The Third Plenary Assembly of the CCITT held in June 1964 at the Maison des Congrès, Geneva. Photo at right, left to right: former CCIF Director Assembly; G.A. Wettstein, President of the General Directorate

THE CCITT AND

by
D. J. DORMER
Engineer, CCITT

SOME OF THE ARTICLES THAT have recently appeared in the *Telecommunication Journal* concerning the organization of the International Telecommunication Union (ITU) have made a point of proposing no change to the detailed organization of the Consultative Committees (the International Radio Consultative Committee, CCIR, and the International Telegraph and Telephone Consultative Committee, CCITT). The present organization of these committees which has so well stood the test of time may not be known in detail, event to those who take part in their meetings.

There are many similarities, but also some important differences in the organization and working methods of the two CCIs. This present article, though parts of it apply to both CCIs, sets out to describe in detail the organization of only one of them, namely the CCITT.

●

1. The CCITT

The CCITT is an assembly of telecommunication engineers and specialists representing the telecommunication Administrations and organizations of the world, be they governmental or private, and also the telecommunication industry in general. It has a Director having over-all responsibility for CCITT affairs and a permanent Secretariat that is under the control of the Director. During the present period, the greater part of the work of the CCITT will be done in some forty study groups and working parties, which will study a total of about 350 Questions, each dealing with international aspects of telephony and telegraphy. It also takes part in the work of some committees for which the CCIR and the CCITT have a common interest, notably the various Plan Committees and the CMTT *(Commission mixte pour les transmissions télévisuelles)*.

Georges Valensi; W. Donzé, Administrative Counsellor (Geneva); CCITT Director Jean Rouvière, who opened the Assembly; A. Langenberger, President of the
of Swiss PTT; Gerald C. Gross, Secretary-General ITU.

ITS SECRETARIAT

Each study group has a number of the Questions set for its study. The individual members of each study group send in comments and proposals concerning these Questions. The Secretariat of the CCITT arranges to publish these comments and proposals in the form of *Contributions* for study by the group as a whole.

At suitable intervals, the members of the study group meet together, discuss the Questions, study the contributions relative to each, and give answers to them. These answers provide bases for *draft CCITT Recommendations* which, before they can become valid, have to be endorsed by the *CCITT Plenary Assembly*.

2. CCITT Recommendations

It is perhaps one of the merits of the *Recommendations* of the CCITT that they are not " regulations. " They can be followed or not as Administrations or private operating agencies may wish. In this way, their revision can proceed side by side with progress and development without either side hindering the other. Although the Recommendations enter into considerable technical detail, this is no more than is essential for their purpose, which is to provide standards for the worldwide telecommunication network, without attempting to impose detailed manufacturing specifications. The fact that CCITT Recommendations are voluntarily and extensively applied and

quoted by Administrations and manufacturers alike is sufficient testimony to their value.

The CCITT *Book* containing the Recommendations consists of a number of volumes—nine in the present period—each of which is usually republished soon after each Plenary Assembly. The colour of the cover of the Book is changed with each republication, the colour helping to identify the current version. Thus the version now in the course of preparation will be the *Blue Book* superseding the previous *Red Book*.

The outcome of some studies by the CCITT is not suitable for presentation in the form of individual Recommendations as in the CCITT Book. For these, the CCITT produces a number of *manuals*, some of them having the same authority as the Recommendations, each of which is presented in a way that is appropriate to its subject matter.

3. The Plenary Assembly

The Plenary Assembly is held every three years. It is immediately preceded by a series of meetings of all, or nearly all, of the study groups, at which the proposals to be submitted to the Plenary Assembly are put into their final form. The Plenary Assembly and the study group meetings that precede it last, in all, for about five weeks.

In the plenary meetings, representatives of all of the study groups meet together. The opportunity is thus provided for an exchange of views to confirm that the proposals of each study group are acceptable to the rest. This being the case, the proposals of the individual study groups are approved by the CCITT as a whole. The period of three years that elapses between Plenary Assemblies appears to provide the best compromise possible, taking account of the work that has to be done, and of the need to keep the Recommendations up to date.

Certain tasks of each Plenary Assembly involve decisions concerning the organization of the CCITT for the following three year period. These tasks are the setting-up of the required study groups and working parties, and the selection of chairmen and vice-chairmen for them, the allocation to the appropriate study group of each Question for study, and the drawing-up, on broad lines, of a programme of meetings to be held during the whole of the three year period.

4. Programme of meetings

The broad programme drawn up by each Plenary Assembly for the following period of three years indicates the number of meetings that each chairman thinks his study group must have in order to complete the major part of the work before it. The chairmen are well aware of the necessity to keep the number of meetings to a minimum, but only rarely are they able to conform to the spirit of a view expressed by the Administrative Council that each study group should have only one meeting between Plenary Assemblies. After the Plenary Assembly, the detailed programme for each year is worked out by the CCITT Secretariat and for this it is necessary to take into account the complicated relations that sometimes exist between study groups. Thus, the answer to one Question by one study group may depend on the answer to one or more Questions by one or more other study groups; or the same Question may be set to more than one study group, one of these groups needing lengthy discussions in more than one meeting in order to arrive at its part of the answer, while the other may arrive for its part at an overriding decision in a short discussion at a single meeting. It is obviously desirable for the programme of meetings to be arranged so that in the first example above, one study group is not delayed by another and, in the second example, so that one study group does not embark on its lengthy discussions only to have them made void by the decisions of another.

An over-all knowledge of these relationships takes some time to acquire, and while individual chairmen are of course aware of the bilateral relationships they must have with other study groups, only in the CCITT Secretariat can there be a view of the whole, and it is only in the CCITT Secretariat that there is any hope of drawing up a detailed programme that is rational and economical, though it is inevitable that the ideal solution cannot always be found. Based on the detailed programme, the CCITT Secretariat makes the best forecast that it can of the periods that are likely to require supernumerary staff in the common services of the ITU, and of the requirements for meeting rooms and interpreters, and forwards these forecasts to the General Secretariat of the ITU.

5. Constitution of study groups

Each Plenary Assembly decides what study groups and permanent working parties are necessary for the succeeding three year period.

After the Plenary Assembly, Administrations, recognized private operating agencies and scientific and industrial organizations are invited by the Secretariat to nominate afresh their delegates and representatives to these study groups and working parties for the new period, and to indicate the number of copies of working documents (contributions and reports) they wish to receive in the working languages of the CCITT. Although the despatch of documents is now carried out by the ITU common services, the classification of these nominations into individual lists for each study group has to be done in the CCITT Secretariat. For the present period, an average of some 200 addresses are registered under each of the study groups and working parties.

6. Receipt and publication of contributions

Contributions from Administrations, etc., are sent to the CCITT Secretariat in one (preferably, though rarely, two) of the working languages of the Union. The Secretariat studies these contributions on receipt and where necessary, and when sufficient time is available, carries out a linguistic revision, for the contributions may have been written in a language which is not the mother tongue of the author. They may have been composed directly in a foreign language, in which case revision of a purely linguistic nature may be desirable in order to make the contribution easier to read, or they may have been translated from the original by a non-technical translator, in which case a technical revision is necessary to make sure that the correct terms are used. Also if sufficient time is available, the CCITT Secretariat carries out a technical revision of translations of contributions made by the official translators of the Language Service of the ITU. Linguistic and technical revision of a single important study group document sometimes requires one man-week or more of work. The increasing amount of work means that less and less time can be devoted to this important part of the CCITT Secretariat's function.
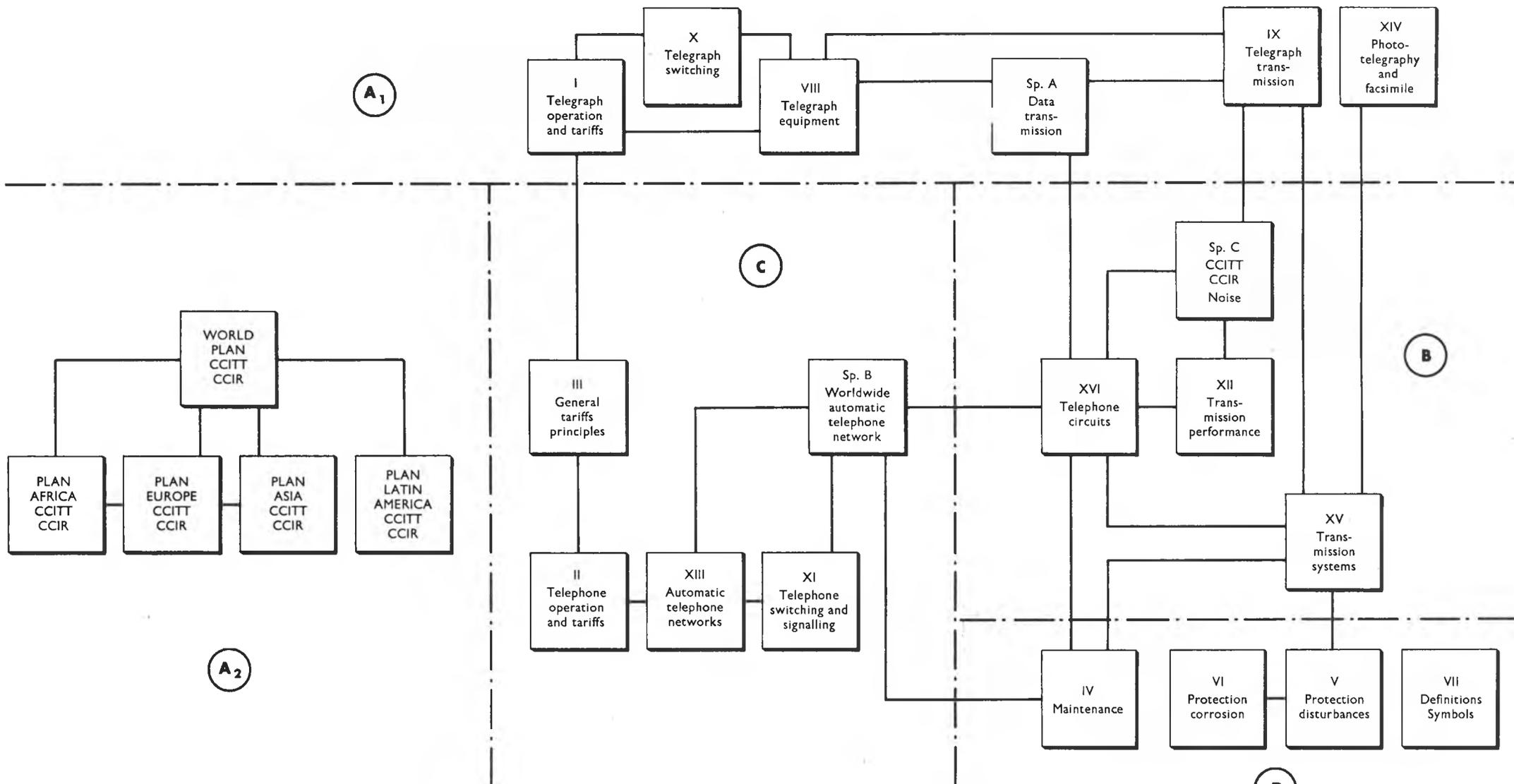
The contribution, duly translated and revised, is then sent to the common services of the ITU for typing, duplication, and despatch, though in the case of a few documents that are particularly involved, which bear many corrections or for some other reason need individual attention, the typing is done in the CCITT Secretariat. Drawings and figures for reproduction are also prepared by the Secretariat's own services.

The CCITT Secretariat maintains a detailed progress schedule for each contribution from the moment it is sent for translation. This enables an immediate check to be made on the stage that any contribution has reached, and it has been shown by experience to be an essential means of ensuring that the priority given to the production of documents is related to the date of the meetings for which they are required. This priority of course can be judged only in the CCITT Secretariat, which does its best, based on its experience of how long typing and duplication take, to indicate in advance to the ITU Distribution Services a realistic date for the despatch of each document.

Each registered member receives at least one copy of every contribution to the work of the study group or working party in which he is interested. As a very rough guide, the average number of copies of each document distributed is 500. The cost of despatching these documents is therefore quite high. In order to respect the limits of the CCITT budget, it was recently necessary to suspend for about two months the despatch of all CCITT documents except those having a special urgency.

ORGANIZATION CHART OF CCITT STUDY GROUPS
(brought up to date after the IIIrd Plenary Assembly)

X Telegraph switching		IX Telegraph transmission
I Telegraph operation and tariffs	VIII Telegraph equipment	XIV Photo-telegraphy and facsimile
	Sp. A Data transmission	

Ⓐ₁

Ⓒ

Ⓑ

Sp. C CCITT CCIR Noise

WORLD PLAN CCITT CCIR

III General tariffs principles

Sp. B Worldwide automatic telephone network

XVI Telephone circuits

XII Transmission performance

PLAN AFRICA CCITT CCIR	PLAN EUROPE CCITT CCIR	PLAN ASIA CCITT CCIR	PLAN LATIN AMERICA CCITT CCIR

XV Transmission systems

II Telephone operation and tariffs

XIII Automatic telephone networks

XI Telephone switching and signalling

Ⓐ₂

IV Maintenance	VI Protection corrosion	V Protection disturbances	VII Definitions Symbols

Ⓓ

LEGEND:

Ⓐ₁ TELEGRAPHY AND DATA TRANSMISSION

Ⓒ TELEPHONE OPERATION AND SWITCHING

Ⓐ₂ PLAN AND TECHNICAL ASSISTANCE

Ⓓ PROTECTION AND MAINTENANCE. MEANS OF EXPRESSION

Ⓑ TRANSMISSION AND LABORATORY

———— MAIN LINKS BETWEEN STUDY GROUP ACTIVITIES

7. Convening of and participation at meetings

As early as convenient before the holding of a CCITT meeting, the Secretariat sends out a circular giving the dates of the meeting and where it will be held and asking for contributions to the study of the Questions concerned. According to the rules of procedure of the CCITT, for normal treatment such contributions should be received four months in advance of the date of the meeting. For various reasons this objective is often not realized in practice and as a consequence, the time available for translation, typing, duplication and distribution is often restricted. The circular also asks for advance notification of members who intend to be present at the meeting. For each study group meeting, the average number of members who participate is about fifty, though the range is considerable; at some study group meetings there are over a hundred participants, while at others, usually special working parties, there are about ten.

8. Chairmen

The chairmen of the study groups and permanent working parties are chosen by the Plenary Assembly. They need to be senior officials in their own Administration, able to conduct the meeting of their study group, to have an intimate knowledge of the work of the study group and to have an adequate knowledge of English or French, since these are the languages most used at meetings, and especially of the vocabulary of the technique involved.

The IIIrd Plenary Assembly of the CCITT had to choose about forty chairmen. Understandably, a large proportion of these are of English or French mother tongue, and this means that a considerable burden is imposed on the Administrations of English or French speaking countries. Nevertheless, about two fifths of the chairmen chosen will have to conduct their meetings in a language that is not their own, and for this reason their work as chairmen will be doubly arduous.

9. Arrangements at meetings

There are four technical departments in the CCITT Secretariat. Each one has a proportion of the study groups, committees and working parties allocated to it, and is responsible for the conduct of their affairs. The part of these affairs, that is most in evidence and upon which superficial impressions of the work of the Secretariat are mostly based is seen at CCITT meetings. The extremely modest nature of the means by which the departments of the Secretariat achieve the smooth running of these meetings is not always appreciated.

The Questions for study and the discussions associated with them are of a highly technical nature. Interpretation into English and French is provided at all except a few very small meetings. The interpreters, who are not technicians, do excellent work, but they sometimes get into difficulties with technical terms. Although simultaneous interpretation is essential when more than two languages are used at a meeting and although it may seem to give a saving in time with two languages, consecutive interpretation has three main advantages: firstly, it enables those whose mother tongue is neither of the two languages used but who have a working knowledge of both of them, to hear the discussion twice over and thus perhaps to obtain a more complete understanding than if they had heard it in only one language; secondly, in the event of difficulty in interpreting a technical expression, an intervention is possible, so avoiding misunderstanding and lost time; thirdly, it is cheaper, since it requires fewer interpreters and it can be used without a complicated installation. The first two of these advantages are of particular importance in detailed technical work of the sort carried out by the CCITT.

Each of the heads of departments, while none of them would claim to be bilingual in the strictest sense of the word, is an engineer capable of working in either English or French. In particular, each has an intimate knowledge of the technical terms of his subject in the two languages and so is frequently able to help in this respect. This is of no small importance since a single misused term can often result at least in a delay of five or ten minutes in the proceedings, if not in a more fundamental misunderstanding.

To those not familiar with the working of the CCITT, the fact that the members at meetings are called, in French, *rapporteurs* and the chairman the *rapporteur principal* sometimes leads to the assumption that they write CCITT reports of meetings. This is not so. Nor are there any minute writers at CCITT meetings to write minutes of each session. It is the head of the relevant department of the CCITT Secretariat who acts as secretary and who himself is responsible for drawing up the report of CCITT meetings. He is well qualified for this task by virtue of his capabilities in English and French which enable him to follow the discussions in both these languages and by virtue of his intimate knowledge of the subjects discussed, which enables him to appreciate and adequately report the proceedings. He also draws up draft replies to the Questions studied and drafts a text for resulting Recommendations. For these tasks, so as to obtain homogeneity in CCITT publications he needs to have ability as a technical writer and a familiarity with CCITT affairs in general.

A *draft Report* of the meeting is, if possible, presented to that meeting before its close. Even in this draft form, without annexes, appendixes and diagrams some of the Reports for large meetings contain some fifty pages. During the course of the meeting it is often necessary for a number of working documents to be written concerning particular points that have emerged during the discussion. All these documents are written by the secretary, who, in order that the translation, typing and duplication can be completed in time for the documents to be presented soon enough to the meeting, must often work long hours after the meeting is finished for the day. As a result of the increasing number of meetings, the average duration of the working day of the heads of department becomes longer and longer. The recent addition of an engineer assistant in each department has provided some relief but it results from the interest in the geographical distribution of staff that none of these assistants has English or French as his mother tongue.

10. The Secretariat departments

Under the over-all responsibility of the Director, the four departments of the CCITT Secretariat ensure that the work of the CCITT is efficiently carried out. These departments are supplemented by administration, registry, drawing office and documentation services working together with the corresponding common services of the ITU. There is in addition a laboratory, which through the head of the department concerned, works in close association whith one of the study groups. The total staff,

▲ Mademoiselle Ursula Landvogt, one of the operators in the CCITT laboratory of the ITU, making speech tests.

▼ The sound proof room in the laboratory of the ITU's International Telegraph and Telephone Consultative Committee, with a typical artificial mouth used for measuring the sensitivity characteristics of a telephone sending system.
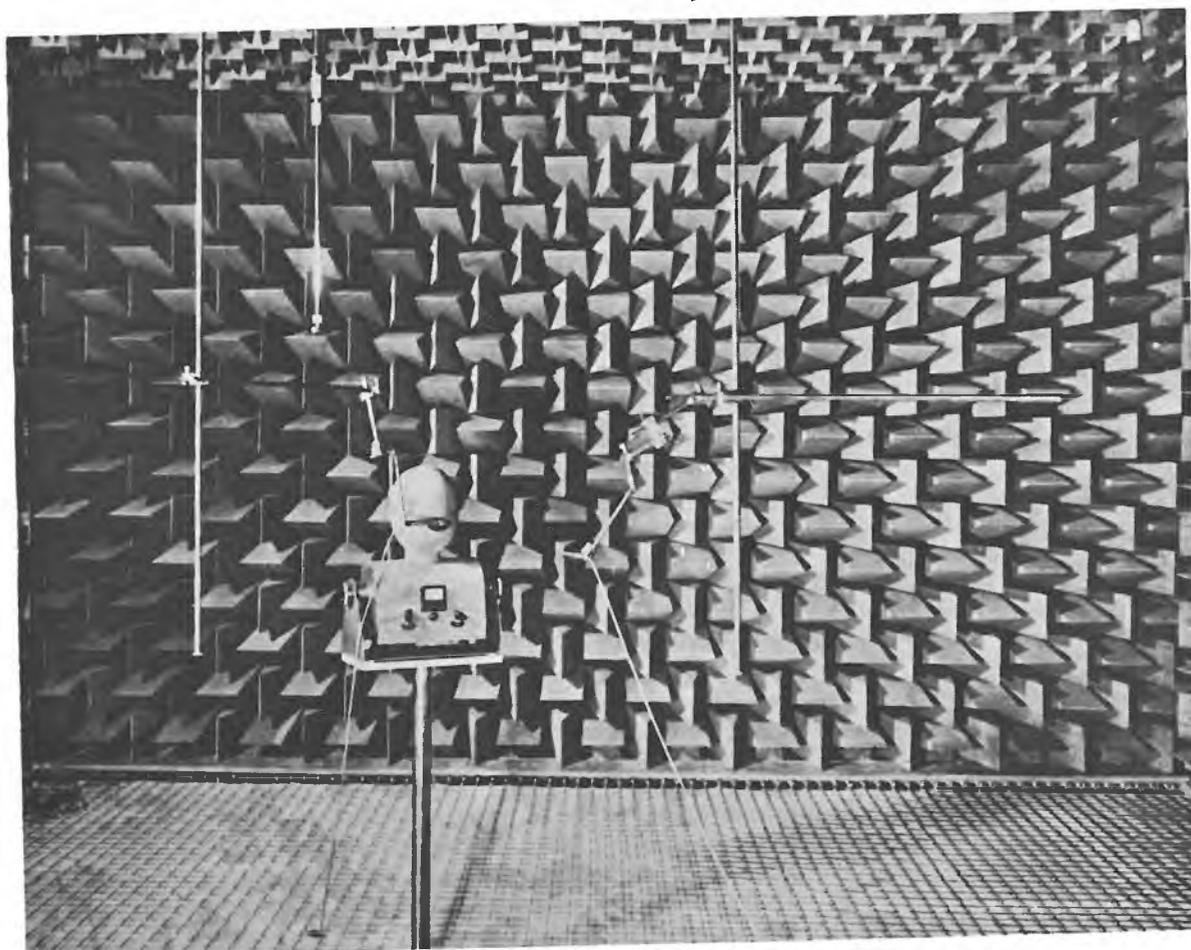
permanent and quasi-permanent, is small in number, being only 29 out of a total of 370 in the whole of the ITU. Of these 29, five are engaged on the supplementary services mentioned above and seven in the CCITT laboratory. It is supplemented by interpreters who are engaged only for the duration of meetings and by a share in the staff employed in the common services. However, for the 1964-1968 period, the total staff of the CCITT Secretariat will be distributed over all the study groups and working parties at the rate of about three-quarters of a person to each. Virtually all the work of the CCITT passes through the hands of its Secretariat, and though the volume of documentation is no criterion of efficiency, a glance at this coupled with a knowledge of the multiple duties of the Secretariat must lead to the conclusion that it is remarkably efficient. This high apparent efficiency results in some measure from the fact that its vital parts are overloaded. In this connection, it is of interest to note that over the years 1948-1957 there was no actual increase in the permanent staff of the CCITT Secretariat (for the years before 1956, this applies to the Secretariats of the International Consultative Telephone Committee, CCIF, and the International Consultative Telegraph Committee, CCIT, taken individually). From the end of 1957, to the end of 1964, the net increase was 9, though it has to be noted that during this period increasing use was made of ITU common services. Spread over the total period 1948 to 1965, the rate of increase of permanent staff in the CCITT Secretariat was 2.8 % per annum. Over the period 1957 to 1964 it was 7.5 % per annum.

Along with the work that they do in connection with the conduct of CCITT study group meetings, drawing up their reports and publishing their contributions, the four departments share in the work of the Plenary Assemblies and compile the various volumes of the CCITT *Book* and associated publications and manuals such as the *Plan*, the *Directives*, the *Recommendations*, the *Instructions for operators*, the book of *Telegraph codes*, and the *List of definitions*, which are then published in accordance with requirements determined by the Publications Service of the ITU. In its work in connection with these publications, the CCITT Secretariat employs a supernumerary proof-reader, who works in close co-operation with the four departments.

In addition to these functions other duties are added to the load of each department. Some of these duties are the general administration of the Secretariat as a whole, the supervision of the CCITT laboratory, and the running of the CMI *(Commission mixte internationale pour la protection des lignes de télécommunication et des canalisations souterraines)*. This last is a separate organization which is not a part of the ITU and which is not recognized as giving rise to any staff requirements. The CCITT Secretariat provides it with a secretarial service, which, while not of the same standard as that provided for the CCITT, nevertheless occupies an appreciable time; the Finance Department of the ITU looks after accounting in connection with the CMI which has a quite independent budget.

One of the departments includes a sub-division (effectively a fifth department) dealing with the work of the various Plan Committees and also with technical questions concerning technical co-operation. All the heads of the departments act in a consultative capacity as required, in connection with such questions, whether they arise from meetings of the Plan Committees or are forwarded from the Technical Co-operation Department of the ITU.

Also, so far as time permits, the heads of the departments keep in touch with the activities of other organizations that concern the interests of their study groups, and if possible send a member to their meetings.

11. The Director and the heads of departments

The Director of the CCITT is an elected official chosen from among the various candidates for the post by a free vote of his peers in the CCITT Plenary Assembly. There is no fixed limit for the length of his term of office.

Apart from his over-all responsibility for the functioning of the CCITT Secretariat, the Director has a wide variety of duties. Confronted as he frequently is with problems which raise diplomatic as well as technical issues, he must be able to meet the heads of Administrations on terms of equality and to take the floor during meetings to advise, not only on matters of telecommunication technique, but also on procedural and organizational questions and on those fortunately rare occasions when the CCITT is, to quote the Editor of the *Telecommunication Journal* in a recent Editorial, " rocked by the storms which those who navigate the political high seas must constantly fight. "

It would not be possible for the Director to be present at all the meetings of the CCITT study groups. He is represented at these meetings, however, by the heads of the four departments, each of whom is directly responsible to him.

Brief mention has already been made of the help given during meetings by the heads of departments, in their capacity as secretary. It is their essential role to give help that extends beyond any Secretariat functions. In those cases where Questions concern more than one study group, they give information on the stage reached in the studies being pursued by other groups. They do the same in the case of related studies being pursued by other organizations. They thus help to avoid duplication of work, or the adoption of opposing points of view. They can guide study groups in the timing of studies to be undertaken, so as to ensure that these are neither too late, with consequent difficulties in reaching agreement, nor so early as to interfere with current development work. Outside the meetings, their advice is frequently sought by individual members on the best moment or the best manner for presenting certain aspects of Questions.

Together with the chairman, they evolve the best procedure to be followed in certain studies, so that problems can be dealt with in a way that will give maximum chances of reaching a satisfactory agreement. And even when agreement has been reached, and although the nature of the agreement may be perfectly apparent to those present at the meeting, there remains the task of presenting this agreement in words, clearly and without equivocation, so that it can be understood by those who have not taken part in the discussions giving rise to it. This task also forms a part of the advisory functions of the heads of the departments.

In these, their most important functions, the heads of departments contribute to the maximum technical efficiency of CCITT meetings. Staff combining the qualities necessary for all these functions are not easy to find. They need to have had experience in telecommunication within a national Administration, to have linguistic and editorial ability, and to have a high degree of responsibility and integrity. Their job is not quickly learnt, and their usefulness to the CCITT increases with their length of service.

(Original language: English)