



Journal Title: Telecommunication Journal

Journal Issue: vol. 26 (no. 12), 1959

Article Title: The IXth Plenary Assembly of the International Radio Consultative Committee (CCIR)

Page number(s): pp. 259-262

This electronic version (PDF) was scanned by the International Telecommunication Union (ITU) Library & Archives Service from an original paper document in the ITU Library & Archives collections.

La présente version électronique (PDF) a été numérisée par le Service de la bibliothèque et des archives de l'Union internationale des télécommunications (UIT) à partir d'un document papier original des collections de ce service.

Esta versión electrónica (PDF) ha sido escaneada por el Servicio de Biblioteca y Archivos de la Unión Internacional de Telecomunicaciones (UIT) a partir de un documento impreso original de las colecciones del Servicio de Biblioteca y Archivos de la UIT.

(ITU) للاتصالات الدولي الاتحاد في والمحفوظات المكتبة قسم أجراه الضوئي بالمسح تصوير نتاج (PDF) الإلكترونية النسخة هذه والمحفوظات المكتبة قسم في المتوفرة الوثائق ضمن أصلية ورقية وثيقة من نقلاً.

此电子版（PDF版本）由国际电信联盟（ITU）图书馆和档案室利用存于该处的纸质文件扫描提供。

Настоящий электронный вариант (PDF) был подготовлен в библиотечно-архивной службе Международного союза электросвязи путем сканирования исходного документа в бумажной форме из библиотечно-архивной службы МСЭ.

The IXth Plenary Assembly of the International Radio Consultative Committee (CCIR)

(Los Angeles, 2-29 April, 1959)

The IXth Plenary Assembly of the CCIR was opened at 11.00 hours on Thursday, 2nd April, 1959, at the Hotel Biltmore in Los Angeles.

It was attended by over 300 participants who represented 39 Members of the Union, 17 private operating agencies, 7 international organizations and 2 Specialized Agencies of the United Nations, as well as all the permanent organs of the Union.

In addition, the study group meetings held in conjunction with the Plenary Assembly were attended by experts of 7 industrial organizations.

At its opening session the IXth Plenary Assembly was honoured by the following telegraphic message of welcome from the President of the United States of America :

"Dr. Ernst Metzler, Director, CCIR. Please give my greetings to the participants in the Ninth Plenary Assembly of the International Radio Consultative Committee. The findings and recommendations of this Committee have contributed significantly to progress in the field of international telecommunications by bringing together experts from around the world to co-operate in the solution of common technological problems. It has fostered international understanding and strengthened the foundations of peace. It is a pleasure to send best wishes for a memorable conference and for the continued success of the work of this Committee.

Dwight D. Eisenhower."

In response, the Director of the CCIR, on behalf of the Assembly, sent the following message :

"The President, The White House, Washington, D.C.
I have conveyed your message to the participants in the Ninth Plenary Assembly of the International Radio Consultative Committee, who join me in expressing deep appreciation for your message of greeting.

This appreciation is enhanced by the realization that, notwithstanding your weighty responsibilities, you have taken the time to send your greetings personally.

Your message once again accentuates the traditional hospitality extended by the American people."

After the appointment of the Head of the US Delegation, Dr. A. LEBEL, as Chairman of the IXth Plenary Assembly, the delegates were welcomed on behalf of the US Government by the Hon. W. T. M. BEALE, Deputy Assistant Secretary of State for Economic Affairs.¹

The meeting was then addressed on behalf of the City of Los Angeles by its Mayor, the Hon. Norris POULSEN.

After a response on behalf of the delegates by the Head of the Polish Delegation, in whose country the

¹ See also the June 1959 issue of the *Telecommunication Journal*.

last Plenary Assembly had been held, the Director of the CCIR spoke on behalf of the permanent establishment of the organization.

In the afternoon, a working plenary meeting was held, which elected the following Vice-Chairmen of the IXth Plenary Assembly :

Mr. S. HAMADA, Head of the Delegation of Japan
Mr. K. SAINIO, Head of the Delegation of Finland
Mr. C. MORALES, Head of the Delegation of Venezuela
Mr. K. RUSH, Head of the Delegation of Ireland.

The Assembly also formed the following special Committees :

Drafting Committee
under the Chairmanship of Mr. A. HENRY (Head of the Delegation of France)

Finance Committee
under the Chairmanship of Dr. M. B. SARWATE (Head of the Delegation of India),

Technical Assistance Committee
under the Chairmanship of Mr. N. CHRISTIAKOV (Head of the Delegation of the USSR),

Organization Committee
under the Chairmanship of Mr. T. R. CLARKSON (Head of the Delegation of New Zealand),

and established their terms of reference.

A report on the activities of these special committees will follow the discussion of the activities of the CCIR Study Groups.

The meeting also approved the Secretariat and covered a number of other administrative details, thus permitting the study groups to start their work the following day.

Work of study groups

In the interval between the two Plenary Assemblies, several meetings of the study groups were held so that it is difficult to distinguish exactly between the results of the interim meetings of the study groups and the study group work carried out at the Plenary Assembly of Los Angeles. The brief summary of the work of the study groups given below, therefore, deals more with the results obtained since the Warsaw Assembly than those which were the outcome specifically of the Los Angeles Plenary Assembly.

The activities of the CCIR Study Groups were, moreover, influenced to some extent by the forthcoming Radio Conference. In fact, one of the tasks of the study groups representatives was to produce a final list of the subjects covered by the texts prepared, which were to be submitted to this Conference.

The following analysis of the work of the study groups is based on the terms of reference in force prior to the Plenary Assembly of Los Angeles.

The changes made by the Plenary Assembly in the study groups' terms of reference are summarized at the end of the analysis.

Study Group I—(Transmitters)

Chairman: Mr. J. LOCHARD (France)

Vice-Chairman: Prof. S. RYŻKO (PR of Poland)

This study group made some minor amendments in the Recommendations on the relationship between peak power and mean power, and in the Recommendation on bandwidth measurements close to the transmitter.

The Recommendation concerning spectra and bandwidths of emissions was also amended, as far as the definitions and limitations of the emitted spectra were concerned.

The Recommendation on the definition "Bandwidth occupied by an emission" was completely revised.

The Recommendation on spurious radiation fixes stricter tolerances than those adopted at Warsaw, which were below 30 Mc/s, and specifies tolerance values between 30 and 235 Mc/s.

The Recommendation on the stabilization of transmitters includes a complete table; below 29.7 Mc/s, few changes have been made in the Atlantic City Regulations, but above that frequency, and particularly above 470 Mc/s, the tolerances are much stricter. It will be observed that a tolerance has been fixed for frequencies above 10 500 Mc/s; this was not foreseen at Atlantic City.

Apart from the aforementioned Recommendations which directly concern transmission, Study Group I drew up new Recommendations for radiotelegraphy.

The classification of multichannel radiotelegraph systems was extended, and the Recommendation on the arrangement of channels of radiotelegraph transmitters was completely redrafted.

Another Recommendation, dealing with telegraph distortion, advises the application of the definitions appearing in the CCITT List of Terms.

The texts relating to frequency-shift operation (which were revised and extended to other cases) as well as those concerning the four-frequency duplex system (particularly the coding system) were modified.

Finally, Study Group I prepared two reports regarding the theory of information considered from a practical point of view. One is a redraft of the text on the reduction of interference and measurement of occupancy of the spectrum; the other deals with the bandwidth of A_1 and F_1 transmissions and the interference caused by such transmissions.

No basic changes have been made in the future study programme which, broadly speaking, still

derives from the studies requested in Atlantic City Recommendation 4. The Study Programmes have, however, been revised so far as concerns spurious radiation, transmitter stabilization and transmission spectra and bandwidths.

As regards the tasks assigned to the study groups, Study Group I has been asked to study a question dealing with the level of tolerable interference in a complete system (formerly assigned to SG III), while the Questions and Study Programmes relating to radiotelegraphy have been entrusted to SG III.

Study Group II—Receivers

Chairman: Mr. P. DAVID (France)

Vice-Chairman: Mr. P. ABADIE (France)

As at other plenary assemblies, the basic work of SG II was the revision of the key Recommendations regarding the three main characteristics of receivers: background noise and sensitivity, selectivity and stability.

As at each previous plenary assembly, these Recommendations were carefully reexamined, clarified and amplified. It was mainly the Annexes, however, that were radically revised. This involved the rather thankless job of completely redrafting the tables, which will thus provide, after each assembly, particularly useful reference values on receiver performance.

Certain headings were added to the tables in these Annexes: data of all kinds about television receivers, bi-signal selectivity, etc.

Other aspects were introduced into the Recommendations, such as multisignal selectivity, study of the stability of high-stability receivers, characteristic group (frequency), delay, etc.

Apart from this basic work, slight amendments were made in three Recommendations advocating methods adopted by the International Electrotechnical Commission (IEC) or the International Special Committee on Radio Interference CISPR (*Comité international spécial des perturbations radio-électriques*) for measuring certain characteristics of sound or television broadcasting receivers.

SG II drew up a new report on the choice of the intermediate frequency in superheterodyne receivers.

New reports were prepared on subjects which were not heretofore dealt with in CCIR reports: study of the usable sensitivity in the presence of quasi-impulsive interference, permissible frequency instability, stability of receivers fitted with special devices, spurious emissions, measurement of amplitude-modulation suppression in frequency-modulated receivers.

For the future study programme, all previous Questions assigned to SG II were redrafted.

The Questions relating to sensitivity (in general, or in the presence of quasi-impulsive noise) and to stability were slightly rearranged.



C.C.I.R.
 International Radio Consultative Committee
 Ninth Plenary Assembly
 THE BILTMORE HOTEL — LOS ANGELES, CALIFORNIA, U.S.A.
 APRIL 1959

20-1
 ZWENGER
 LH

The Question referring to selectivity was redrafted and now includes a new Question, the purpose of which is to find standards for "correct tuning" of a receiver.

The Question on the choice of the intermediate frequency now relates exclusively to the maritime mobile service, as other classes of receivers have already been dealt with in another report (see above).

The Questions on the usable sensitivity in presence of quasi-impulsive interference, on spurious emissions, on distortion caused by multipath propagation and on protection against keyed interfering signals are still being studied, although some changes have been made to take account of the results already mentioned in the reports and to make a clearer separation between the work of Study Groups I, II and III.

Study Group III—Fixed services

Chairman: Dr. H. C. van DUUREN (Netherlands)

Vice-Chairman: Mr. A. COOK (United States)

A fairly large number of Recommendations on the fixed services remains in force unchanged.

The Recommendation on protection ratios was amended, and the new table gives results covering a greater number of cases.

A new Recommendation and a report of SG III introduce, in a fairly comprehensive way, ideas on transmission loss, and secondary aspects, in radio systems.

In the field of radiotelegraphy, some amendments have been made in the Recommendations relating to the photography and facsimile transmission of meteorological charts.

Three new reports also concern radiotelegraphy; these deal with the prediction of telegraph system performance in terms of bandwidths and signal-to-noise ratio, the use of automatic error correction and frequency deviations associated with passage through the ionosphere in systems using frequency-shift keying.

The problem of directional antennae is the subject of two new reports; another report describes new results with regard to radio systems using ionospheric scatter.

As regards information theory, which also comes within the province of SG III, there is a new report on the relation between permissible delay and residual uncertainty.

The future programme of study will cover, in the first place, the problems associated with Atlantic City Recommendation 4 (Conditions to be fulfilled by complete systems).

In that connection, a Study Programme regroups and restates the studies formerly mentioned in three Questions and four Study Programmes.

The Study Group's programme also includes previous or slightly amended texts concerning antenna directivity, ionospheric scatter propagation,

communication theory and the influence of frequency deviations associated with passage through the ionosphere.

Other studies have been undertaken for the first time, such as standardized radiotelephone test recording and transmission by meteoric ionization.

Finally, there is a series of Questions on different aspects of radiotelegraphy, some of which, as was mentioned in connection with SG I, were formerly assigned to that study group. One is a new Question and concerns the stability required for single-sideband transmissions to make the use of automatic frequency control superfluous.

Study Group IV—Ground-wave propagation

Chairman: Prof. L. SACCO (Italy)

Vice-Chairman: Mr. G. MILLINGTON (United Kingdom of Great Britain and Northern Ireland)

(Owing to the resignations of the Chairman and Vice-Chairman shortly before the opening of the Conference, the chairmanship was assumed by Dr. SMITH-ROSE, Chairman of SG V).

The Recommendation giving theoretical ground-wave propagation curves was amended to incorporate the results of field-strength calculations for distances above 2000 km.

There have been some changes in the Recommendation on propagation over inhomogeneous earth, a subject dealt with in a report which includes a long bibliography.

Finally, SG IV, in collaboration with SG V, drew up a Recommendation defining a basic reference atmosphere in terms of an exponential variation of the refractive index of the air as a function of height.

There are two reports dealing respectively with the determination of the electrical characteristics of the surface of the earth and with ground-wave propagation over uneven terrain.

No important changes have been made in the work programme regarding ground-wave propagation; the programme relates mainly to the subject covered by the above-mentioned reports.

The terms of reference of SG IV and SG V were revised during the IXth Plenary Assembly, the new SG V taking over all the activities of the former SG IV (see below).

The terms of reference of the new SG IV include a study of space systems; attention is drawn, in this connection, to the preparation of a Recommendation on the choice of frequencies for space communication and to a fairly comprehensive report on the technical considerations affecting this choice.

Study Group V—Tropospheric propagation

(Chairman: Dr. R. L. SMITH-ROSE (United Kingdom)

Vice Chairman: Mr. E. W. ALLEN (United States of America)

In collaboration with SG IV, SG V drew up a Recommendation and a report defining a basic reference atmosphere, as a result of which the Recommendation defining tropospheric terms had to be revised.

This study group established new tropospheric-wave propagation curves for distances up to 700 km. This Recommendation is the result of the work carried out by the special working party prior to the Plenary Assembly. Details on the establishment of these curves are given in a report.

The scope of this working party has been enlarged to include an analysis of the data available for short distances.

SG V also prepared a report on field measurements, which constitutes a synthesis of the subject and assembles information formerly appearing in 7 Recommendations and 3 reports of the CCIR. Another report concentrates on field measurements for broadcasting purposes and the presentation of the results obtained.

In a further report, a provisional reply is made to the problem of data on the propagation required for radio relay systems. This highly important subject is still being studied.

Another international working party, which was set up in Geneva in 1958, has prepared a report with 32 climatic charts of the refractive index parameter ΔN for various regions in the world.

No appreciable change has been made in the programme of work for tropospheric propagation, which again includes the Questions on the data required for radio relay systems, on tropospheric scatter, on tropospheric propagation in various circuits (across mountain ridges, in multipath transmission and for distances well beyond the horizon).

Since the last Plenary Assembly, the terms of reference of SG V include the study of ground-wave propagation, formerly assigned to SG IV. The work programme of the new Study Group V thus includes also the subjects discussed in connection with SG IV.

(To be continued)

The Technical Assistance Problem at the Plenipotentiary Conference

During the ITU Plenipotentiary Conference, held in Geneva from October to December 1959, the General Secretariat of the ITU had occasion to submit a report on Technical Assistance in the sphere of telecommunications.

Since the questions dealt with in that report are of topical interest, we are reproducing below the text of the statement made at the Plenipotentiary Conference for the information of readers of the Journal.

(Ed.)

(Translation)

The subject of technical assistance, particularly in telecommunications, is of the highest interest but at the same time of the greatest complexity, and as the Conference is about to tackle its fundamental aspects, I think it advisable to define it as clearly as possible, that is, to recall its principles and to outline its scope. With your permission, Mr. Chairman, I shall first try to explain what technical assistance is.

What is Technical Assistance ?

The expression "technical assistance to under-developed countries" adopted in international circles about ten years ago, is not the most felicitous of terms, as it does not reflect exactly the aim of the great undertaking which has developed under the auspices of the United Nations, and which might be more accurately termed "international co-operation for economic development." This undertaking is, of course, primarily intended to give technical assistance to countries which are as yet inadequately equipped in certain fields, but in reality its purpose is much wider, for it aims at improving economic and social conditions in all countries of the world, including

those which are at present sometimes considered as being sufficiently developed.

We shall, however, continue to use the term "technical assistance" but, as well as using the words "countries which are as yet inadequately equipped" or "under-equipped countries" in preference to "under-developed countries," we must bear in mind the following points :

- 1) technical assistance is not conceived as an act of charity but as a combined effort to co-operate in the general interest ;
- 2) if, in some respects, the technical assistance machinery allows a distinction to be made between countries which give and those which receive, it should be remembered that most countries are in a position both to give and to receive ;
- 3) the aim of technical assistance is to spread and to standardize every kind of technique (including, often primarily, administrative techniques), so as "to help some countries to help themselves," to use a seemingly paradoxical but, in the circumstances, very apt expression ; technical assistance