairmanship of Mr. G. Searle (New Zealand) and the vice-chairmanship of Mr. G. E. Enright (Ireland), Committee 3 had to control the evolution of Conference expenditure. From 16 October 1959, the Committee was amalgamated with the Finance Control Committee of the Plenipotentiary Conference, since the Conferences were taking place simultaneously and using common accommodation and services, thus making the apportionment of expenditure necessary; the Administrative Council had decided that one third of the expenses would be charged to the Plenipotentiary Conference and two thirds to the Administrative Radio Conference.

On the proposal of Committee 3, the Conference decided to print the blue, pink and white documents submitted by the Editorial Committee, which enabled amendments made to the texts during the readings in Plenary Assembly to be incorporated with maximum accuracy. In view of the considerable amount of reproduction work, the services of three printers in Geneva were enlisted; the duration of the Conference was thus reduced and delegates received copies of the future Radio Regulations in quasi-final form.

7. Committee 4 (Frequency Allocation Committee)

With Mr. G. Pedersen (Denmark) in the Chair, and Mr. E. J. Stewart (Australia) and Mr. E. Oltuski y Ozaki (Cuba) as Vice-Chairmen, Committee 4 had to examine all the problems relating to frequency allocation. In the course of its work, Committee 4 set up the following working groups as indicated on the following page.

Committee 4 held thirty-nine meetings between 21 August and 12 December, 1959, and discussed the following matters, among others:

Group No.	Terms of reference	Chairman
4 A	Articles 3, 4 and 5 of the Atlantic City, Regulations	Mr. Ch. Loyen (France)
4 B	Bands between 10 and 4 000 kc/s	Mr. M. L. Sastry (India)
4 C	Bands between 4 000 and 27 500 kc/s $$	Mr. H. Pressler (F. R. of Germany)
4 D	Bands between 27.5 and 960 Mc/s	Mr. C. W. Sowton (United Kingdom)
4 E	Bands between 960 and 10 500 Mc/s	Mr. G. de Campos Braga (Brazil)
4 F	Footnotes, Frequency Allocation Table	Mr. S. Gejer (Sweden)
4 G	Bands between 10 500 and 40 000 Mc/s	Mr. S. Myers (USA)

7.1 Frequency Allocation Table

Obviously the main task of this Committee was the preparation of the new Frequency Allocation Table. The problem was complicated by the following facts:

The previous Table drawn up in 1947 at Atlantic City had been implemented progressively during the period 1951-1959;

The technical development of radio systems used in the various services had advanced considerably during the previous ten years;

In view of this development, many Administrations had been led to put new installations into operation in frequency bands which did not always correspond to the Atlantic City allocations;

Above 10 500 Mc/s, frequency assignments had been made to stations of various services either as an experiment or even for normal operation;

New radio services such as the "Space" and "Earth-Space" and radioastronomy services had to be fitted into the new Table.

All these points gave rise to considerable discussion both in the Committee and in the Working Groups and Sub-Groups. Committee 4 finally drew up the new Table, the main points of which are:

Between 10 and 4 000 kc/s, slightly modified but the general structure is unchanged.

Between 4 and 27.5 Mc/s, a large majority of delegations was in favour of the "status quo", and felt that in view of the costly efforts made by Members of the Union to bring this part of the Table into use, no substantial changes should be made. There are therefore few modifications in this part of the Table, and only on slight matters of detail.

Between 27.5 and 960 Mc/s, the problem was made more difficult by the introduction of new radio systems using ionospheric or tropospheric scatter

propagation; the development of the mobile service and future requirements in the broadcasting service, including television, also had to be taken into consideration. As a result of an exchange of views this part of the Table was amended; there are however many footnotes indicating that, in some countries, allocations to services may differ from those given in the Table.

Between 960 and 10 500 Mc/s, there were no important changes; it should however be noted that frequency bands were allocated to the radio-astronomy service, and to the "Space" and "Earth-Space" services for research purposes.

Finally, Committee 4 extended the Frequency Allocation Table to 40 000 Mc/s (40 Gc/s). Satisfactory agreement was reached on this part of the spectrum, on a world-wide basis, with some footnotes, however, concerning certain countries which were given special assignments.

The new Frequency Allocation Table, the finalizing of which was a very difficult task, can be considered accurately to reflect the present and future situation of radio services in the various countries. Although there are 248 footnotes, it is reasonable to suppose that Administrations will endeavour to operate their stations in conformity with the Table. The next Administrative Radio Conference will study the results obtained, it being of importance that it be held not more than five years later in order to avoid the difficulties that arose in 1959 when modifying a Table drawn up twelve years before.

7.2 Footnotes to the Frequency Allocation Table and classes of service

From the first meetings of Committee 4, a large number of delegations, as well as representatives of the International Frequency Registration Board, voiced the opinion that the footnotes to the Atlantic City Frequency Allocation Table could give rise to varying interpretations since the wording was not standardized. In some cases it was difficult to assess the relative status accorded to the different services. To solve this difficulty, Committee 4 asked Working Group 4F, with Mr. Gejer (Sweden) in the Chair, to define the status of the various services and to separate the allocations into different categories. The work of this Group enabled the services with allocations in the Table or in footnotes to be divided into three main classes:

primary service, permitted service, secondary service.

Also, the footnotes to the Table indicate whether the allocations concerned replace those given in the Table or are in addition to them.

7.3 Frequency bands allocated exclusively to the High Frequency Broadcasting Service

A certain number of frequency bands were exclusively allocated to the HF Broadcasting Service in the Atlantic City Table.

Because of congestion in these bands and the multiplicity of out-of-band broadcasting stations, a number of delegations asked for them to be widened.

Other delegations, however, disagreed with this proposal on the grounds that, since such widening would be to the disadvantage of other radio services, it would be wise to make absolutely certain that the change was necessary. For this reason, Committee 4 asked for the opinion of Committee 5, which was studying a new procedure for the improved use by the HF broadcasting service of the bands allocated to it. As this procedure has been drawn up and approved by Committee 5, it became pointless to propose the widening of the bands until the new procedure had been implemented. Accordingly, Committee 4 decided, on the recommendation of Committee 5, that there should be no change in the high frequency broadcasting exclusive bands.

8. Committee 5 (Frequency Registration Procedure and International Frequency List)

Under the chairmanship of Dr. M. Joachim (Czechoslovakia) and the vice-chairmanship of Mr. M. A. Vieira (Portugal), Committee 5 had to study the problems arising from:

frequency assignment notification procedure, the International Frequency List.

The study of the frequency assignment notification procedure was entrusted to Working Group 5A with Mr. G. Searle (New Zealand) in the Chair, while Working Group 5B, presided by Mr. J. A. Autelli (Argentine Republic) dealt with the International Frequency List.

8.1 Frequency Assignment Notification Procedure

The elaboration of a clear-cut frequency assignment notification procedure was a highly complicated task since conditions varied from service to service and from frequency band to frequency band. Working Group 5A had thus to work extremely hard.

It may be useful to recall the background of the matter. The Extraordinary Administrative Radio Conference (Geneva, 1951) noted that the Provisional Frequency Board (PFB) was unable to prepare an International Frequency List, especially for the Fixed and Mobile Services. It therefore adopted a number of provisions which were applied by Administrations, with the help of the IFRB, between 1952 and 1959.

During that time, it became evident that the rational use of the frequency spectrum required a serious study of each frequency assignment and that attention should be given to any changes in one or several characteristics of an existing assignment (bandwidth, power, antenna, directivity, etc.).

Working Group 5A had therefore to base its work on :

the procedure given in Article 11 of the Atlantic City Radio Regulations;

the provisions of the Extraordinary Administrative Radio Conference (EARC) Agreement (Geneva 1951);

the results obtained from 1952 to 1959;

the difficulties encountered in preparing a high frequency broadcasting plan.

the proposals submitted by a number of delegations for a new frequency assignment notification procedure and an improved use of the high frequency broadcasting bands.

After three months of discussion, Working Group 5A submitted for approval to Committee 5:

the new procedure for notification of frequencies and their registration in the Master International Frequency Register (Article 9 of the new Regulations);

the procedure for the exclusive broadcasting bands between 5 950 and 26 100 kc/s (Article 10 of the new Regulations) ;

Appendices 1 and 2, giving directives for establishing Notices;

Resolution No. 1 relating to the establishment of the Master International Frequency Register;

Resolution No. 2 relating to the application from 1 March 1960 to 30 April 1961 (date upon which the new Regulations come into force) of the procedure specified in Article 10 of the Regulations.

8.2 International Frequency List

The preparation of the International Frequency List gave rise to many problems at the Conference, because of the adoption, since the Atlantic City Conference, of a number of frequency assignment and frequency allotment plans. The development of radio services, the use of new techniques, and the case of new or developing countries required thorough study of the List. It was however clear to most delegations that the Conference could not undertake a complete revision, and would have to confine itself to adjustments likely to meet the requirements submitted. The work was split up among various subworking groups, the terms of reference of which were limited to a specific Region, service or part of the spectrum.

The main adjustments effected by the group concern:

the maritime mobile radiotelephone service. It was possible to provide an additional two-way channel in each band, and some channels were created for single sideband systems;

the maritime mobile aeronautical service, the allotment plans for which were drawn up in 1949 and slightly altered pending a review of the whole problem by a future aeronautical conference, taking into account the increased speed of aircraft, in the future.

9. Committee 6 (Technical)

Under the chairmanship of Mr. M. N. MIRZA (Pakistan) and the vice-chairmanship of Mr. L. Barajas, Committee 6 formed the three working groups as indicated below, at its first meeting.

9.1 Definitions

Working Group 6A had to study the definitions to appear in the Radio Regulations. It decided to study the greatest possible number of definitions of terms used in the Regulations, and then, as work progressed at the Conference, other Committees were invited to state which of the definitions should be maintained. A number of new definitions were introduced, especially with regard to the radiolocation service, the "Space" and "Earth-Space" services, and the radioastronomy service.

were made to put this radiatelephone slown signal into service in the waters of the Baltic and North

9.2 Technical characteristics of emissions

On the basis of Recommendations Nos. 233 and 232 of the CCIR, Working Group 6B finalized the appendices containing the Table of Frequency Tolerances and the Table of Tolerances for the Levels of Spurious Emissions. In general, the values proposed by the CCIR were maintained except for certain cases in respect of which, in any case, some of the delegations at the IXth Plenary Assembly at Los Angeles had made reservations.

9.3 International monitoring and procedure in case of interference

Faced with these two important problems, Working Group 6C had to find solutions in harmony with the findings of Committee 5 on the real use of the frequency spectrum. Some delegations felt that the number of stations carrying out international monitoring should be considerably increased since, in some areas of the world, monitoring was non-existent or inadequate.

Other delegations, however, felt that the development of the monitoring network would entail considerable expense for Administrations. Finally, Working Group 6C adopted a text requesting Administrations to extend their monitoring services, on the understanding that the monitoring data would be centralized and coordinated by the International Frequency Registration Board.

10. Committee 7 (Operations)

Under the chairmanship of Mr. A. J. Ehnle (Netherlands) and the vice-chairmanship of Mr. Y. Nomura (Japan), Committee 7 had to deal with all operating questions covered by the Radio Regulations and the Appendices. It was a sizeable task since operating methods had evolved since 1947, especially after a number of regional conferences and three Plenary Assemblies of the CCIR. It was therefore important that the future Regulations should contain a complete set of operating rules, taking into account the development of radiotelephony in the mobile service and the growing use of VHF.

Group No.	Terms of reference	Chairman
6 A	Definitions	Mr. E. W. ALLEN (USA)
6 B	Technical characteristics of emissions	Mr. J. K. Jowett (United Kingdom)
6 C	Monitoring and procedure in case of interference	Mr. A. Heilmann (F. R. of Germany)

Sub- Committee	Terms of reference	Chairman	Vice-Chairman
7 A	General operating questions	Mr. P. Bouchier (Belgium)	Mr. M. F. Cantero (Mexico)
7 B	Radiotelegraph and Radiotele- phone Procedures in the Mobile Service	Mr. R. M. BILLINGTON (United Kingdom)	Mr. J. Bès (France)
7 C	Distress and Safety	Mr. G. V. A. Graves (USA)	Mr. S. Gejer (Sweden)
7 D	Radiotelegrams	Mr. A. Caruso (Italy)	Mr. M. Flišak (P. R. of Poland)

At the start Committee 7 divided the work between the above four Sub-Committees.

10.1 General operating questions

The work of Sub-Committee 7A mostly concerned:

provisions concerning secrecy, licences, the inspection of mobile stations and irregularities or infringements of the Convention or Radio Regulations;

experimental stations and special services; call signs;

service documents;

ship and aircraft stations' operators' certificates.

One of the most significant changes in the Radio Regulations concerns call-signs, since the growing use of radiotelephony in the mobile service and the special operating conditions on air lines require means of identification other than the call-signs used in radiotelegraphy.

10.2 Radiotelegraph and Radiotelephone Procedures in the mobile service

Sub-Committee 7B dealt with Chapter XIII, Operating conditions in the Mobile Services (Articles 27 to 35). Since the Atlantic City Conference, conferences such as the Administrative Radio Conference held in Geneva in 1949 for Region 1 and Region 3, the Extraordinary Administrative Radio Conference (Geneva, 1951), the Baltic and North Sea Radiotelephone Conference (Göteborg, 1955), the International Maritime VHF Radiotelephone Conference (The Hague, 1957) had met to study the problems arising from the rapid evolution of operating conditions in the mobile services.

The development of MF, HF and VHF radiotelephony, the volume of HF radiotelegraph circuits in the maritime mobile service, the need for clearing the distress frequencies, the problem of language difficulties in radiotelephony, are all factors which had to be taken into consideration by Sub-Committee 7B, and led it to propose considerable revision of this part of the Regulations.

The texts drawn up appear in new Chapter VII dealing with operating conditions in the mobile

services and in some appendices and recommendations.

The group of articles forming Chapter VII was intended to group together :

generalities,
radiotelegraphy,
radiotelephony.

Administrations will find in this Chapter a set of up-to-date operating rules listed in more orderly fashion than in the old Regulations.

10.3 Distress and safety

Sub-Committee 7C dealt with:

distress signals and traffic, alarm, urgency and safety signals.

The Administrative Radio Conference, Atlantic City, recommended in 1947 that the CCIR study the possibility of keeping watch on 2182 kc/s by means of an automatic device and, should a practical solution be found, make the necessary Recommendations.

After several years of experiment by various Administrations, the CCIR unanimously recommended (Recommendation No. 219) the international adoption of a radiotelephone alarm signal the characteristics of which were specified in the Recommendation, together with details of the equipment which the signal would set into action automatically.

At the Göteborg Conference (1955), arrangements were made to put this radiotelephone alarm signal into service in the waters of the Baltic and North Seas, where there is a great deal of traffic.

Sub-Committee 7C adopted this radiotelephone alarm signal for international use. The next Conference for the Safety of Life at Sea, to be held in London in May 1960, will determine the conditions under which the provisions contained in this part of the Regulations may be applied to ships.

10.4 Radiotelegrams

The mandate of Sub-Committee 7D was to study matters of radiotelegram routing and accounting

covered in the Radio Regulations and the Additional Radio Regulations. In actual fact, in view of the development of radiotelephony, it was also necessary to make suitable arrangements for radiotelephone calls and conversations. Furthermore certain changes to the Telegraph and Telephone Regulations adopted by the Administrative Telegraph and Telephone Conference, at the end of 1958, had to be taken into consideration.

10.5 Manual for the use of mobile services

Sub-Committee 7D having finished its work very quickly, Committee 7 entrusted Mr. A. CARUSO (Italy) with the chairmanship of a fifth Sub-Committee (7E) to study a manual for the use of the mobile services.

In 1955, the Göteborg Conference had drawn the attention of Administrations to the interest of publishing a manual containing such provisions of the Radio Regulations as applied to the operation of mobile services. The Swedish Delegation had submitted a detailed proposal on the subject.

Time being short, the Conference was unable to prepare the manual but instructed the Secretary-General, in Resolution No. 12, to do so. Before publication, the manual must be approved by the following six Administrations: United States of America, France, Italy, Netherlands, United Kingdom and Sweden.

11. Committee 8 (Editorial)

Under the chairmanship of Mr. A. Henry (France) and the vice-chairmanship of Mr. E. Cubero, and later Mr. V. Quintas (Spain), Committee 8 had to submit to the Plenary Assembly the blue (first reading), pink (second reading) and white (signature) documents.

At its first meeting on 25 August 1959, the Editorial Committee submitted proposals which were approved by the Plenary Assembly.

The purpose of these proposals was to give accurate information to each delegate on the texts submitted for the approval of the Plenary Assembly, both insofar as their source was concerned and in comparison with the old Regulations. One of the following symbols (the same in the three languages) was therefore placed opposite each paragraph of text:

Symbol	English	Spanish	French
NOC	No change	No cambiado	Sans changement
MOD	Modification	Modificación	Modification
SUP	Suppression	Supresión	Suppression
ADD	Addition	Adición	Addition

When a modification concerned the wording of a Number without making any change in meaning, the symbol (MOD) was used.

When progress of work in other Committees made this possible, the Editorial Committee also studied and had approved by the Plenary Assembly the layout of the new Radio Regulations, with the purpose of reducing the number of chapters by combining some articles.

The main part of the work of the Editorial Committee began about 8 November, but the majority of texts were not submitted for its study until 20 November or later. The 672 printed pages of the Final Acts of the Geneva Conference were an increase of more than 57% over 426 pages of the Final Acts of the Atlantic City Conference. Thanks, however, to the hard work and enthusiasm of the delegates, the officials of the General Secretariat and the Specialized Secretariat of the IFRB, the proof-readers and printers, the Editorial Committee was able to maintain a rhythm during the last five weeks such that the Acts were signed no later than five days after the date planned.

12. The thirty-first plenary meeting

At the thirty-first plenary meeting of the Administrative Radio Conference, held on 21 December, 1959, the Chairman, Mr. C. J. Acton, summed up the work accomplished by the Conference and, before concluding, stated:

"Looking forward to the future, I am certain all will agree that there will be an increase in tempo in the development and use of frequencies in the higher part of the radio spectrum. Some of these developments, for example, the use of telecommunications relating to outer space, could be of worldwide significance.

I would suggest that all delegations draw the attention of their Administrations to the desirability of arranging, as far as may be possible, for continuity in the attendance of experts, who have had conference experience, at the conferences foreseen in the future.

In conclusion, although the objective of the Conference has been difficult to achieve, your Chairman considers that much greater success has been attained than appeared possible, even though at times there seemed to be insurmountable obstacles. This success is due to the cooperation of all delegates."

A number of delegates then expressed their satisfaction with the substantial results obtained by the Conference, and thanked and congratulated Mr. Acton for the remarkably efficient and impartial way in which he had carried out his duties as Chairman.

With regard to the date of the next Administrative Radio Conference, the Plenary Assembly felt that it should not be too far distant, for example, 1965, but left it to the Administrative Council to fix the date and place.

13. Closing ceremony

A combined closing Plenary Meeting of the Plenipotentiary Conference and the Administrative Radio Conference was held on 21 December 1959 at 5 p.m.

After the induction ceremony for Mr. G. C. Gross, elected Secretary-General of the Union, and Dr. M. B. Sarwate, elected Deputy Secretary-General of the Union, the delegations present were invited to sign the Final Acts of both Conferences.

Mr. G. C. Gross, speaking as Acting Secretary-General of the Union, Mr. C. J. Acton (Canada), Chairman of the Administrative Radio Conference, and Mr. J. D. H. van der Toorn (Netherlands), Chairman of the Plenipotentiary Conference, then made closing speeches to which Commissioner T. A. M. Craven (United States of America), Dean of the Conferences, replied. He recalled the work achieved by both Conferences and stated:

"There were nearly 90 nations represented at the Conferences.

These nations sent highly trained delegates who were proficient in the administrative, operational and technical field of radio communications. Consequently, the atmosphere of the Conferences may be characterized generally as friendly but business-like. That is to say, logic rather than sentiment has prevailed. The delegates conducted themselves as professionals dedicated to achieve results in the international coordination of radio communications. These results are designed for the benefit of the public in all of the nations of the world.'

Having thanked Commissioner Craven for his much appreciated speech, Mr. van der Toorn concluded in these terms:

"Our work is finished. You can now go home with satisfaction and be proud of the results achieved. We all spread out in the different directions in which the wind blows—we return to our homes all over the world. May you have a good return and may you find your families,

A number of delegates then expressed their distriction with the substantial results obtained we

from whom you have been so long separated, well and safe. I wish you a Happy Christmas and a Prosperous New Year.

May our feelings of friendship and the spirit of cooperation which have existed here between us not be influenced by the distance which, from now on, will separate us again. May God bless you all."

The Plenipotentiary Conference and the Administrative Radio Conference were officially declared closed on 21 December 1959 at 7.50 p.m.

14. Conclusion Thus after four months of hard work, the Administrative Radio Conference came to a successful conclusion. In the beginning it was permissible to wonder whether serious difficulties might not endanger its results; the problems facing the Conference were considerable, especially with regard to future radiocommunications. Happily, however, the cooperation of all delegations was remarkable and so was their desire to reach solutions acceptable to all.

The Final Acts of the Administrative Radio Conference are composed of:

The Radio Regulations,

The Additional Radio Regulations,

The Additional Protocol,

The Resolutions and Recommendations adopted by the Conference.

An analysis of the Final Acts will be made in an article to be published later in the Telecommunication

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