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INTERNATIONAL TELECOMMUNICATION UNION

TELECOMMUNICATION STANDARDIZATION SECTOR OF ITU

WORLD TELECOMMUNICATION STANDARDIZATION CONFERENCE

HELSINKI, 1-12 MARCH 1993

BOOK No. 1

RESOLUTIONS

**RECOMMENDATIONS ON THE
ORGANIZATION OF THE WORK
OF ITU-T (SERIES A)**

STUDY GROUPS AND OTHER GROUPS

LIST OF STUDY QUESTIONS (1993-1996)

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WORLD TELECOMMUNICATION STANDARDIZATION CONFERENCE

(Helsinki, 1993)

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Contents

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<i>Part</i>	<i>Page</i>
1. Resolutions adopted by the Conference of the ITU Telecommunication Standardization Sector.....	1
2. Recommendations on the organization of the work of the ITU Telecommunication Standardization Sector (Series A)	61
3. Study Groups, Study Group Chairmen and Study Group Vice-Chairmen of the ITU Telecommunication Standardization Sector	85
4. Questions approved for study by the ITU Telecommunication Standardization Sector.....	89

PART 1

Resolutions adopted by the Conference of the ITU Telecommunication Standardization Sector

CONTENTS

<i>Resolution No.</i>	<i>Title</i>	<i>Page</i>
1	Rules of procedure and working methods of the ITU Telecommunication Standardization Sector (ITU-T).....	2
2	Study Group responsibility and mandates.....	24
3	Publication of ITU-T Recommendations.....	31
4	Identification and layout of Recommendations	34
5	Supplements to the ITU-T Recommendations	36
6	Relations with other standardization organizations.....	37
7	Collaboration with the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC)	38
8	Cooperation with the IEC on the standardization of cables, wires, optical fibres and waveguides	40
9	Development of Electronic Document Handling	42
10	Electronic Document Handling Group within the Telecommunication Standardization Advisory Group.....	43
11	Collaboration with the Consultative Council for Postal Studies (CCPS) of the Universal Postal Union (UPU) in the study of new services concerning both the postal and the telecommunication sectors.....	44
12	An Information Bulletin for the Telecommunication Standardization Sector.....	46
13	Protection of the common names of ITU-T defined international public services	47
14	Establishment of an intersector coordination group (ICG) to deal with satellite matters of common interest to the Telecommunication Standardization and Radiocommunication Sectors	48
15	Establishment of an intersector coordination group (ICG) to deal with activities relating to the Future Public Land Mobile Telecommunication Systems (FPLMTS) in the Telecommunication Standardization and Radiocommunication Sectors	49
16	Initiation of joint coordination groups to deal with matters of concern to multiple study groups in the Telecommunication Standardization Sector in accordance with Resolution No. 1	50
17	The importance of telecommunication standardization for the developing countries	51
18	Principles and procedures for the allocation of work to, and coordination between, the Radiocommunication and Telecommunication Standardization Sectors	52
19	Inclusion of appropriate work from the Radiocommunication Sector into the programme of the Telecommunication Standardization Sector	57
20	Procedures for allocation of country and network codes.....	58
21	Collection and dissemination of operational and service information by the Telecommunication Standardization Bureau	59

RESOLUTION No. 1

Rules of procedure and working methods of the ITU Telecommunication Standardization Sector (ITU-T)

(Helsinki, 1993)*

The WTSC,

considering

(a) that, in accordance with Article 17 of the Constitution (Geneva, 1992) the duties of the ITU-T shall be to study technical, operating and tariff questions and to issue Recommendations on them with a view to developing telecommunication standards, on a world-wide basis;

(b) that the ITU-T Recommendations and reports resulting from these studies must be in harmony with the International Telecommunication Regulations (Melbourne, 1988), complement the basic principles therein and assist all those concerned in the provision and operation of telecommunication services to meet the objectives set down in the Preamble and Article 1 of those Regulations;

(c) that accordingly, the rapid developments in telecommunication technology and services require timely and reliable ITU-T Recommendations to assist all Member countries in the balanced development of their telecommunication infrastructures;

(d) that general working arrangements of the Telecommunication Standardization and Radiocommunication Sectors are defined in the Convention (Geneva, 1992);

(e) that, pursuant to Resolution No. 18 of the IXth CCITT Plenary Assembly (Melbourne, 1988), a careful review of the more detailed working arrangements has been made in order to adapt them to meet the increasing demand for developing Recommendations with the most effective use of the limited resources within Member countries and ITU headquarters,

decides

that, as far as the ITU-T is concerned, the general provisions referred to in d) above shall be amplified by the provisions set down in this Resolution and in the Resolutions to which they refer. In case of conflict, the Constitution and the Convention (in that order) shall prevail over this Resolution.

SECTION 1

WORLD TELECOMMUNICATION STANDARDIZATION CONFERENCES

1 Preparations for the WTSC

1.1 If the WTSC meets at the seat of the Union, the precise date of the meeting shall be decided by the Director of the TSB in agreement with the Secretary-General of the Union. If the WTSC does not meet at the seat of the Union, the exact date of the meeting shall be decided by the inviting government in agreement with the Director of the TSB.

1.2 The Secretary-General of the ITU shall send an invitation to participate in the WTSC to all Members of the Union. The invitation shall also be sent, in conformity with Article 25 of the Convention (or Article 28 according to the circumstances), to those entities duly authorized according to Article 19 of the Convention. If the WTSC does not meet at the seat of the Union, the Secretary-General of the ITU shall issue the above-mentioned invitation on behalf of the inviting government.

1.3 Members of the ITU-T (CS110) wishing to participate in the WTSC are required to advise the Director of the TSB, in writing, at least one month before the meeting, of the names of the delegates of Administrations especially the Heads of Delegation and participants of duly authorized entities who will attend meetings of the WTSC. The Director of the TSB shall forward this information to the Administration of the inviting government, if any.

* Previously published (Geneva, 1956 and 1958; New Delhi, 1960; Geneva, 1964; Mar del Plata, 1968; Geneva, 1972, 1976 and 1980, Malaga-Torremolinos, 1984; Melbourne, 1988).

1.4 The Secretary-General of the ITU shall invite the Director of the BR, the Director of the BDT, the United Nations, the Specialized Agencies of the United Nations which reciprocally allow representatives of the Union to attend their conferences, and the international organizations and regional telecommunication organizations entitled to participate in the work of the ITU-T under Article 19 of the Convention (Geneva, 1992), to attend the WTSC in an advisory capacity. The United Nations, the specialized agencies and other international and regional telecommunication organizations are required to notify the names of their observers in the manner specified in § 1.3 above for members of the ITU-T.

1.5 Prior to the official opening of the WTSC the Heads of delegation shall meet:

- a) to prepare, on the basis of proposals by the Director of the TSB, the programme of work of the WTSC, for submission to the latter at its first meeting;
- b) to designate the persons who will be proposed as Vice-Chairmen and, if necessary (when the WTSC meets at the seat of the Union), Chairman of the WTSC;
- c) to determine the Committees to be proposed to the WTSC for establishment.

2 Committees

2.1 In general, the following Committees are proposed:

- a) "Committee on Working Methods of the ITU-T", which examines the working methods of the ITU-T.
- b) "Committee on the ITU-T Work Programme and Organization", which considers the report of the Telecommunication Standardization Advisory Group, and submits a report to the WTSC setting out the allocation of work to Study Groups, and an organizational structure necessary to support the work programme (see §§ 3, 4).

This Committee shall include:

- the Chairmen of the Study Groups, the Chairman of the TSAG and the Chairmen of other groups set up by the WTSC.
- c) "Budget Control Committee", which examines the estimate of the financial needs of the CCITT up to the next WTSC and the accounts for expenditure incurred by the current WTSC, in accordance with Article 32 of the Convention.
- d) "Editorial Committee", which refines the wording of any text such as Resolutions arising from the WTSC's deliberations. This Committee also aligns the official languages for such text.
- e) "Steering Committee" shall coordinate all matters connected with the smooth execution of work and shall plan the order and number of meetings, avoiding overlapping wherever possible in view of the limited number of members of some delegations.

2.2 Any other WTSC Committee may be set up if the Heads of Delegation deem it advisable.

3 Programme of work

3.1 During the WTSC, the Heads of Delegation shall meet:

- a) to consider the proposals of the Committee on the ITU-T Work Programme and Organization concerning the work programme and the constitution of Study Groups in particular;
- b) to draw up proposals concerning the designation of Chairmen and Vice-Chairmen of Study Groups, and any other groups established by the WTSC (see Section 2).

3.2 The WTSC shall set up the committees listed in §§ 2.1 and 2.2 above. On the basis of the proposals by the Committee on the Work Programme and Organization of the ITU-T and the assessment of those proposals by the Heads of Delegation, it shall set up Study Groups and, where appropriate, other groups.

3.3 The programme of work of the WTSC shall be designed to provide adequate time for consideration of the important administrative and organizational aspects of the ITU-T. As a general rule, the following sequence of work is recommended:

3.4 The WTSC shall examine the reports of the Study Groups and the report of the Director of the TSB on activities in the previous study period. While the WTSC is in session, Study Group Chairmen shall make themselves available to the WTSC to supply information on matters which concern their Study Groups.

3.5 In those cases as indicated in Section 8, a WTSC may be asked to consider approval of one or more Recommendations. The report of any Study Group(s) proposing such action should include information on why the standard procedure is not being applied.

3.6 The WTSC shall receive and consider the reports of the Committees it has set up and take final decisions on the proposals submitted to it by those Committees.

3.7 The Committee on the Work Programme and Organization of the ITU-T shall meet to prepare proposals on the programme and organization of the work of the ITU-T. Specifically, it shall:

- a) review the Questions set for study or further study;
- b) allocate these Questions to Study Groups and other groups as appropriate;
- c) decide, when a Question, or a group of closely related Questions, concerns several Study Groups, whether:
 - to accept the recommendation of the TSAG,
 - to entrust the study to a single Study Group, or
 - adopt an alternative arrangement;
- d) produce a clear description of the general area of responsibility within which each Study Group may amend existing Recommendations, in collaboration with other groups, as appropriate;
- e) review, and adjust as necessary, the lists of Recommendations for which each Study Group is responsible.

3.8 The Budget Control Committee shall meet to approve the budget of the current WTSC and prepare a report proposing that the WTSC should approve an estimate of the financial needs of the ITU-T until the next WTSC, for subsequent submission to the ITU Council in accordance with Article 32 of the Convention (Geneva, 1992).

3.9 After considering the proposals made by the Heads of Delegation, the WTSC shall appoint the Chairmen and Vice-Chairmen¹⁾ of Study Groups, and the TSAG. See Article 20 of the Convention (Geneva, 1992) and § 1 of Section 3.

4 Voting

4.1 Any proposal (e.g. a draft Recommendation) put to the vote during a WTSC shall be considered as approved if it obtains a majority of votes: the minutes of the WTSC shall give the result of the vote without listing the delegations that voted for or against, unless a delegation expressly asks for its vote to be mentioned.

4.2 When a country is not represented by an Administration, the representatives of its recognized operating agencies shall be entitled jointly, whatever their number, to a single vote when authorized in writing by the relevant Administration according to No. 239 of the Convention.

¹⁾ Exceptionally, taking into account the needs of the Telecommunication Standardization Advisory Group to organize its work, the WTSC appointed at its meeting in Helsinki (March, 1993) one Vice-Chairman. The Telecommunication Standardization Advisory Group appointed any additional Vice-Chairmen, if appropriate, at its first meeting. Vice-Chairmen appointed by the Telecommunication Standardization Advisory Group will have the same status as a Vice-Chairman appointed by the WTSC.

SECTION 2

STUDY GROUPS AND OTHER GROUPS

1 Classification of Study Groups and other groups

1.1 The WTSC establishes Study Groups in order for each of them:

- a) to pursue the goals set down in a set of Questions related to a particular area of study in a task-oriented fashion;
- b) to review and, as necessary, to recommend amendment or deletion of existing Recommendations and definitions within its general area of responsibility (as defined by the WTSC), in collaboration with other groups as appropriate.

1.2 See Section 4 regarding role of the Telecommunication Standardization Advisory Group (TSAG), which functions in a manner analogous to a Study Group.

1.3 To facilitate their work, Study Groups may set up Working Parties, Joint Working Parties and Rapporteur groups to deal with some of the tasks assigned to them (see Section 3).

1.4 A Joint Working Party shall submit draft Recommendations to the Lead Study Group.

1.5 A Joint Coordination Group may be formed to coordinate work relating to more than one Study Group. Its primary role is to harmonize planned work effort in terms of subject matter, timeframes for meetings and publication goals (see Section 3).

1.6 A Regional Group may be established to deal with Questions and studies of particular interest to a group of countries and Administrations in an ITU region (e.g. the TAF Group).

1.7 A Study Group may be set up by the WTSC in order to carry out joint studies with the Radiocommunication Sector and prepare draft Recommendations on questions of common interest. The Telecommunication Standardization Sector shall be responsible for the management of this Study Group and approval of its Recommendations. The WTSC shall appoint the Chairman and Vice-Chairman of the Study Group²⁾, in consultation with the Radiocommunication Assembly as appropriate, and will receive the formal report of the work of the Study Group. A report for information may also be prepared for the Radiocommunication Assembly.

2 Meetings outside Geneva

2.1 Study Groups or Working Parties may meet outside Geneva if invited to do so by Administrations, and other duly authorized entities of countries that are Members of the Union and if the holding of a meeting outside Geneva is desirable (e.g. in association with symposiums or seminars). Such invitations shall be considered only if they are submitted to a WTSC or a ITU-T Study Group meeting and they shall be finally accepted after consultation with the Director and if they are compatible with the credits allocated to the ITU-T by the Council.

2.2 The invitations mentioned in § 2.1 above shall be issued and accepted and the corresponding meetings outside Geneva organized only if the conditions laid down in Resolution No. 4 of the Plenipotentiary Conference (Nice, 1989) and the ITU Administrative Council Decision No. 304 are met. These are appended to this Resolution.

2.3 Should an invitation be cancelled for any reason, it shall be proposed to Administrations that the meeting be convened in Geneva, in principle on the date originally planned.

²⁾ In special cases the WTSC may appoint the Chairman and request the Radiocommunication Assembly to appoint a Vice-Chairman.

3 Participation in meetings

3.1 Administrations and other duly authorized entities shall be represented, in the Study Groups and other Groups in whose work they wish to take part, by participants registered by name and chosen by them as experts qualified to investigate technically and economically satisfactory solutions to the Questions under study. Exceptionally, however, registration with a Study Group or other Group may be made without specifying the name of the participants concerned.

4 Frequency of meetings

4.1 Study Groups are required to meet to facilitate the approval of Recommendations under the terms of Section 8 of this Resolution. Such meetings shall only be held with the approval of the Director of the TSB, and with due consideration of the physical and budgetary capabilities of the ITU-T. To minimize the number of meetings required, every effort should be made to resolve questions by correspondence [No. 245 of the Convention (Geneva 1992).]

4.2 In the establishment of the work programme, the timetable of meetings must take into account the time required for participating bodies (Administrations and other duly authorized entities) to react and prepare Contributions. Meetings should not be held more frequently than is necessary to make effective progress and should take into account the TSB's capabilities to provide the necessary documentation. A meeting scheduled so that its separation from a preceding meeting, upon which it depends, is less than 6 to 8 months, may incur the possibility of full documentation not being available.

4.3 Meetings of Study Groups having common interests or dealing with problems possessing affinities should, if possible, be arranged so as to enable participating bodies to send one delegate or representative to cover several meetings. As far as possible, the arrangement chosen should enable the Study Groups meeting during the period to exchange any information they may require without delay. Furthermore, it should enable specialists from all over the world in the same or related subjects to have direct contacts with each other of benefit to their organizations. It should likewise enable the specialists concerned to avoid leaving their home countries too often.

4.4 The timetable of meetings shall be prepared and communicated to participating bodies well in advance (one year), to give time to study problems and submit Contributions within the prescribed time-limits and to give the TSB time to distribute the Contributions. In this way, Study Group Chairmen and delegates will be given the opportunity to consider the Contributions in advance, thus helping to make meetings more efficient and reduce their length.

4.5 Subject to physical and budgetary limitations, Study Groups should be encouraged to schedule interregnum meetings, including their Working Parties, Joint Working Parties or Rapporteur groups, to conduct ongoing activities within their mandate (§ 1.1 above) in the time period between their last meetings before the WTSC and the first meetings after the WTSC, in consultation with the Director of the TSB. Such ongoing activities shall be listed in the report of the last meeting before the WTSC.

5 Preparation of studies and meetings

5.1 At the beginning of each study period an organization proposal and an action plan for the study period shall be prepared by each Chairman with the help of the TSB. The plan should take into account any priorities and coordination arrangements, recommended by the TSAG or decided by the WTSC.

How the proposed action plan is implemented will depend upon the Contributions received from the members of the ITU-T and the view expressed by participants in the meetings.

5.2 A Collective-letter with an agenda of the meeting, a draft work plan and a listing of the Questions or proposals under the general areas of responsibility to be examined, shall be prepared by the TSB with the help of the Chairman.

The work plan should state which items are to be studied on each day, but it must be regarded as subject to change in the light of the rate at which work proceeds. Chairmen should try to follow it as far as possible.

This Collective-letter should be received by bodies participating in the activities of particular ITU-T Study Groups, as far as practicable, two months before the beginning of the meeting. The Collective-letter shall include a registration form for these bodies to indicate participation in the meeting. This registration form should be returned to the TSB so that it is received one month before the start of the meeting. The registration form should indicate the names of the expected participants. In the event that names cannot be provided, the expected number of participants should be indicated. Such information will facilitate the registration process and the timely preparation of registration materials. Individuals who attend the meeting without pre-registration may experience a delay in receiving their documents.

If the meeting in question has not been previously planned and scheduled or if an approval of Recommendations is intended to be initiated, a Circular should be received at least three months before the meeting.

5.3 If an insufficient number of Contributions or notification of delayed Contributions has been submitted, no meeting should be held. The decision whether to cancel a meeting or not shall be taken by the Director of the TSB, in agreement with the Chairman of the Study Group or Working Party concerned.

6 Conduct of meetings

6.1 The Chairman shall direct the debates during the meeting, with the assistance of the TSB.

6.2 The Chairman is authorized to decide that there shall be no discussion on Questions on which insufficient Contributions have been received.

6.3 Questions which have not elicited any Contribution should not be placed on the agenda of the meeting, and at the end of the study period should be deleted from the list of Questions to be studied.

6.4 Study Groups and Working Parties may set up working teams (which should be as small as possible and are subject to the normal rules of the Study Group or Working Party) during their meetings, to study Questions allocated to those Study Groups and Working Parties.

6.5 The meetings of regional tariff groups shall, in principle, be limited to delegates and representatives of Administrations and recognized operating agencies (for the definition of these terms see the Annex to the Constitution, Geneva 1992). However, each regional tariff group may invite other participants to attend all or part of a meeting.

6.6 There should be an established format for liaison statements between Study Groups and/or between Working Parties. This should include:

- the origin of the liaison documents;
- the level of approval (e.g. approved at the Study Group or Working Party level);
- the nature of information and the goal, for instance:
 - documents submitted for action,
 - documents submitted for comment,
 - documents for information, etc.,
 - requested date for response.

6.7 Liaison statements should be forwarded as soon after the meeting as possible. Copies of all liaison statements should be sent to the Chairman of the parent Working Party or Study Group for information.

6.8 For projects involving more than one Study Group, baseline documents may be prepared in order to provide the basis for coordinated study among the various Study Groups. The term “baseline document” refers to a document which contains the elements of common agreement at a given point in time.

7 Preparation of reports of Study Groups, Working Parties or Joint Working Parties, Recommendations and new Questions

7.1 A report on the work done during a meeting of a Study Group, Working Party or Joint Working Party shall be prepared by the TSB. Reports of meetings not attended by the TSB should be prepared under the responsibility of the Chairman of the meeting. This report should set out, in a condensed form, the results of the meeting and the agreements reached and should identify the points left to the next meeting for further study. The number of annexes to the report should be kept to a strict minimum by means of cross-references to contributions, reports, etc., and references to material in the documentation of a Study Group or Working Party. It would be desirable to have a concise summary of delayed contributions (or equivalent) considered by the meeting.

The report should consist of two parts:

Part I – Organization of work, references to and possible summary of contributions and/or documents issued during a meeting, main results, directive for future work, planned meetings of Working Parties, Sub-Working Parties and Rapporteur groups, and condensed liaison statements endorsed at the Study Group or Working Party level.

Part II – Draft Recommendations or modified Recommendations accepted by the meeting as mature.

7.2 To assist the TSB in this task, the Study Group or Working Party may arrange for delegates to draft some parts of the report. The TSB should coordinate this drafting work. If necessary, the meeting will set up an editorial group to improve the texts of draft Recommendations in the three working languages.

7.3 If possible, the report shall be submitted for approval before the end of the meeting; otherwise it shall be submitted to the Chairman of the meeting for approval.

7.4 When existing and already translated ITU-T texts have been used for some parts of the report, a copy of the report annotated with references to the original sources should also be sent to the TSB. If the report contains ITU-T figures, the ITU-T number should not be deleted even if the figure has been modified.

7.5 ITU-T participating bodies are authorized to transmit Study Group or Working Party reports and documents to any experts they consider it expedient to consult, except where the Study Group or Working Party concerned has specifically decided that its report, or a document, is to be treated as confidential.

7.6 The report of a Study Group's first meeting in the study period shall include a list of all the Rapporteurs appointed. This list shall be updated, as required, in subsequent reports.

8 Reports of Study Groups to the WTSC

8.1 All Study Groups shall meet sufficiently in advance of the WTSC for the report of each Study Group to the WTSC to reach Administrations at least one month before the WTSC.

8.2 The report of each Study Group to the WTSC is the responsibility of the Study Group Chairman, and shall include:

- a short but comprehensive summary of the results achieved in the study period by submitting a synoptic tabular summary of the replies to the Questions, indicating in particular which new and amended Recommendations have been prepared identifying the scope, the application and the importance of these Recommendations;
- reference to all new or revised Recommendations that have been approved by the Members during the study period;
- the final text of any new draft or revised Recommendations that are forwarded exceptionally for consideration by the WTSC;
- the list of new or revised Questions proposed for study.

SECTION 3

STUDY GROUP MANAGEMENT

1 Chairmen and Vice-Chairmen

1.1 These guidelines are provided to the Heads of Delegation in connection with the appointment of Chairmen and Vice-Chairmen at WTSCs and to Study Group Chairmen in connection with the selection of Working Party Chairmen.

1.2 Appointment of Chairmen and Vice-Chairmen should be primarily based upon proven competence both in technical content of the Study Group concerned, and the management skills required.

1.3 The mandate of the Vice-Chairman shall be to assist the Chairman in matters relating to the management of the Study Group including substitution for the Chairman at official ITU-T meetings or replacement of the Chairman should he or she be unable to continue with Study Group duties. Each Working Party Chairman provides technical and administrative leadership and should be recognized as having a role of equal importance to that of the Study Group Vice-Chairman.

1.4 Vice-Chairmen shall not be automatically selected as Working Party Chairmen but shall not be excluded from consideration along with other qualified members of the Study Group.

1.5 To the extent possible, and taking into account the need for proven competence, appointment or selection to the management team should utilize the resources of as broad a range of Member countries as possible.

1.6 In principle, a Working Party Chairman, on accepting this role, is expected to have the support necessary to fulfil his commitment throughout the study period.

2 Study Group Structure and Distribution of Work

2.1 Study Group Chairmen shall be responsible for the establishment of an appropriate structure for the distribution of the work, the selection of an appropriate team of Working Party Chairmen and shall take into account the advice provided by the members of the Study Group as well as the proven competence, both technical and managerial, of the candidates.

2.2 A Study Group may entrust a Question, a group of Questions or the maintenance of some existing Recommendations within its general area of responsibility to a Working Party.

2.3 Where the scope of the work is considerable, a Study Group may decide to further divide the tasks assigned to a Working Party to Sub-Working Parties.

2.4 Working Parties and Sub-Working Parties should be set up only after thorough consideration of the Questions. Proliferation of Working Parties, Sub-Working Parties or any other sub-groups should be avoided.

2.5 A Lead Study Group may exceptionally, by agreement with other relevant Study Group(s) and taking account of any advice from the TSAG and the Director, entrust a Joint Working Party with Questions or parts of Questions of common interest to the Study Groups concerned. The Lead Study Group shall coordinate and have responsibility for the work concerned. The contributions used as a basis for discussion in the Joint Working Party shall be sent exclusively to those registered in the Joint Working Party. Only the reports shall be sent to all participating bodies of the Study Groups concerned.

3 Joint Coordination Groups

3.1 When a broad subject is studied in more than one Study Group, it may require coordination of planned work effort in terms of subject matter, timeframes for meetings and publication goals. When such a broad study can profit

from such coordination, it may be accomplished by the establishment of a Joint Coordination Group in consultation with the TSAG. The work itself will be conducted in the relevant Study Groups and the results subject to the normal approval processes within each Study Group.

3.2 Any Study Group may propose a joint coordination effort, seek approval to act as the Lead Study Group and provide one of its Working Party Chairmen, or exceptionally, one of its Rapporteurs, as the Chairman of the Joint Coordination Group. Any Study Group may also propose that another Study Group take the Lead Study Group role with a liaison message to that Study Group copied to the Director of the TSB, the Chairman of TSAG and the Chairman of that Study Group.

3.3 The proposal to establish a Joint Coordination Group and take the responsibility of Lead Study Group should first be discussed informally among the relevant Chairmen to seek agreement, and then be approved by consensus at a meeting of the Study Group which proposes to take the lead. The TSAG should be so advised by such Study Group to permit the TSAG to monitor such work programme activities and carry out its advisory role.

3.4 The TSAG may also propose a Joint Coordination Group and recommend that a particular Study Group Chairman assume the lead.

3.5 A Joint Coordination Group shall also coordinate with bodies outside the ITU-T concerning the programme effort. Its Chairman, or someone the Chairman designates, shall act as the point of contact concerning the activities of the Joint Coordination Group to supplement this Resolution and Resolution No. 7 (WTSC, Helsinki 1993) as well as the A-Series Recommendations concerning cooperation and collaboration with other bodies. For subjects studied also in the Radiocommunication Sector, the JCG should invite and encourage participation by members of that Sector.

3.6 The role of a Joint Coordination Group does not confer any authority upon its members not already provided by the Study Groups involved. A Joint Coordination Group may in exceptional circumstances recommend to the TSAG the reallocation of relevant Questions for involved Study Groups. The decision to make such a recommendation shall be approved by consensus at a Joint Coordination Group meeting to which the relevant Study Group Chairmen must be invited.

4 The roles of Rapporteurs

4.1 The Chairmen of Study Groups and Working Parties (including Joint Working Parties) are encouraged to make most effective use of the limited resources available by delegating responsibility to Rapporteurs for the detailed study of individual Questions or small groups of related Questions, parts of Questions, terminology, or amendment of existing Recommendations. Review and approval of the results resides with the Study Group or Working Party.

4.2 Liaison between ITU-T Study Groups or with other organizations can be facilitated by the Rapporteurs or by the appointment of Liaison Rapporteurs;

4.3 The following guidelines should be used as a basis within each Study Group or Working Party to define the roles of Rapporteurs, Associate Rapporteurs and Liaison Rapporteurs; however, they may be adjusted following careful deliberation of the need for change and with the approval of the relevant Study Group or Working Party.

4.3.1 Specific persons should be appointed as Rapporteurs to be responsible for progressing the study of those Questions, or specific study topics, that are felt to be likely to benefit from such appointments. The same person may be appointed as the Rapporteur for more than one Question, or topic, particularly if the Questions, parts of Questions, terminology, or amendment of existing Recommendations concerned are closely related.

4.3.2 Rapporteurs may be appointed (and their appointments may be terminated) at any time with the agreement of the competent Working Party, or of the Study Group, where the Question(s) are not allocated to a Working Party. The term of the appointment relates to the work needing to be done rather than to the interval between WTSCs.

4.3.3 Where the work requires it, a Rapporteur may propose the appointment of one or more Associate Rapporteurs or Liaison Rapporteurs, whose appointments should then be endorsed by the relevant Working Party (or Study Group). Again these appointments may be made or terminated at any time in accordance with the work requirements. An Associate Rapporteur assists the Rapporteur, either in general or to deal with a particular point or area of study in a Question. A Liaison Rapporteur assists the Rapporteur by ensuring there is effective liaison with other groups, by attending meetings of other designated groups to advise and assist in an official capacity, by correspondence with such groups or by any other means considered appropriate by the Rapporteur. In the event that a Liaison Rapporteur is not appointed, the responsibility to ensure effective liaison resides with the Rapporteur.

4.3.4 Rapporteurs, and their Associate and Liaison Rapporteurs, play an indispensable role in coordinating increasingly detailed and often highly technical study. Consequently, their appointment should be primarily based on their expertise in the subject to be studied.

4.3.5 As a general principle, work by correspondence (including electronic messaging and telephone communications) is preferred and the number of experts' meetings should be kept to a strict minimum, consistent with the scale and milestones agreed by the parent group. Where possible, experts' group meetings in related areas of study or within a work area being managed by a JCG, should be coordinated. In any case this work should proceed in a continuous fashion between meetings of the parent group.

4.3.6 The Rapporteur's responsibilities are:

- to coordinate the detailed study in accordance with guidelines established at Working Party (or Study Group) level;
- to the extent authorized by the Study Group, to act as a contact point and source of expertise for the allocated study topic with other ITU-T and Radiocommunication Sector Study Groups, other Rapporteurs, other international organizations and other standards organizations (where appropriate) and the TSB;
- to adopt methods of work (correspondence including the use of the TSB EDH system, meetings of experts, etc.) as considered appropriate for the task;
- in consultation with the collaborators for the study topic, to establish a work programme, which should be approved and reviewed periodically by the parent group and which lists the tasks to be done, the results anticipated (e.g. titles of possible draft Recommendations), liaison required with other groups and specific milestones, including proposed meetings, for each stage of the work to be completed (see Appendix I for model format);
- to ensure that the parent Working Party (or Study Group) is kept well informed of the progress of the study, particularly of work proceeding by correspondence or otherwise outside of the normal Study Group and Working Party meetings;
- in particular, to submit a progress report to each of the parent group's meetings (see suggested format in Appendix II), where possible this report should be submitted as a white contribution when substantial progress has been made and where draft new or revised Recommendations are concerned; however, where little or no progress has been made, or the relative timing of meetings requires it, the report may take the form of a temporary document available on the first day of the meeting;
- to give the parent Working Party or Study Group and the TSB adequate advance notice of the intention to hold any meetings of experts (see § 4.3.10 below) particularly where such meetings are not included in the original programme of work;
- to establish a group of active "collaborators" from the Working Party (or Study Group) where appropriate, with an updated list of those collaborators being given to the TSB at each Working Party meeting;
- to delegate the relevant functions from the list above to Associate Rapporteurs and/or Liaison Rapporteurs as necessary.

4.3.7 The basic goal of each Rapporteur is to assist the Study Group or Working Party in developing new and revised Recommendations to meet changing requirements in telecommunication techniques and services. However, it must be clearly understood that Rapporteurs should not feel under any obligation to produce such texts unless a thorough study of the Question reveals a clear need for them. If it turns out that this is not the case, the work should be concluded with a simple report to the parent group establishing that fact.

4.3.8 Rapporteurs are responsible for the quality of their texts, submitted by the Study Group for publication. They shall be involved in the final review of that text prior to it being submitted to the publication process. This responsibility extends only to text in the original language and should take into account applicable time constraints. (See Resolution on Publication of ITU-T Recommendations.)

4.3.9 Rapporteurs should normally base any draft new or substantially revised Recommendations on written contribution(s) from ITU-T members.

4.3.10 In conjunction with their work planning, Rapporteurs must give advance notice of any expert meetings they arrange, not only to the collaborators on their Question or project, but also to the Study Group (see § 4.3.11). The TSB is not required to circulate convening letters for meetings below Working Party level.

4.3.11 The intention to hold expert meetings should be agreed in principle and publicized with as much notice as possible (normally at least two months) at Study Group or Working Party meetings (for inclusion in their reports) and via the TIES system, for example. Confirmation of the date and place of any experts' meeting should be provided to the collaborators (and any other ITU-T members who have indicated an interest in attending or submitting a contribution to the meeting), to the relevant Working Party Chairman and to the TSB at least three weeks prior to the meeting.

4.3.12 Rapporteur meetings as such, should not be held during Working Party or Study Group meetings. However, Rapporteurs may be called upon to chair those portions of Working Party or Study Group meetings that deal with their particular area of expertise. In these cases Rapporteurs must recognize that the rules of the Working Party and Study Group meetings then apply and the more relaxed rules described above, particularly those that relate to document approvals and submission deadlines, would not apply.

4.3.13 The parent Working Party (or Study Group) must define clear terms of reference for each Rapporteur. The general direction to be followed in the study should be discussed, reviewed as necessary and agreed periodically by the parent group.

APPENDIX I

(to Resolution No. 1, Section 3)

Rapporteur proposed work programme format

The following format is recommended for a work programme proposed by a Rapporteur in accordance with § 4.3.6, Section 3.

- A. List parent group and known scheduled meeting dates of parent group
- B. Starting point and goal including references to existing documents
- C. Anticipated results in terms of possible draft new or revised Recommendations (List titles or provide descriptions)
- D. Specific tasks involved and milestone schedules
- E. Liaison required with other groups and schedules for transmitting liaisons and receiving replies
- F. Proposed rapporteur meetings, if any, for each stage of the work to be completed

APPENDIX II

(to Resolution No. 1, Section 3)

Rapporteur Progress Report format

The following format is recommended for the Progress Reports of Rapporteurs to enable a maximum transfer of information to all concerned:

- A. Brief summary of contents of report
- B. Conclusions or Recommendations sought to be endorsed
- C. Status of work with reference to work plan including baseline document if available
- D. Draft new or draft revised Recommendations
- E. Draft liaison in response to or requesting action by other Study Groups or organizations
- F. Reference to normal or delayed Contributions considered part of assigned study
- G. Reference to submissions attributed to collaborators of other organizations
- H. Major issues remaining for resolution and draft agenda of future approved meeting, if any
- I. List of attendees at all meeting held since last progress report

Note – A Progress Report shall not be used as a vehicle to violate the rules concerning the submission of contributions that are inappropriate to the assigned study task.

SECTION 4

TELECOMMUNICATION STANDARDIZATION ADVISORY GROUP

1 The Telecommunication Standardization Advisory Group is open to all Administrations, and other duly authorized entities participating in the work of the ITU-T. Its principal duties are to review priorities and strategies for activities in the Telecommunication Standardization Sector, to review progress in the implementation of its work programme, provide guidelines for the work of the Study Groups and to recommend measures, inter alia, to foster cooperation and coordination with other standards bodies, within its own Sector and with the Radiocommunication and Development Sectors and with the Strategic Planning Unit in the General Secretariat.

2 This Group will identify changing requirements and provide advice on appropriate changes to be made to the priority of work in ITU-T Study Groups, planning, and allocation of work between Study Groups, giving due regard to the cost and availability of resources within the Bureau and the Study Groups. The Group will monitor the activities of the JCGs and may also recommend their establishment, if appropriate. The Group may also advise on further improvements to the working methods of the Telecommunication Standardization Sector.

3 The Group will be composed of representatives of Administrations, entities and organizations authorized in accordance with the provisions of Article 19 of the Convention (Geneva, 1992), and, as ex-officio members, the Study Group Chairmen or their designated representatives and the Director of the Telecommunication Standardization Bureau.

4 Taking into account its advisory function, the Telecommunication Standardization Advisory Group will have no formal authority. The Study Group Chairmen provide for the action required within their Study Groups or Joint Coordination Groups and the Director provides the necessary liaison between the ITU-T and other sectors and the General Secretariat of the ITU or other standards bodies.

5 The Group holds regular scheduled meetings, included on the ITU-T timetable of meetings and announced in accordance with § 4 of Section 2 of this Resolution. The meetings should take place as necessary, but at least once a year. In principle, the meetings should be scheduled to enable joint meetings with the Advisory Group of the Radiocommunication Sector, as required³⁾.

6 In the interest of minimizing the length and costs of the meetings, the Chairman of the Group should collaborate with the Director of the TSB in making appropriate advance preparation, for example by identifying the major issues for discussion.

7 In general, the same rules of procedure as for Study Groups in this Resolution should apply to this Group and its meetings, for example, for submission of contributions.

8 The Group shall prepare a report of its activities after each meeting to be distributed in accordance with normal ITU-T procedures, and a report at its last meeting prior to the WTSC for its use. The report to the WTSC should summarize the Group's activities and offer advice on allocation of work and relations with other relevant bodies inside and outside the ITU, as appropriate.

SECTION 5

DUTIES OF THE DIRECTOR

1 The Director shall take the necessary preparatory measures for meetings of the WTSC, Study Groups and other groups, and coordinate their work so that the meetings produce the best results in the shortest possible time. The Director shall fix, by agreement with the TSAG and Study Group Chairmen, the dates and programmes of TSAG, Study Group and Working Party meetings and shall group these meetings in time according to the nature of the work and the availability of the TSB. Joint meetings of the TSAG and the Advisory Group of the Radiocommunication Sector should be scheduled as required.

2 In his estimate of the financial needs of the ITU-T until the next WTSC, the Director shall communicate to the WTSC (for information) a summary of the accounts for the years which have elapsed since the preceding WTSC and the estimated expenses of the ITU-T to cover the latter's financial requirements until the next WTSC.

The estimated expenses of the ITU-T shall first be submitted for preliminary examination to the Budget Control Committee of the WTSC; whose Chairman shall prepare a report on the subject for the WTSC. After approval, the estimated expenses of the ITU-T shall be sent by the Director of the TSB to the Secretary-General of the Union, for submission to the Council.

3 The Director shall communicate to the Secretary-General, for inclusion in the annual budgetary estimates of the Union to be submitted to the Council, the estimate expenses of the ITU-T for the following year, on the basis of the estimate of financial needs approved by the WTSC.

4 The Director of the TSB shall submit for preliminary examination by the Budget Control Committee and thereafter for approval by the WTSC, the accounts for expenditure incurred for the current WTSC.

5 The Director shall submit to the WTSC a consolidated report on the proposals that have been received from the TSAG concerning the organization, terms of reference and work programme of Study Groups and other groups for the next study period; he may give his views on these proposals if he so desires (see Section 4).

6 In addition, the Director may, within the limits imposed by the Convention, submit to the WTSC any report or proposal which would help to improve the work of the ITU-T, so that the WTSC may decide what action to take. In particular, the Director shall submit to the WTSC such proposals concerning the organization and terms of reference of the Study Groups for the next study period as may be considered necessary.

³⁾ The Director and the Study Group Chairmen may use the opportunity of these meetings to consider any appropriate measure related to activities described in § 4 above.

7 The Director may request assistance from the Study Group and TSAG Chairmen regarding proposals for potential candidates for Study Group and TSAG Chairmen and Vice-Chairmen, for consideration by the Heads of Delegations.

8 After the close of the WTSC, the Director shall supply Administrations and other duly authorized entities taking part in the activities of the ITU-T with a list of the Study Groups and other groups set up by the WTSC, indicating the general areas of responsibility and the Questions that have been referred to the various Groups for study and asking them to advise him of the Study Groups or other groups in which they wish to take part.

Furthermore, he shall supply the international organizations with a list of the Study Groups and other groups set up by the WTSC, asking them to advise him of the Study Groups or other groups in which they wish to participate in an advisory capacity.

9 Administrations and other participating organizations are requested to supply these particulars after each WTSC as soon as possible and not later than two months after they have received the circular of the Director of the TSB, and to update them regularly.

10 In the interval between WTSCs, when circumstances so demand, the Director is authorized to take exceptional measures to ensure the efficiency of work of the ITU-T within the limits of the credits available.

11 The Director of the TSB in conjunction with the Chairman appointed by the WTSC shall convene periodic meetings of the Telecommunication Standardization Advisory Group, as necessary but at least once a year (see Section 4).

SECTION 6

SUBMISSION AND PROCESSING OF CONTRIBUTIONS

1 Submission of Contributions

1.1 Administrations and other duly authorized entities registered with a Study Group or other Group and the Chairmen and Vice-Chairmen of Study Groups and Working Parties should submit their Contributions to current studies to the Director of the TSB.

1.2 These Contributions shall contain comments or results of experiments and proposals designed to further the studies to which they relate.

2 Processing of Contributions

2.1 Contributions received at least two months before a meeting shall be published in the normal way and the abstracts posted on the appropriate EDH bulletin board. As far as possible, the Director shall group the Contributions received Question by Question, have the necessary translations made and send them to participants in the working language they desire, before the date laid down for the opening of the Study Group or Working Party meeting which has the Question or Recommendation concerned on its agenda.

2.2 If a Chairman, in agreement with the participants of his Study Group (or Working Party), states that his Study Group (or Working Party) is willing to use documents in the original working language, the Director shall send out the documents, grouped as specified in § 2.1 above, without having them translated.

2.3 Contributions received by the Director less than two months but not less than seven working days before the date set for the opening of a meeting cannot be handled under the procedure outlined in § 2.1 above and shall be published as "Delayed Contributions" in the form in which they are received, in their original language only and (where applicable) in the second working language into which they have been translated by the sender. They shall be distributed at the beginning of the meeting only to the concerned participants present. If these delayed contributions contain draft amendments to Recommendations or draft new Recommendations, and if they are received by the Director one month before the date of the meeting, they shall be translated for distribution at the beginning of the meeting.

The abstracts shall also be posted on the appropriate EDH bulletin board.

2.4 Draft Recommendations submitted within this period of time will be translated into working languages. As far as possible, participating bodies should advise the TSB about any forthcoming "Delayed Contribution" and its contents, at least two months before the meeting.

2.5 Delayed Contributions should be available from the TSB at least one full working day before the meeting.

2.6 Contributions received by the Director less than seven working days before the meeting will not appear on the agenda of the meeting, will not be distributed and will be held for the next meeting. Contributions judged to be of extreme importance may be admitted by the Director at shorter notice.

2.7 The Director of the TSB should insist that participating bodies follow the rules established for the presentation, form and timing of documents, set out in Recommendation A.1. A reminder Circular should be sent out by the Director whenever appropriate.

2.8 The Director of the TSB, with the agreement of the Study Group Chairman, may return to the contributor any document which does not comply with the general directives set out in Recommendation A.1, so that it may be brought into line with those directives.

2.9 The TSB shall not reissue delayed Contributions as normal Contributions, unless otherwise decided by the Study Group or Working Party in cases of special interest and importance. Normal or Delayed Contributions shall not be included in reports as annexes.

2.10 Some Contributions of general (and not merely incidental) interest which may, for example, be of some scientific importance (measurement results), although received too late to be distributed before a meeting and therefore issued as delayed Contributions, might exceptionally be distributed later as Contributions.

2.11 Contributions should, as far as possible, be submitted to a single Study Group. If, however, a participating body submits a Contribution which it believes is of interest to several Study Groups, it should identify both the Study Group primarily concerned and a single sheet giving the title of the Contribution, its source and a summary of its contents will be issued to the other Study Groups. This single sheet will be numbered in the series of Contributions of each Study Group to which it is issued.

2.12 Contributions addressed to interregnum meetings of Study Groups or Working Parties shall be treated in all aspects as those for normal meetings.

3 Temporary Documents

3.1 Extracts from reports of other Study Group meetings or from reports of Chairmen, Rapporteurs or Drafting Groups received less than two months before the meeting shall be published as Temporary Documents and distributed during the meeting to participants.

3.2 Temporary documents containing extracts from reports of other Study Group or Working Party meetings shall not be reissued by the TSB as normal Contributions, since they have usually served their purpose at the meeting and some relevant parts may already have been included in the report of the meeting.

SECTION 7

DEVELOPMENT AND APPROVAL OF QUESTIONS

1 Development of Questions

1.1 Administrations, and other duly authorized entities, shall submit proposed Questions at least two months before the Study Group meeting which will consider the Question(s).

1.2 Each proposed Question should be formulated in terms of specific task objective(s) and shall be accompanied by appropriate information as contained in Appendix I. Appendix I when completed would clearly justify the reasons proposing the Question and indicate the degree of urgency, while taking into account the relationship of the work of other Study Groups and standardization bodies.

- 1.3 The TSB shall circulate the forms received proposing the Questions to the members of the Study Group(s) concerned so as to be received at least one month before the Study Group meeting which will consider the Question(s).
- 1.4 New or revised Questions may also be proposed by a Study Group itself during a meeting.
- 1.5 Each Study Group shall consider the proposed Questions to determine:
- i) the clear purpose of each proposed Question;
 - ii) the priority, urgency and type of new Recommendation(s) desired, or changes to existing Recommendations resulting from the study of the Questions;
 - iii) that there be as little overlap of work as possible between the proposed Questions both within the Study Group concerned and with Questions of other Study Groups and the work of other standardization bodies.
- 1.6 Agreement by a Study Group to submit proposed Questions for approval is achieved by reaching consensus among the members present that the above criteria have been satisfied.
- 1.7 The Telecommunication Standardization Advisory Group (TSAG) shall be made aware of all proposed Questions, in order to allow that Group to consider the possible implications on the work of all ITU-T Study Groups or other groups. In collaboration with the author(s) of proposed Question(s), the Group considers, reviews and, if appropriate, may recommend changes to these Question(s), taking into account the criteria in § 1.5 above.
- 1.8 The opportunity for review by the TSAG of the Questions prior to approval by Members may be dispensed with only where urgent approval of the proposed Question is justified in the opinion of the Director of the TSB, after consulting the Chairman of the TSAG and the Chairman of any other Study Groups where overlay or liaison problems could arise.
- 1.9 In summary, there are three possible methods of developing a draft Question for approval by the Members for inclusion in the work programmes of the ITU-T:
- a) processing through a Study Group and the TSAG;
 - b) as in a) plus consideration in the relevant Committee of the WTSC, when the Study Group meeting is its last prior to a WTSC;
 - c) processing through a Study Group only, where urgent treatment is justified.
- 1.10 If, despite the above provisions, a Member proposes a Question directly to a WTSC, the Member should be invited to submit the proposal to the next meeting of the TSAG to allow time for its thorough examination.
- 1.11 In order to allow for the specific characteristics of the developing countries, the Telecommunication Standardization Bureau must take account of the relevant provisions of APP-92 Resolution 10 in responding to any request submitted by the developing countries through the BDT, particularly with regard to matters connected with training, information, the examination of questions which are not covered by the Development Study Groups and the technical assistance required for the examination of certain question by the Development Study Groups.
- ## 2 Approval of Questions by the WTSC
- 2.1 At least two months before the WTSC, the TSAG shall meet to consider, review and, where appropriate, recommend changes to these Questions for the WTSC's consideration, while ensuring that the Questions respond to the overall needs and priorities of the ITU-T work programme and are duly harmonized to:
- i) avoid duplication of effort;
 - ii) provide a coherent basis for interaction between Study Groups;
 - iii) facilitate the monitoring of overall progress in the drafting of Recommendations;
 - iv) facilitate cooperative efforts with other standardization organizations.

2.2 At least one month before the WTSC, the Director of the TSB will inform the members of the list of proposed Questions, as agreed by the TSAG.

3 Approval of proposed Questions between WTSCs

3.1 Between WTSCs, the periodic meetings of the TSAG will review the work programme of the ITU-T and recommend revisions as necessary.

3.2 In particular the TSAG will consider any new and revised Questions proposed by the Study Groups after the following steps:

- i) Administrations, and other duly authorized entities shall submit proposed Questions to the Study Group concerned for consideration.
- ii) Each proposed Question shall be accompanied by appropriate information as contained in Appendix I which will justify the reasons proposing this Question, and indicate the degree of urgency, while taking into full account the relationship of the work of other Study Groups and standardization bodies.
- iii) Agreement by a Study Group to submit proposed Questions for approval is achieved by reaching consensus among the members present, that the criteria as contained in § 1.5 have been satisfied.
- iv) Determine whether a proposed new or revised Question is in line with the mandate of the Study Group assigned by the WTSC.

3.3 The Director of the TSB shall request Members to notify him within two months whether they approve or do not approve the proposed new or revised Question.

3.4 The proposed Question shall be adopted, and have the same status as Questions approved at a WTSC if:

- a simple majority of all the Member respondents are in agreement;
- and at least ten replies are received.

3.5 The Director of the TSB shall notify the results of the consultation by Circular-Letter.

APPENDIX I

(to Resolution No. 1, Section 7)

Information for submission of a Question

- Source
- Short title
- Type of Question or proposal⁴⁾
- Reasons or experience motivating the proposed Question or proposal
- Draft text of Question or proposal
- Specific task objective(s) with expected time frames for completion
- Relationship of this study activity to other:
 - Recommendations
 - Questions
 - Study Groups
 - Relevant standardization bodies.

⁴⁾ Background Question, task oriented Question designed to lead to a Recommendation, proposal for a new manual, revised manual, etc.

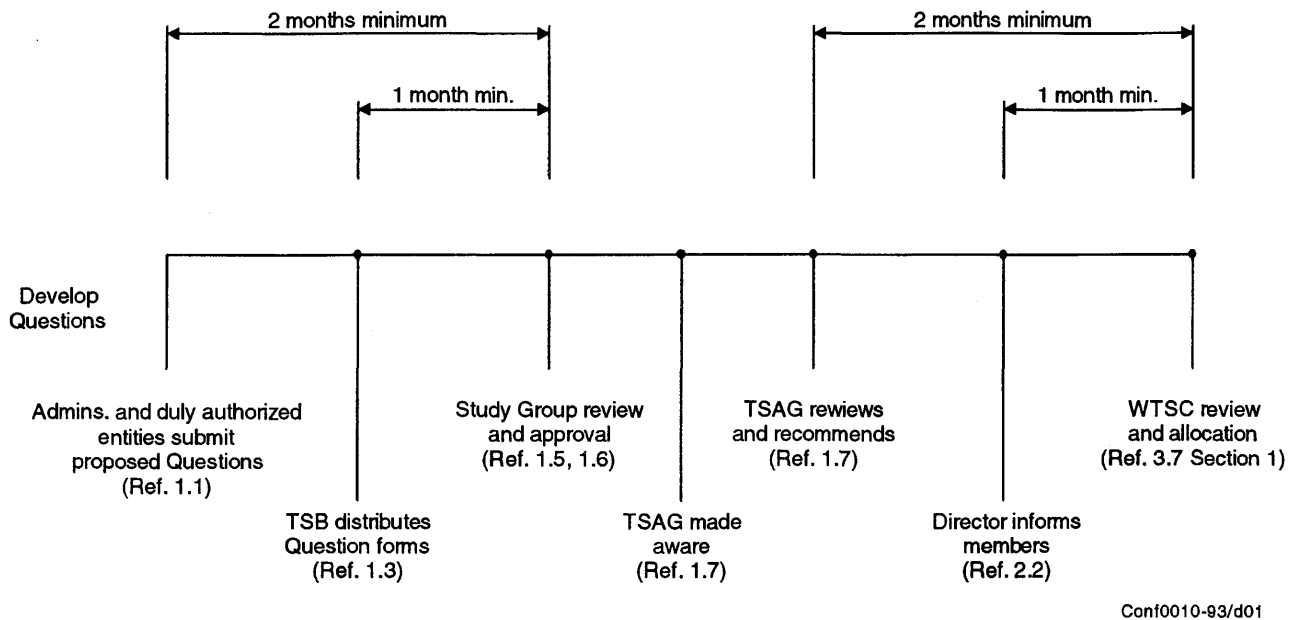


FIGURE 1a
Approval of Questions at WTSC

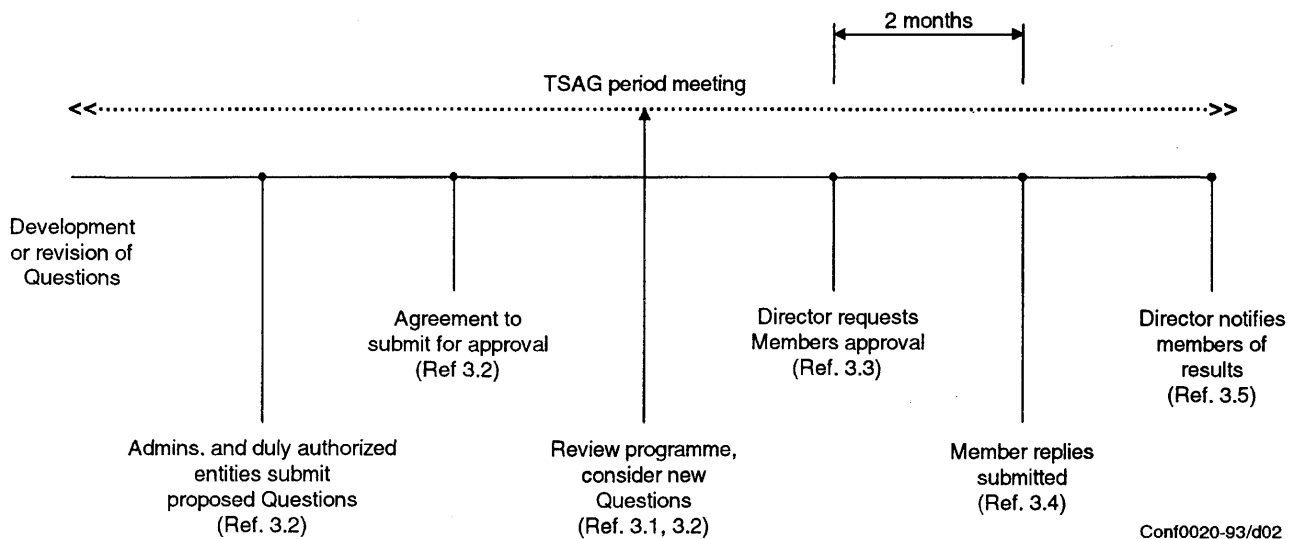


FIGURE 1b
Approval of Questions between WTSCs

SECTION 8

APPROVAL OF NEW AND REVISED RECOMMENDATIONS

1 General

Approval of new or revised Recommendations shall normally be sought by consultation of the Members. Approval may also be sought at a WTSC. In accordance with the Convention, the status of Recommendations approved is the same for both methods of approval.

2 Process

2.1 Study Groups should decide that the process described below be applied for seeking the approval of all draft new and revised Recommendations as soon as they have been developed to a mature state. Although not explicitly mentioned below, this procedure may also be used for the deletion of existing Recommendations. See Figure 1 for the sequence of events.

2.2 Cases where approval of new or revised Recommendations should be deferred for consideration at a WTSC are:

- a) for Recommendations of an administrative nature concerning the ITU-T as a whole (primarily in the A-Series);
- b) where the Study Group concerned considers it desirable that the WTSC itself should debate and resolve particularly difficult or delicate issues;
- c) where attempts to gain agreement within the Study Groups have failed due to non-technical issues such as differing views on policy.

3 Prerequisites

3.1 Upon request of the Study Group Chairman the Director of the TSB shall explicitly announce the intention to initiate the approval procedure set out in this Resolution when convening the meeting of the Study Group. Such request shall be based upon a determination at a Study Group or Working Party meeting, or exceptionally, at a WTSC, that work on a draft Recommendation is sufficiently mature for such action. The Director shall include the specific intent of the proposal in summarized form. Reference shall be provided to the report or other documents where the text of the draft new or revised Recommendation to be considered may be found. This information shall also be distributed to all members.

3.2 Study Groups are encouraged to establish an editing group in each Study Group to review the texts of new and revised Recommendations for suitability in each of the working languages.

3.3 The text of the draft new or revised Recommendation must be available to the TSB in a final edited form in at least one of the working languages at the time that the Director makes the announcement of the intended application of the approval procedure set out in this Resolution. A summary that reflects the final edited form of the draft Recommendation must also be provided to the TSB in accordance with § 3.4 below. The invitation to the meeting, together with the summary of the draft new or revised Recommendation, announcing the intended application of this approval procedure, should be sent by the Director of the TSB to all members so as to be received in the normal course of delivery, at least three months before the meeting. The invitation and the enclosed summary shall be distributed according to normal procedures which include the use of the appropriate working languages.

3.4 Such a summary shall be prepared in accordance with Recommendation A.15. This summary is a brief outline of the purpose and content of the new or revised draft Recommendation and, when appropriate, the intent of the revisions. No Recommendation shall be considered as complete and ready for approval without this summary statement.

3.5 The text of the draft new or revised Recommendation must have been distributed in the working languages at least one month before the announced meeting.

3.6 Approval may only be sought for a draft new or revised Recommendation, within the Study Group's mandate as defined by the Questions allocated to it, in accordance with Article 14, No. 192 of the Convention (Geneva, 1992). Alternatively, or additionally, approval may be sought for amendment of an existing Recommendation within the Study Group's responsibility and mandate.

3.7 Where a draft Recommendation (or revision) falls within the mandate of more than one Study Group, the Chairman of the Study Group proposing the approval should consult and take into account the views of any other Study Group Chairmen concerned before proceeding with the application of this approval procedure.

3.8 In the interests of stability, once a new or revised Recommendation has been approved, approval should not normally be sought within a reasonable period of time for any further amendment of that new text or that revised portion respectively, unless the proposed amendment complements rather than changes the agreement reached in the previous approval process or a significant error or omission is discovered. As a guideline, in this context "a reasonable period of time" would be at least two years in most cases.

3.9 Any Members considering themselves to be adversely affected by a Recommendation approved in the course of a study period may refer their case to the Director of the TSB, who shall submit it to the relevant Study Group for prompt attention.

3.10 The Director of the TSB shall inform the next competent conference of all cases notified in conformity with § 3.9 above.

4 Procedure at Study Group meetings

4.1 The Study Group should review the text of the draft new or revised Recommendation as referred to in § 3.1 and § 3.3 above. The meeting may then accept any editorial corrections or other amendments not affecting the substance of the Recommendation. The Study Group should assess the summary statement referred to in § 3.4 in terms of its completeness and ability to concisely convey the intent of the draft new or revised Recommendation to a telecommunications expert who has not participated in the Study Group work.

4.2 Technical and editorial changes may only be made during the meeting as a consequence of written contributions or liaison statements. Where proposals for such revisions are found to be justified but to have a major impact on the intent of the Recommendation or to depart from points of principle agreed at the previous Study Group or Working Party meeting, consideration of approval by the Members should be deferred to another meeting. However, the approval procedure may still be applied if the Chairman of the Study Group, in consultation with the TSB, consider:

- that the proposed changes are reasonable (in the context of the advice issued under § 3.1 above) for those administrations not represented at the meeting, or not represented adequately under the changed circumstances; and
- that the proposed revised text is stable.

4.3 After debate at the Study Group's meeting the decision of the delegations to apply this approval procedure must be unopposed (but see §§ 4.4 regarding reservations, 4.5, 4.6). See Article 19 of the Convention approved at Geneva, 1992, paragraph 239.

4.4 In cases where a delegation does not elect to oppose approval of a text, but would like to register a degree of reservation on one or more aspects, this shall be noted in the report of the meeting. Such reservations shall be mentioned in a concise note appended to the text of the Recommendation concerned.

4.5 A decision must be reached during the meeting upon the basis of a text available in its final form to all participants at the meeting. Exceptionally, but only during the meeting, a delegation may request more time to consider its position. Unless the Director of the TSB is advised of formal opposition from any such delegation's Administration within a period of six weeks starting from the date of that delegation's request for more time, he or she shall proceed in accordance with § 5.1.

4.6 A delegation may advise at the meeting that it is abstaining from the decision to apply the procedure. This delegation's presence shall then be ignored for the purposes of § 4.3 above. Such an abstention may subsequently be revoked, but only during the course of the meeting.

5 Consultation

5.1 As soon as possible following the decision of a Study Group to seek approval, and within a time period not to exceed six weeks, the Director of the Telecommunication Standardization Bureau shall request Members to inform him or her within three months whether they approve or do not approve the proposal. This request shall contain the summary referred to in § 3.4 above, updated if necessary, and be accompanied by reference to the complete final text in the three working languages of the proposed new or revised Recommendation. The request shall also identify the number of Members which did not oppose the decision to proceed with the approval process at the Study Group meeting.

5.2 The Director of the Telecommunication Standardization Bureau shall advise the Directors of the other two Bureaux, as well as recognized operating agencies, scientific or industrial organizations and international organizations participating in the work of the Study Group in question, that Members are being asked to respond to a consultation on a proposed new or revised Recommendation. Only Members are entitled to respond.

5.3 If 70% or more of the replies from Members indicate approval, the proposal shall be accepted.

5.4 If the proposal is not accepted it shall be referred back to the Study Group. Subject only to further consideration in the Study Group, the proposal may be submitted again for approval.

5.5 Those Members which indicate disapproval are requested to advise their reasons and to indicate the possible changes that would facilitate further consideration and future approval of the draft new or revised Recommendation.

6 Notification

6.1 Within four weeks of the closing date for Members to respond to the consultation, the Director of the TSB shall notify whether the text is approved or not by Circular-Letter. The Director of the TSB shall arrange that this information is also included in the next available ITU Notification.

6.2 Should minor, purely editorial amendments or correction of evident oversights or inconsistencies in the text as presented for approval be necessary, the TSB may correct these with the approval of the Chairman of the Study Group.

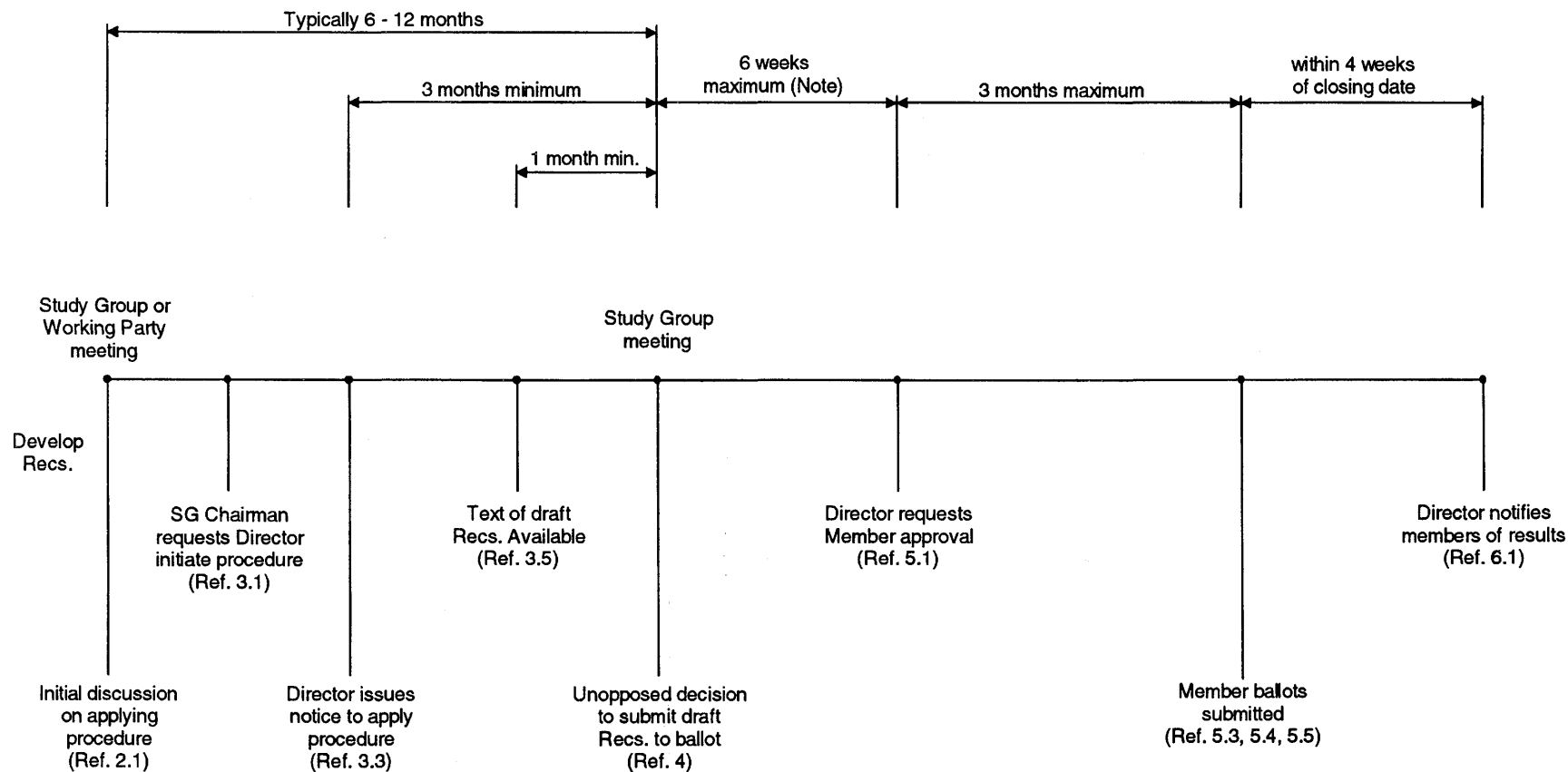
6.3 Any comments received along with responses to the consultation shall be collected by the TSB and submitted to the next meeting of the Study Group or to the relevant Working Party or Rapporteur for consideration.

6.4 The Secretary-General shall publish the approved new or revised Recommendations in the working languages as soon as practicable, indicating, as necessary, a date of entry into effect. However, in accordance with WTSC-93 Resolution No. 3 minor amendments may be covered by corrigenda rather than a complete reissue. Also, where appropriate, texts may be grouped to suit market needs.

6.5 See also Resolution No. 3 concerning the publication of lists of new and revised Recommendations.

Note 1 – For the purpose of this Section, use of the term “Member” should not be read as having any implications for the customary practice of each country in dealing with ITU-T matters. It should be further noted that Article 17 of the Geneva Constitution 1992, Nos. 110 and 111, states that Administrations of all Members of the Union are, of right, members of the ITU-T.

Note 2 – A Regional Tariff Group shall decide on its own to apply this procedure. The Chairman of Study Group 3 shall be informed of the decision to apply this approval procedure and Study Group 3 at its next Plenary Meeting will examine in broad terms, the draft Recommendation. If there is no objection as regards principles and methodology, the procedure shall be initiated. Only the Regional Tariff Group member countries will be consulted by the Director of the TSB for the approval of the draft Recommendation concerned.



Conf0030-93/d03

Note – Exceptionnally, an additional period of up to 6 weeks would be added if a delegation requested more time under § 4.5.

FIGURE 1
Approval of new and revised Recommendations - Sequence of events

RESOLUTION No. 2

Study Group Responsibility and Mandates

(Helsinki, 1993)

The WTSC,

considering

that the mandate for each study group needs to be clearly defined to avoid duplication of effort between study groups and to ensure the coherence of the overall ITU-T work programme,

decides

- (1) that the general areas of responsibility of the study groups shall be as defined in Annex A;
- (2) that the mandate of each study group, which it shall use as the basis for organizing its study programme, shall consist of:
 - a set of Questions related to particular areas of study, which are compatible with the general area of responsibility and which should be results-oriented (refer to Section 7 of Resolution No. 1);
 - a general area of responsibility (see Annex A) within which the study group may amend existing Recommendations, in collaboration with other groups, as appropriate.

ANNEX A

(to Resolution No. 2)

Post-1992 Study Groups and general areas of responsibility

Study Group 1 – Service definition

Responsible for studies relating to service definitions, service operation, principles of service interworking, user quality of service (QoS) and human factors.

Study Group 2 – Network operation

Responsible for studies relating to network operations including routing, numbering, network management and service quality of networks (traffic engineering, operational performance and service measurements).

Study Group 3 – Tariff and accounting principles

Responsible for studies relating to tariff and accounting principles for international telecommunications services.

Study Group 4 – Network maintenance

Responsible for studies relating to maintenance of networks, including their constituent parts, identifying needed maintenance mechanisms and for applications of specific maintenance mechanisms provided by other study groups.

Study Group 5 – Protection against electromagnetic environment effects

Responsible for studies relating to electromagnetic compatibility (EMC) of telecommunications systems that includes precautions to avoid hazard to human beings.

Study Group 6 – Outside plant

Responsible for studies relating to outside plant such as the construction, installation, jointing, terminating, protection from corrosion and other forms of damage from environment impact, except electromagnetic processes, of all types of cable for public telecommunications and associated structures.

Study Group 7 – Data networks and open system communications

Responsible for studies relating to data communication networks, and for studies relating to the development of Open Systems Interconnection and to the application of Open Systems Interconnection including networking, message handling, directory, security and management (except telematic aspects). Has overall responsibility for technical collaborative work with ISO/IEC JTC 1.

Study Group 8 – Terminals for telematic services

Responsible for studies relating to terminal characteristics and higher layer protocols for telematic services, including document architecture for general application. Responsible for the appropriate liaisons with ISO.

Study Group 9 (formerly CMTT) – Television and sound transmission

Responsible for studies, in cooperation with the Study Groups of the Radiocommunication Sector and the Telecommunication Standardization Sector, of the specifications to be satisfied by telecommunications systems to permit the transmission of sound and television broadcasting programmes.

Study Group 10 – Languages for telecommunication applications

Responsible for studies relating to technical languages and methods for telecommunication applications.

Study Group 11 – Switching and signalling

Responsible for studies relating to switching and signalling.

Study Group 12 – End-to-end transmission performance of networks and terminals

Responsible for studies concerning the end-to-end transmission performance of networks and terminals in relation with the perceived quality and the acceptance of text, speech and image signals by the users and for the related transmission implications.

Study Group 13 – General network aspects

Responsible for studies relating to general network aspects and the initial studies of the impact of new system concepts with far-reaching consequences. Its studies must take into account the functional responsibilities of other study groups.

Study Group 14 – Modems and transmission techniques for data, telegraph and telematic services

Responsible for studies relating to modems and transmission techniques for data, telegraph and telematic services.

Additionally responsible for subject matter relating to ISDN terminal adapters and interworking between ISDN terminals and modems on the PSTN.

Study Group 15 – Transmission systems and equipment

Responsible for studies concerning transmission systems and equipment including the associated signal processing aspects.

ANNEX B

(to Resolution No. 2)

Points of guidance to study groups for the development of the post-1992 work programme

B.1 This Annex provides points of guidance to study groups for the development of the post-1992 study questions in accordance with the proposed structure and general areas of responsibility. The points of guidance are intended to clarify, where appropriate, the interaction between study groups in certain areas of common responsibility and are not intended to provide a comprehensive list of such responsibilities.

B.2 This Annex will be reviewed by the TSAG as necessary to facilitate the interaction between study groups, to minimize duplication of effort and to harmonize the overall ITU-T work programme.

Study Group 1

- Study Group 1 should recommend the QoS for each service and interact with other study groups for particular aspects of network performance impacting the QoS (e.g. SG 13 for basic principles and more complex issues, or other SGs responsible for particular aspects).
- Study Group 1 shall define and describe services from a user's point of view.
- Study Group 1 should study allocation and global planning principles for routing codes for the telegram service, ensure their appropriate relations with network identification codes for the international telex service and, in collaboration with Study Group 2, consider telex destination codes and their relationship with other codes and services.

Study Group 2

- Study Group 2 to take on numbering and routing studies for all types of networks (see also text under Study Groups 1 and 7).
- Recommend traffic engineering planning and dimensioning guidance for the implementation and operation of all types of networks and network elements.
- Recommend measures to be taken to assure the operational performance of all networks (including network management) in order to meet the in-service network performance and QoS.
- If Study Group 2 identifies operating functions which need the support of network capabilities, these functions should be defined and described on the basis of the description method and network architectural principles as defined by SG 13.

Study Group 3

All study groups shall notify Study Group 3 at the earliest opportunity of any developments which may have an impact on tariff and accounting principles.

Study Group 4

Study Group 4 has the responsibility for coordinating Telecommunications Management Network studies within ITU-T.

Study Group 5

There is no requirement at this time to provide points of guidance for Study Group 5.

Study Group 6

Study Group 6 should review its Study Questions to place emphasis on standardization activities.

Responsible for studies involving all the physical aspects of outside plant including construction and installation but excluding optical and digital system design and maintenance. It also cooperates with Study Group 5 in the study of coordinated protection schemes.

Study Group 7

- Develop Recommendations and assume overall responsibility and coordination within ITU-T on OSI-system management (X.700-Series).
- Develop Recommendations for technical and operational standards for services such as Message Handling, Directory (X.400, X.500-Series, etc.).
- Develop Recommendations for OSI in collaboration with ISO/IEC JTC 1 (X.200-Series, etc.).
- Maintain Recommendations on data communication networks, such as X.21, X.25, X.32, X.75.

The following areas are transferred to other Study Groups:

- Numbering, routing: General principles for numbering and routing applicable to all networks is the responsibility of Study Group 2. Study Group 7 retains responsibility for detailed work on numbering and routing for public data networks, including Recommendations X.110, X.121, X.122, X.353. Ongoing work is to take into account Recommendations on general principles established by Study Group 2.
- Interworking: SG 13 (only interworking between new types of networks and data networks).
- Network Performance: General principles to Study Group 2 (Study Group 7 to retain responsibility for e.g. X.130 to X.140).

Study Group 8

There is no requirement at this time to provide points of guidance for Study Group 8.

Study Group 10

Studies and activities on modelling, specification and description techniques will be developed in line with the requirements of and in cooperation with the relevant study groups such as SG 7, SG 11 and SG 13.

Developments carried on by other standardization bodies such as ISO, IEC, etc., will also be considered (in close liaison with such bodies) in order to get the maximum synergy and to minimize the efforts in the development of new Recommendations.

Study Group 11

Study Group 11 shall develop and maintain Recommendations for:

- switching and signalling systems for all applications and networks irrespective of the technology applied (except for telex and dedicated data networks),
- signalling networks and procedures,
- switching and signalling performance and maintenance,
- testing and conformance testing of switching and signalling systems,

- location and utilization of switching and signalling logic and resources (network intelligence),
- switching and signalling interfaces between mobile and terrestrial systems and networks,
- services – stage 2 and 3 descriptions and their implementation in the switching and signalling systems,
- interworking between signalling systems including, for example, Signalling System No. 7 TUP, ISUP, MSAP and DSS 1,
- TMN Protocols.

Study Group 12

Close cooperation between Study Groups 12 and 13 is necessary to assist SG 12 in the definition of the end-to-end transmission performance parameters and related transmission planning rules based on the overall network performance studies, in particular the reference configurations and hypothetical reference connections, developed by SG 13, especially in cases of new system concepts under study by SG 13. Close cooperation between Study Groups 12 and 15 is also required on the assessment of the subjective quality of signal processing algorithms.

Study Group 13

Specific areas to be studied in the near future:

- Recommendations on network architecture, network functions and functional entities, including interworking functions between networks
 - functional structure
 - location of functions
 - reference configurations
 - functional description of entities
 - connection types
 - reference connections
 - digital sections
 - models and tools.
- Recommendations on interfaces (such as UNI, NNI, Internetwork)
 - location
 - functions across interfaces
 - structure of information flow
 - network capabilities at layer 1.
- Network Performance
 - Responsible for Recommendations on availability and error performance and their relation to QoS. Initially to retain overall studies on B-ISDN performance aspects.
 - Impact of new technologies and new service requirements with far-reaching consequences on networks.
 - To issue Recommendations on general principles and guidelines for specific studies of network elements.
- Overall responsibility for Recommendations for basic principles of B-ISDN

Furthermore attention to be given to, among other issues:

- Network performance studies with regard to new system concepts should assist SG 12 in their work on end-to-end transmission performance and related network planning rules, and assist SG 15 in the specification of transmission systems, switching systems and other network components.
- Impact of new technology and new techniques with far reaching consequences on network architecture, functionality and design and identification of areas for Recommendations and study items for other Study Groups.

Study Group 14

Study Group 14 will review and integrate Study Questions from (former) Study Group IX which will be required in the post-1992 study period.

Study Group 15

Study Group 15 shall develop and maintain Recommendations on:

- systems and equipment for the transmission of audio and visual signals
- signal processing methods, equipment and systems (including speech coding, video coding for communication services, echo control)
- transport systems and equipment (e.g. multiplexing and cross-connect equipment) taking into account network performance objectives set by other Study Groups
- line transmission systems and equipment for use on metallic or optical media
- the application of TMN to facilitate the management of transport networks, systems and equipment
- implementation of SDH and PDH digital hierarchies (bit rates, interfaces and multiplexing structure)
- transmission techniques and associated implementation topologies for the local loop and access environments
- transmission characteristics of digital switching systems.

ANNEX C

(to Resolution No. 2)

List of Recommendations under the responsibility of the respective study groups in the post-1992 study period

Study Group 1

C.2 and C.3

E.100, E.105, E.110 to E.133, E.140 to E.152, E.161, E.180 to E.184, E.330 to E.333

Supplements No. 1 to No. 6 (Fascicle II.2) and No. 1 to 3 (Fascicle II.4) Blue Book

All F Recommendations except those under the mandate of SG 2 or related to network operation, i.e. F.23, F.24, F.64, F.70, F.93, F.120, F.125

F.126 primarily SG 2 in consultation with SG 1

F.95 primarily SG 1 in consultation with SG 2

F.69 Study Group 2 responsible for numbering principles, Study Group 1 responsible for other aspects and coordination of any changes

Recommendations I.220 and I.230, I.240 and the I.250-Series

S and U Recommendations.

Study Group 2

E Recommendations except those under the responsibility of Study Group 1 (see SG 1 above)

F Recommendations related to network operation (see SG 1 above)

Study Group 3

All D Recommendations
Supplements Nos. 1 to 3 (Fascicle II.1)
C1 (in conjunction with SGs 1 and 2)

Study Group 4

All M, N and O Recommendations
I.602 to I.605 (now M.3602 to M.3605)

Study Group 5

All K Recommendations

Study Group 6

All L Recommendations

Study Group 7

All X Recommendations except those under the responsibility of Study Groups 8 and 14
I.461-I.462 (double-numbered X.30-31)

Study Group 8

All T Recommendations
X.408

Study Group 10

All Z Recommendations

Study Group 11

All Q Recommendations except Q.551 to Q.554
I.440- and I.450-Series (double-numbered Q.920- and Q.930-Series)

Study Group 12

All P Recommendations
G.100-Series (except for G.160- and G.180-Series)
G.470-Series

Study Group 13

I Recommendations except those under the responsibility of Study Groups 1, 4, 7, 11 and 14
G.700, G.701, G.703, G.707 (all jointly with SG 15), G.801, G.802, G.803, G.810-Series, G.820-Series, G.831, G.901, and the G.910-, G.920- and G.960-Series

Study Group 14

All R and V Recommendations
X.26-X.27, X.50 to X.58
I.463 (double-numbered V.110)

Study Group 15

All G Recommendations except those under the responsibility of Study Groups 12 and 13
All H and J Recommendations
Q.551 to Q.554

RESOLUTION No. 3

Publication of ITU-T Recommendations

(Helsinki, 1993)

The WTSC,

considering

(a) the importance of distributing effectively and promptly the ever increasing volume of Recommendations (including Instructions) developed by the ITU-T;

(b) Article 5 (No. 98) of the Convention (Geneva, 1992), charging the Secretary-General with the task of publishing Recommendations;

(c) that the publication of ITU-T Recommendations should take advantage of evolving technology, particularly paperless publication;

(d) Resolution No. 4 dealing with the identification and layout of ITU-T Recommendations;

(e) that in accordance with CCITT Resolution No. 2 (Melbourne, 1988), many new and revised Recommendations have been developed during the 1989-1993 study period, approved by postal ballots of the Members of the ITU and published in individual booklets;

(f) that a number of new and revised Recommendations have been approved by this World Telecommunication Standardization Conference (Helsinki, 1993);

(g) that the ITU has been publishing telecommunications Recommendations using the name CCITT for many years and it is well recognized within the telecommunications industry,

noting

(h) Recommendation A.14 concerning the production, maintenance and publication of terms and definitions essential to the work of the ITU-T;

(i) that references to CCITT Recommendations are contained in numerous legal documents throughout the world,

decides

1 that, as soon as practicable after this first World Telecommunication Standardization Conference, an ITU-T White Book shall be printed in A4 format with the contents restricted to the following in principle:

- Minutes and reports of the WTSC;
- Opinions and Resolutions;
- List of the Study Groups, the Advisory Group and any other groups established or maintained by the WTSC, with their titles and general areas of work;
- Titles of the Questions and the groups to which they are allocated;
- Recommendations on organization of the work of ITU-T (Series A);
- List identifying all Recommendations current at the conclusion of this WTSC;

2 that this White Book should also be published in electronic form;

3 that the colour of the cover of the ITU-T Book will rotate successively through the colours of previous Books in their chronological order, i.e. white for this first WTSC, then green, orange, yellow, red and blue;

4 that the Recommendations approved at this WTSC should also be published in electronic form (diskettes and/or CD ROM as soon as practicable after this Conference and in any case within three months). They should also be placed in a directly accessible database holding the texts of the Recommendations as soon as practicable after this WTSC and in each language version as soon as it is available;

5 that the Recommendations approved at this WTSC should also be printed promptly in booklet form, either as single Recommendations or in small groups of related texts;

6 that, if there is sufficient demand, a re-issue should be made of all Recommendations approved during the 1989-1993 study period (up to and including this WTSC), possibly for insertion in binders, together with either a list of the titles of all other Recommendations still valid or of their full texts where appropriate;

7 that Instructions (see Recommendation C.3) may be published in a different format, e.g. an A5 booklet, where appropriate;

8 that for the period (1993-1996), the Recommendations formerly developed by the CCITT and revised by the Telecommunication Standardization Sector and published by the ITU shall also carry the name "formerly CCITT Recommendation" and where responsibility for Radiocommunication Recommendations has been transferred to the Telecommunication Standardization Sector as "formerly CCIR Recommendations",

noting further

(j) that almost all Recommendations should be approved between WTSCs in future, in accordance with Resolution No. 1 (Section 8, § 2),

decides

9 that each new and revised Recommendation approved between WTSCs should be made available to the public as soon as practicable after it has received the approval of Members and in each language as soon as it is available;

10 that these Recommendations be published both electronically (as in point 4 above) and in booklet form (where appropriate texts may be grouped together in these booklets to suit market needs, as noted in Resolution No. 1, Section 8, § 6, in which case publication may be delayed in agreement with the Chairman of the Study Group concerned, to allow grouping of texts),

11 that, at regular intervals (in principle every six months), a list of all new and revised Recommendations approved by the Members during that time be published in booklet form (together with a summary giving a brief outline of the purpose and content of each Recommendation);

12 that the current status of the complete range of Recommendations in effect, i.e. including those approved by the CCITT prior to 1993, be accessible on a database;

13 that adequate indexing and search facilities be provided on database(s) and in hard copy,

requests

1 the Secretary-General and the Director of the TSB to observe the annexed guidelines when managing the continuing process of publishing Recommendations during the 1993-1996 study period;

2 the Director of the TSB to report to the next WTSC and to the intervening meetings of the Telecommunication Standardization Advisory Group on any difficulties encountered in the timely publication of texts, with proposals for remedial action;

3 the Council to consider what adjustments, if any, may be needed to the ITU policy on publication, pricing, etc. to facilitate the rapid, wide and effective dissemination of ITU-T Recommendations.

ANNEX

(to Resolution No. 3)

Guidelines on publication of ITU-T Recommendations

1 The following guidelines have been drawn up to assist in the timely publication of ITU-T Recommendations approved in accordance with the procedures laid down in Resolution No. 1 (Section 8). These guidelines should apply to those ITU services involved in publication and distribution of Recommendations, and (to the extent relevant) to other organizations permitted by the ITU to publish and distribute Recommendations under conditions and arrangements established with the ITU.

2 From the users' viewpoint the main principles that need to be applied are:

- a) the maximum feasible use of electronic publishing of Recommendations by allowing direct access to databases and by distributing diskettes (or the like) as soon as possible after approval of the Recommendations;
- b) unambiguous labelling of Recommendations to identify successive issues (see Resolution No. 4);
- c) convenient (in terms of locality and culture) access to appropriate guidance and definitive information on prices, availability and current status of Recommendations;
- d) simple to use indexes and search facilities to locate provisions on specific subjects without necessarily knowing the titles or understanding the general structure and letter series used to designate ITU-T Recommendations.

3 Immediately after the conditions for approval have been met in accordance with Resolution No. 1, a new or revised Recommendation shall be transmitted to the ITU's authorized distributors and made available to the public in a database that can be accessed in accordance with the conditions established by the ITU.

The Recommendation should also be made available as soon as is practicable in diskette¹⁾ or analogous form (normally within two weeks of formal approval) and in hard copy form (normally within two months of formal approval). In these cases, i.e. publication other than by providing direct database access, the initial publication will normally be as individual Recommendations. However, if market demand proves it desirable or if practical and priority considerations permit, the initial publication of new and revised Recommendations could be grouped when any resulting delay is considered reasonable by the Director in consultation with the Chairman of the Study Group concerned.

Minor amendments may be covered by publishing corrigenda (rather than issuing a new booklet for example). Any such corrigenda must specify the new "revision numbers" (see Resolution No. 4) for the affected Recommendations.

4 The current status of the complete range of Recommendations must be accessible on a database at any time. The current status should also be available in hard copy form twice per year.

5 Adequate indexing and search facilities shall be provided both on a database and in hard copy.

6 Groups of Recommendations should be printed (or reprinted) from time to time to suit market needs. (However, see 3 above.) For example, consideration could be given to printing complete letter-series or large blocks of related Recommendations where commercially viable.

7 For research and reference purposes, the TSB should maintain an official copy in an archive of all Recommendations that are or were valid in the preceding twelve years.

8 In addition the generally accessible database should retain superseded versions of Recommendations for a period of at least two years.

9 Certain conditions apply to the making and/or sale of copies of ITU-T Recommendations.

¹⁾ Initially text and diagrammatic material will be produced separately.

RESOLUTION No. 4

Identification and layout of Recommendations

(Helsinki, 1993)

The WTSC,

noting

(a) that the ad hoc Group set up under CCITT Resolution No. 18 (Melbourne, 1988) has reviewed the methods of identifying and laying out Recommendations;

(b) that the CCITT Secretariat has prepared a revision of Recommendation A.15 (*Elaboration and Presentation of Texts for the ITU Telecommunication Standardization Sector's Recommendations*) with detailed guidelines on format and style,

decides

that the following principles be applied in identifying and laying out Recommendations.

1 all ITU-T Recommendations shall be numbered. The number of each Recommendation shall have a letter prefix referring to the series as well as a number identifying the particular subject in that series;

2 the scope of the series identified by the letter shall be as follows:

- A Organization of the work of the ITU-T
- B Means of expression (definitions, symbols, classification)
- C General telecommunication statistics
- D General tariff principles
- E Overall network operation (numbering, routing, network management, operational performance and traffic engineering); telephone service, service operation and human factors
- F Telecommunication services other than telephone (operations, quality of service, service definitions and human factors)
- G Transmission systems and media, digital systems and networks
- H Line transmission of non-telephone signals
- I Integrated Services Digital Networks (ISDN)
- J Transmission of sound programme and television signals
- K Protection against interference
- L Construction, installation and protection of cable and other elements of outside plant
- M Maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
- N Maintenance: international sound programme and television transmission circuits
- O Specifications of measuring equipment
- P Telephone transmission quality, telephone installations, local line networks
- Q Switching and signalling
- R Telegraph transmission
- S Telegraph services terminal equipment
- T Terminal characteristics and higher layer protocols for telematic services, document architecture

- U Telegraph switching
- V Data communication over the telephone network
- W *Unallocated*
- X Data networks and open system communication
- Y *Unallocated*
- Z Programming languages

- 3 Recommendations in each series shall be classified in sections according to subject;
- 4 the title of each Recommendation should be concise (preferably no more than one line) but meaningful and unambiguous. The detail identifying the precise intent and coverage should be contained in the text where possible (e.g. under scope);
- 5 the date of formal approval of the Recommendation or its revision and the Study Group(s) responsible for coordinating proposals for any future revision shall be clearly indicated;
- 6 each successive issue of a Recommendation shall provide, apart from the Recommendation itself, information on past issues including their issue date and, where appropriate, a concise reason for the reissue;
- 7 the operative part of a Recommendation should normally be preceded by a statement of the reasons that have led to the issue of the Recommendation;
- 8 the guidelines attached to Recommendation A.15 should be applied in drafting new Recommendations, and wherever practicable, in revising existing Recommendations.

RESOLUTION No. 5

Supplements to the ITU-T Recommendations

(Helsinki, 1993)

The WTSC,

considering

(a) that, in the course of its studies, each Study Group deals with contributions and reports, which are distributed to those organizations that have registered for participation in the Study Group's work;

(b) that, once approved and published, Recommendations reach a much wider audience;

(c) that, normally, any information that is considered as merely illustrative or supplementary to a Recommendation should be included as a (non-integral) Appendix to that Recommendation, where it is useful to the wider audience;

(d) that there are exceptional instances where separate publication of such information is warranted, in the form of Supplements to the Recommendations,

decides

that the following general principles be applied by Study Groups for the development, approval, identification and revision of Supplements.

1 before proposing any new or revised text as a Supplement, a Study Group should ensure that:

- i) the subject matter is within its mandate;
- ii) there is a sufficient need for the information on a long term basis outside the normal distribution of Study Group reports, otherwise the material should be circulated as part of a report, as an annex to a Question or as a normal (white) contribution;
- iii) that the text cannot be reasonably adapted for inclusion in an existing or new Recommendation (e.g. as an Appendix);
- iv) that the text is sufficiently mature;

2 before accepting any text as a Supplement, agreement at a Study Group level meeting is required, in consultation with the Director;

3 supplements should be limited in number and volume;

4 unlike Recommendations, Supplements are only informative. They do not imply any agreement on the part of the ITU-T;

5 each Supplement should be unambiguously identified by the TSB, with a prominent indication of the date when the Study Group agreed to issue it;

6 since Supplements are essentially reference material, no onus is implied on the issuing Study Group to update or to reissue Supplements. However, should reference to a Supplement be made in a Recommendation, the Study Group should review the applicability both of that reference and the Supplement at least once every four years, and take any necessary action;

7 supplements should be included in databases along with ITU-T Recommendations, but may be deleted if not reviewed or updated after a period of eight years;

8 to the extent practicable, Supplements will be published in a similar fashion to Recommendations (see Resolution No. 3), but with a lower priority, and taking into account market needs.

RESOLUTION No. 6

Relations with other standardization organizations

(Helsinki, 1993)

The WTSC,

noting

the pre-eminence of ITU in worldwide telecommunications standardization, in accordance with Resolution No. 17 (Melbourne, 1988),

considering

(a) that collaboration with international standardization organizations, for example ISO, IEC, ISO/IEC JTC 1, is well established;

(b) that cooperation with regional standardization organizations is proposed in the advisory responsibilities of the TSAG at its discretion, as noted in Resolution No. 1;

(c) that cooperation resulting in worldwide agreement on telecommunication standards depends upon a degree of flexibility in all standardization organizations, including international, regional, and if appropriate national, which are involved in the preparation of positions for resolution in the ITU-T,

resolves

(1) to cooperate with other standardization organizations involved in the studies relevant to the Recommendations to be developed in the ITU;

(2) to ensure that such cooperation shall provide, as required, appropriate access to the Sector's meeting schedules and documentation by the Director with the advice of the TSAG;

(3) to encourage cooperation among those organizations that are involved in studies that are expected to be considered in the ITU;

(4) to promote coordination of national views concerning issues arising in international and regional standardization organizations which are relevant to the ITU.

RESOLUTION No. 7

Collaboration with the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC)

(Malaga-Torremolinos, 1984; Helsinki, 1993)

The WTSC,

considering

the purposes of the Union set forth in Article 1 of the International Telecommunication Constitution (Geneva, 1992) relating to the harmonization of telecommunication facilities,

considering further

the duties of the Telecommunication Standardization Sector (Chapter III of the Constitution, Geneva, 1992) of the International Telecommunication Union,

recognizing

the common interest of ISO, IEC and ISO/IEC Joint Technical Committee 1 (JTC 1) on one hand and ITU-T on the other hand in the development of information technology standards, which take full account of the needs of manufacturers, users, and those responsible for communication systems,

and noting

that harmonious development of all telecommunications networks is proceeding with the determination of Member countries to work together in the ITU,

bearing in mind

(a) the convergence of data processing and telecommunication which affects the connection of data processing and text processing equipments to public networks, and hence the Study Programmes and ITU-T Recommendations;

(b) that the working methods and timing of the organizations concerned are not the same,

and further noting

(c) increasing demands on financial and specialized professional experts in both telecommunications technology and operations as well as computer science and terminal manufacturing and testing;

(d) the progress made on the basis of existing procedures in the alignment of technical Recommendations with ISO, IEC and ISO/IEC JTC 1 in areas of joint interest, thanks to the excellent spirit of cooperation which has prevailed;

(e) that principles of collaboration have been established between ISO and IEC and particularly with ISO/IEC Joint Technical Committee 1 (JTC 1) as contained in Recommendation A.23 and the ISO/IEC JTC 1 Directives;

(f) the increasing cost of developing international standards,

resolves

1 to invite ISO and IEC to examine the ITU-T Study Programme in the early stages of its studies and vice versa, in order to identify subjects where coordination seems desirable, and to so advise the Director of the TSB;

2 to request the Director of the TSB, after consultation with the Study Group Chairmen concerned, to reply, and to furnish any additional information as it becomes available;

- 3 to request the Director of the TSB and the Telecommunication Standardization Advisory Group (TSAG) to consider and propose further improvements to the procedures for cooperation between the Telecommunication Standardization Sector, and ISO, IEC and, in particular, JTC 1;
- 4 that the necessary contacts with ISO and/or IEC should be at the appropriate levels; within these arrangements and in accordance with Recommendation A.23, and the Guidelines for Cooperation therein, especially where the need for common text has been identified;
- 5 to request the Chairmen of Study Groups in drafting replies to their questions to take into account the related programmes of work and the progress of projects in ISO, IEC and ISO/IEC JTC 1; further, to cooperate with these Organizations as widely as possible and by appropriate means, in order to:
- a) ensure that the specifications which have been jointly drawn up remain aligned;
 - b) collaborate in drawing up other specifications in fields of joint interest;
- 6 that for reasons of economy, any necessary collaborative meetings take place as far as possible in association with other meetings;
- 7 that the report concerning such coordination indicates the status of alignment and compatibility of draft texts on points of common concern, in particular identifying any subject which could be dealt with in a single organization, and cases where cross-referencing would be helpful to users of published International Standards and Recommendations;
- 8 that administrations can contribute significantly to the coordination between ITU-T on one hand and ISO and IEC on the other hand by ensuring adequate coordination of national activities associated with the three organizations, and that this be brought to the attention of all Administrations;
- 9 to request the Director of the TSB to bring this Resolution to the attention of the competent authorities of ISO and IEC;
- 10 to request the Director of the TSB to bring this Resolution also to the attention of the RS.

RESOLUTION No. 8

Cooperation with the IEC on the standardization of cables, wires, optical fibres and waveguides

(New Delhi, 1960; Geneva, 1964; Mar del Plata, 1968; Geneva, 1976
and 1980; Malaga-Torremolinos, 1984; Melbourne, 1988; Helsinki, 1993)

The WTSC,

considering

(a) that the International Electrotechnical Commission has set up a Technical Committee (TC 46) to prepare international standards on cables, wires, waveguides and accessories for use in telecommunication equipment and in devices employing similar techniques, and a Technical Committee TC 86 to prepare international standards for fibre optics intended for use with telecommunications equipment and devices employing similar techniques;

(b) that the cables with metallic conductors and optical fibres and waveguides intended for use in public telecommunication networks are not included in the scope of these Committees with the exception of polyolefin insulated LF cables for outdoor use covered by the present scope of IEC TC 46 (see Appendix I);

(c) that other points of the scope of these Committees have not been narrowly defined and that its work in this respect should be coordinated with that of the ITU-T;

(d) that telecommunication Administrations reserve the right to establish some of the specifications for wires, optical fibres and cables for use in public telecommunication networks whenever they consider it advisable,

instructs

the Director of the TSB to take any useful measures to ensure efficient liaison between the ITU-T and IEC TC 46 and TC 86 in accordance with the principles given in Annex A below,

recommends

to member Administrations of the ITU-T whose countries participate in the work of the IEC to take an active part – each within the National Committee of the IEC – in work connected with the activities of IEC TC 46 and TC 86, so that the views of telecommunication Administrations may be duly taken into account.

ANNEX A

(to Resolution No. 8)

Principles of cooperation between the ITU-T and IEC Technical Committee 46 and Technical Committee 86

A.1 The aim of the standardization envisaged by the IEC is to cut down the number of types of cables to be made, so that the price may be lowered and so that the cables made by different manufacturers will be interchangeable. This policy is analogous to that followed by the ITU-T as regards those types of cables for which it alone is competent. The IEC can study the standardization of internal cabling for use for various purposes in electronics, including telecommunications, polyolefin insulated low-frequency cables for outdoor use covered by the revised scope of IEC TC 46 and cables containing optical fibres not intended for use in public telecommunication networks, covered by the scope of IEC TC 86 (see Appendix I).

Although standards for cables, wires or optical fibres [with the exception mentioned in (b) of Resolution No. 8] for use in public telecommunication installations are not in the scope of IEC TC 46 and TC 86, IEC will endeavour to develop standards which are also in accordance with ITU-T Recommendations concerning public

telecommunication installations and which in any case are not at variance with them. In particular it is important that the characteristics of the cables are compatible with ITU-T Recommendations on transmission, electromagnetic and mechanical protection drawn up by relevant Study Groups.

A.2 It therefore seems very desirable for the draft standards studied by TC 46 and TC 86 to be forwarded to the ITU-T for examination. To simplify cooperation, the result of this examination should preferably be expressed in one of the following forms:

- (a) the ITU-T has no comment to make on this draft, or
- (b) draft standard . . . should be brought into line with ITU-T Recommendation . . . , or
- (c) the ITU-T is at present studying the point dealt with in draft standard . . . , which it considers as being within its terms of reference, or
- (d) the ITU-T is of the opinion that this draft is not of interest for the ITU-T.

As a general rule, this examination should be carried out by the appropriate ITU-T Study Group but, since IEC procedure involves time-limits that may not be exceeded (and which are sometimes rather short), the Plenary Assembly leaves it to the Director to take any appropriate practical measures.

A.3 The Director of the TSB will continue to supply the IEC with any useful documentation regarding ITU-T work and to send observers to the meetings of TC 46, TC 86 and their subcommittees studying the problems which are of interest to the ITU-T.

APPENDIX I

(to Resolution No. 8)

Technical Committee 46: Cables, wires and waveguides for telecommunication equipment

Scope

To prepare international standards regarding cables having metallic conductors, wires, waveguides and accessories for use with electrical telecommunication equipment and with devices employing similar techniques. Where appropriate, the work of TC 46 and the ITU shall be coordinated.

Cables and waveguides intended for use in public telecommunication networks are not included in the scope of the Committee, with the exception of polyolefin insulated low frequency cables for outdoor use.

Technical Committee 86: Fibre optics

Scope

To prepare international standards for fibre optics intended for use with telecommunications equipment and devices employing similar techniques.

This activity terminology, essential characteristics, measuring methods, and functional and mechanical requirements to ensure satisfactory system performance for, but not restricted to, the following: single, and bundles of optical fibres, fibre optic cables, fibre optic connectors, fibre optic components, fibre optic terminal devices, and fibre optic transmitting and receiving assemblies or sub-systems (containing solid state devices and other components) which are specified as sub-systems for purposes of trade and commerce.

Cables intended for use in public telecommunications networks are not included in the scope of this Committee.

Discrete or integrated photo-emitting and/or photo-sensitive solid state devices that may be used in fibre optic systems or sub-systems, but which are specified as components for purposes of trade and commerce as well as fibre optic face-plates for cathode ray tubes, are also excluded from the scope of TC 86.

RESOLUTION No. 9

Development of Electronic Document Handling

(Helsinki, 1993)

The WTSC,

considering

(a) the recommendations from the Ad hoc Group – Resolution 18 for the use of Electronic Document Handling (EDH) in the work of the ITU-T (as contained in Resolution No. 1, Section 6);

(b) that EDH is a strategic tool for information exchange between participants in the activities of ITU-T;

(c) that the implementation of EDH capabilities will have very significant benefits for resource-limited individuals, organizations and countries, by allowing them timely and effective access to standards information and the standards-making process;

(d) that EDH will be equally advantageous for improving communication among members of the ITU-T and between other relevant standardization organizations and the ITU,

decides

(1) that there should be long term convergence of EDH standardization tools;

(2) that it may be opportune and beneficial for EDH tools of the ITU-T to interwork with other EDH-related tools used by other telecommunication standardization organizations;

(3) that the implementation of EDH will be based on the EDH model and that this will require its evolution from interim arrangements to the desired basis of Open Document Architecture (ODA) and X.400, which in turn will require a migration plan to be developed;

(4) that the valuable approach of identifying and satisfying user needs requires the development of user-friendly systems and interfaces;

(5) that the critical importance of EDH capabilities to the standards-making process requires the construction and employment of architectures and systems which are proof against possible failures;

(6) that the evolution of users' requirements, changes in the standards-making process and improvements in technology imply that the implementation of EDH will be a continual process, with the identification of specific milestones;

(7) that executive authority, budget and resources should be provided for the continuation of work on the development of EDH and for the progression of the implementation of EDH methods, systems and procedures with all possible speed.

RESOLUTION No. 10

Electronic Document Handling Group within the Telecommunication Standardization Advisory Group

(Helsinki, 1993)

The WTSC,

considering

the decisions contained in Resolution No. 9 on Electronic Document Handling (EDH),

decides

(1) that an EDH Group shall be set up under the Telecommunication Standardization Advisory Group (TSAG) (see Resolution No. 1, Section 4);

(2) that the objectives of this group are to:

(2.1) review and study evolving EDH user needs;

(2.2) review progress of the implementation of services and related documentation to support EDH, including computer and administrative support from all relevant ITU Bureaux;

(2.3) ensure that the EDH evolution path proceeds along specific milestones;

(3) that membership in this group shall be open to all members of the ITU-T and include EDH experts from ITU-T Study Groups and from appropriate ITU Bureaux;

(4) that the tasks of this group are to study user needs and plan their introduction through appropriate subgroups and pilot programs;

(5) that this group shall meet in Geneva as necessary to carry out its objectives;

(6) that this group shall take into account the long term convergence of EDH standardization needs in the ITU-T and other relevant standardization organizations;

(7) that representatives from each ITU-T Study Group may be identified as needed as EDH liaisons for their respective Study Group.

RESOLUTION No. 11

Collaboration with the Consultative Council for Postal Studies (CCPS) of the Universal Postal Union (UPU) in the study of new services concerning both the postal and the telecommunication sectors

(Malaga-Torremolinos, 1984; Helsinki, 1993)

The WTSC,

considering

(a) Resolution No. 42 of the ITU Plenipotentiary Conference (Nairobi, 1982) on the Electronic Mail/Message Service;

(b) Resolution No. 911 of the 39th session of the ITU Administrative Council on relations between the CCITT and the CCPS;

(c) Resolution CCEP 1/1983 of the CCPS of the UPU on relations between the CCITT and the CCPS,

considering further

that postal and telecommunications Administrations are anxious to be kept informed of technical progress liable to improve or harmonize existing services and that it is useful for them to examine jointly the implications of any new Recommendations or modifications to current Recommendations made in this connection,

resolves

to create a "CCPS/ITU-T Contact Committee" to consider questions of joint interest to both organs. This Contact Committee shall:

- identify complementary activities to assist both organs in coordinating time scales of results;
- identify overlapping activities to minimize duplication of work.

1 Composition of the Contact Committee

The Committee is structured on a basis of equal representation. It shall consist of a maximum of three representatives from each organization, with power to co-opt experts when the need arises. The three representatives of the ITU-T would be typically as follows:

- a) representative designated by Study Group 1 (depending on the nature of the question to be considered);
- b) as the need arises, a representative designated by another ITU-T Study Group (e.g. ITU-T Study Group 3);
- c) the representative of the appropriate department of the TSB.

2 Method of operation

2.1 Frequency of meetings

In order to minimize costs, the Contact Committee should, to the greatest extent possible, exchange information of mutual interest by correspondence.

Whenever sufficient need arises, a meeting may be called by either party on the basis of an agenda drawn up well in advance of the meeting.

2.2 *Location of meetings*

Unless otherwise mutually agreed, the meetings will be held either in Bern or Geneva.

2.3 *Chairman*

The chairmanship of the meetings should rotate between the CCPS and the ITU-T. The ITU-T Chairman of the Contact Committee will be the representative designated by Study Group 1 (refer to § 1a) above).

2.4 *Timing of meetings*

In the interests of controlling expenditure, meetings will be held, to the extent possible, conjointly with meetings of the organization which issues the invitation.

2.5 *Secretariat*

Each organization shall be responsible for preparing its own documents and submitting them to the other body. The hosting secretariat is responsible for drafting the report of the meeting which will be submitted for comments to the other organization prior to publication and distribution to the groups concerned.

RESOLUTION No. 12

An Information Bulletin for the Telecommunication Standardization Sector

(Helsinki, 1993)

The WTSC,

considering

(a) that the telecommunication standardization environment is one of increasingly rapid change;

(b) that in this environment Administrations face considerable challenge to be aware of developments in the work of the Telecommunication Standardization Sector and to identify issues relevant to their constituencies, and

recognizing

(c) that the Study Groups produce detailed reports on their activities;

(d) that decision makers in Administrations and member organizations would be assisted by résumé statements of progress of the work, identification of future decision points, and non-technical descriptions of the work,

noting

(e) that an Information Bulletin has been developed for similar purposes in the former CCIR,

instructs

the Director of the Telecommunication Standardization Bureau

1 to produce and distribute in the relevant languages a periodic Information Bulletin which enables members to follow and appreciate the progress of work in the Sector, and

2 to work with the Chairmen of the Study Groups and the Telecommunication Standardization Advisory Group to ensure an appropriate flow of executive summary information on the work of the Study Groups.

RESOLUTION No. 13

Protection of the common names of ITU-T defined international public services

(Geneva, 1980; Helsinki, 1993)

The WTSC,

considering

(a) that ITU-T has defined, inter alia, the international public services Teletex, Telefax and Bureaufax in Service Recommendations;

(b) that those international public services are characterized by complete end-to-end compatibility;

(c) that it is desirable to use on a worldwide basis for those ITU-T defined international public services their respective common name, i.e. Teletex, Telefax or Bureaufax, to qualify any service provided in that respect as complying completely with the ITU-T definitions for the respective international public service in order to guarantee end-to-end compatibility;

(d) that it is essential to protect the use of the aforementioned common names,

noting

(a) that, within a number of countries, several recognized operating agencies (ROAs) may provide such ITU-T defined international public services and may also wish to add further optional user facilities in addition to the respective basic international public service as defined by the ITU-T;

(b) that, for the preceding reason, some ROAs may wish to use service designations, e.g. XXX/Teletex, indicating a combination of a basic international public service as defined by the ITU-T with additional optional user facilities,

resolves to request Administrations

(1) to ensure that any such international public service offered by an Administration be denominated by its respective common name, i.e. "Teletex", "Telefax" or "Bureaufax" and comply completely with the respective ITU-T definitions for such service;

(2) to endeavour to protect the common names of the ITU-T defined international public services "Teletex", "Telefax" and "Bureaufax", inter alia through the communication of those names to the national, regional and international authorities for the registration and administration of trade marks and service marks in order to ensure that the said names be not made the subject of trade marks or service marks or, if claimed in an application for the registration of trade marks or service marks, be made the subject of a disclaimer;

(3) to ensure that in the case of a combination of any such ITU-T defined international public service together with further optional user facilities in addition to that basic service, the trade mark of the service mark for such a combined service offered by any ROA be always combined with the respective common name of the basic ITU-T defined international public service, i.e. "Teletex", "Telefax" or "Bureaufax", and that the latter names, in the case of registration of such a trade mark or service mark, be made the subject of a disclaimer;

(4) to inform the Director of the TSB continuously about the measures taken with regard to *resolves* (1) to (3) above,

requests the Director of the TSB

to compile the information received in respect of such measures and to make this information available on request for consultation by Administrations.

RESOLUTION No. 14

**Establishment of an intersector coordination group (ICG)
to deal with satellite matters of common interest to the Telecommunication
Standardization and Radiocommunication Sectors**

(Helsinki, 1993)

The WTSC,

considering

(a) Annex C to Resolution No. 18 relating to the coordination of the Radiocommunication and Standardization Activities through Intersector Coordination Groups;

(b) the proposal of the joint meeting of the ad hoc Resolution No. 18 Group of the former CCITT and the ad hoc Resolution 106 Group of the former CCIR (January, 1993),

resolves

(1) that an Intersector Coordination Group shall be established to coordinate the review of Recommendations being developed in both Sectors in order to assure a continuing and full integration of the satellite transmission medium in public digital networks, including the ISDN taking account of the emerging technologies, applications and services;

(2) that the Telecommunication Standardization Sector shall be the leading Sector for the above coordination activity,

instructs

the Director of the Telecommunication Standardization Bureau to establish, in cooperation with the Director of the Radiocommunication Bureau, the Satellite Intersector Coordination Group in accordance with Resolution No. 18, in particular Annex C.

RESOLUTION No. 15

Establishment of an intersector coordination group (ICG) to deal with activities relating to the Future Public Land Mobile Telecommunication Systems (FPLMTS) in the Telecommunication Standardization and Radiocommunication Sectors

(Helsinki, 1993)

The WTSC,

considering

(a) Annex C to Resolution No. 18 relating to the coordination of the Radiocommunication and Standardization Activities through Intersector Coordination Groups;

(b) the proposal of the joint meeting of the ad hoc Resolution No. 18 Group of the former CCITT and the ad hoc Resolution 106 Group of the former CCIR (January, 1993),

resolves

(1) that an Intersector Coordination Group shall be established to coordinate the FPLMTS work activities in both Sectors and facilitate the present extensive liaison process between the Radiocommunication Sector and the Telecommunication Standardization Sector;

(2) that the Telecommunication Standardization Sector shall be the leading Sector for the above coordination activity,

instructs

the Director of the Telecommunication Standardization Bureau to establish, in cooperation with the Director of the Radiocommunication Bureau, the FPLMTS Intersector Coordination Group in accordance with Resolution No. 18, in particular Annex C.

RESOLUTION No. 16

Initiation of joint coordination groups to deal with matters of concern to multiple study groups in the Telecommunication Standardization Sector in accordance with Resolution No. 1

(Helsinki, 1993)

The WTSC,

considering the

(a) provisions of Resolution No. 1 (Section 3, §§ 3.1 through 3.6) defining the application, establishment and operation of a Joint Coordination Group (JCG);

(b) report of the Ad Hoc Group Resolution No. 18 to the WTSC in March 1993, Attachment 1, noting that a limited number of JCGs should be initially formed to determine whether this new management tool adds value to the ITU-T Standardization process;

(c) the complexity of the following non-exhaustive set of subject areas (see § 6 below) that could benefit from coordination, some of which has already begun on an ad-hoc basis e.g. Telecommunications Management Network,

instructs Study Group Chairmen

- 1 to recognize the need for coordination in any appropriate subject area;
- 2 to propose a mandate and terms of reference for any suggested JCG, giving some details of the work programme specific to the originating Study Group and indicating how it may fit into the overall ITU-T work programme;
- 3 to nominate the particular Rapporteurs and others proposed to participate in the JCG under consideration together with the lead Study Group;
- 4 to suggest whether specific entities of the Radiocommunication Sector should be invited to JCG meetings;
- 5 to forward such proposals to the Telecommunication Standardization Advisory Group (TSAG) and to the Director of the TSB to be available for consideration by the TSAG at its first meeting in June 1993;
- 6 to consider the possible establishment of JCGs in the following areas of study and any other considered necessary to further the work of the ITU-T:
 - a) Telecommunication Management Network (TMN)¹⁾
 - b) Universal Personal Telecommunications (UPT)
 - c) Broadband ISDN (including, for instance, B-ISDN Traffic Control, Congestion Control, Resource Management and Traffic Engineering)
 - d) Audiovisual/Multimedia Services²⁾
 - e) Quality of Service and Network Performance,

instructs the Director of the Telecommunication Standardization Bureau

to provide all necessary assistance to facilitate the above.

¹⁾ Telecommunication Management Network studies were coordinated during the 1989 to 1993 study period through joint meetings of the TMN Rapporteurs from the involved Study Groups, under the leadership of Study Group 4.

²⁾ A coordination mechanism concerning video performance assessment, a task related to this subject area, has already been initiated by Study Group 1.

RESOLUTION No. 17

The importance of telecommunication standardization for the developing countries

(Helsinki, 1993)

The WTSC,

considering

the abolition of the Plan Committees and the transfer to the BDT of some of their activities and the activities of the Special Autonomous Groups (GAS),

noting

the multifarious difficulties encountered by the developing countries in ensuring their effective and efficient participation in the work of the ITU-T,

recognizing

that the harmonious and balanced global development of the worldwide telecommunication network is of mutual advantage to the industrialized and the developing countries,

recalling

that one of the purposes of the Union is to promote international cooperation through the harmoniously integrated development of the worldwide telecommunication network for the benefit of mankind as a whole,

taking account of

the relevant provisions of the Convention 190/196 and of the Additional Plenipotentiary Conference (Geneva, 1992) Resolutions relating to the Development Sector, in particular Resolutions 2, 7 and 10,

resolves to instruct

the Director of the TSB to provide the BDT with all necessary support with a view to:

- encouraging and increasing the participation of the developing countries in telecommunication standardization activities;
- taking account of the specific characteristics of the telecommunication networks of the developing countries in the process of establishing standards in the fields of planning, services, operation, tariffs and maintenance;
- assisting in the organization and holding of periodic information meetings concerning the work of the Study Groups in the ITU-T,

further resolves to instruct

the Director of the TSB to take appropriate steps to have studies carried out on questions connected with standardization which are submitted to him by the World Telecommunication Development Conferences.

RESOLUTION No. 18

Principles and procedures for the allocation of work to, and coordination between, the Radiocommunication and Telecommunication Standardization Sectors¹⁾

(Helsinki, 1993)

The WTSC,

considering

(a) that the Additional Plenipotentiary Conference (APP-92) held in Geneva, December 1992, decided with respect to the assignment of responsibilities to the newly-created Radiocommunication Sector and the Telecommunication Standardization Sector:

- that the Radiocommunication Sector Study Groups are charged to focus on the following in the study of Questions assigned to them:
 - “a) use of the radio-frequency spectrum in terrestrial and space radiocommunications (and of the geostationary-satellite orbit);
 - b) characteristics and performance of radio systems;
 - c) operation of radio stations;
 - d) radiocommunication aspects of distress and safety matters;”

(Article 11 of the Convention, 151 to 154)

- that the Telecommunication Standardization Sector Study Groups are charged to:
 - “... study technical, operating and tariff questions and prepare recommendations on them with a view to standardizing telecommunications on a worldwide basis, including recommendations on interconnection of radio systems in public telecommunication networks and on the performance required for these interconnections;”

(Article 14 of the Convention, 193)

(b) that the two Sectors were given the responsibility of jointly agreeing on the assignment of studies and to keep the division of studies constantly under review (158 and 195);

(c) that the Directors of the Standardization and Radiocommunications Bureaux were instructed “to work together to develop proposals for an initial allocation of work between the Sectors, ensuring that:

- there is minimum disruption to the continuing work of the Sectors;
- the grouping of work ensures that there is maximum opportunity for efficient participation by experts from all countries;
- there is minimum overlap between respective Study Groups of the Sectors;

and to report to the first World Telecommunications Standardization Conference and the first Radiocommunication Assembly on the proposed initial allocation” (Additional Plenipotentiary Resolution 2);

(d) that the respective Conference and Assembly shall confirm the detailed allocation of work and that joint meetings of the Advisory Groups of the Radiocommunication and Standardization Sectors shall review the distribution of new and existing work between the Sectors, subject to confirmation by the Members. The objective is to:

- minimize the duplication of activities of the Sectors;
- group the standardization activities in order to foster cooperation and coordination of the work of the Telecommunication Standardization Sector with regional standardization bodies. (See Additional Plenipotentiary Resolution 2),

¹⁾ Note – An identical Resolution will be submitted to the Radiocommunications Assembly, November, 1993.

noting

(e) that the former CCIR ad hoc Group on Strategic Review and Planning (Resolution 106) and the former CCITT ad hoc Group on "CCITT working methods and structure" (Resolution 18) have carried out an initial review of their respective work programmes and have identified matters of interest for each Sector;

(f) that a joint meeting of these Groups endorsed the conclusions of the Groups as indicated in *noting* (e) above and made recommendations on the allocation of work to the Telecommunication Standardization Sector and the Radiocommunication Sector, subject to confirmation by the Members,

resolves

1 that the ITU-T and the Radiocommunications Sector Advisory Groups (or Resolution 106 ad hoc Group), meeting jointly as necessary shall continue the review of new and existing work and its distribution between the ITU-T and the ITU-R, for approval by Members in accordance with the procedures laid down for the approval of new and/or revised Questions;

2 that the principles for the allocation of work to the Radiocommunication Sector and Telecommunication Standardization Sector (see Annex A) shall be used to give further guidance in the allocation of work to the Sectors, taking account of the objectives for continuing review as outlined in *considering* (d);

3 that, if considerable responsibilities in both Sectors in a particular subject are identified, either:

- a) the procedure as given in Annex B should be applied, or
- b) a joint group should be established, or
- c) the matter should be studied by relevant Study Groups of both Sectors with appropriate coordination (see Annex C),

requests

1 that a joint meeting of the Telecommunication Standardization Advisory Group and the former CCIR Resolution 106 ad hoc Group submit a report before October 1993 to the Directors of the two Bureaux;

2 that a joint meeting of the Advisory Groups submit a report by the end of March 1994 to the Directors of the two Bureaux to assist them in the preparation of a joint report to the Plenipotentiary Conference (Kyoto, 1994).

ANNEX A

(to Resolution No. 18)

Principles for the initial allocation of work to the Radiocommunication and Telecommunication Standardization Sectors

1 General

Principle 1

The approach to work in a Sector needs to be task-oriented, with an appropriate Study Group (or designated group) responsible for coordination. Further assignment of detailed tasks within a given work item or subject area would then occur, with special arrangements for handling work which crosses Sector boundaries.

Work planning may start with a service or system concept, and would include development of overall network or service architectures and identification of interfaces through to more detailed specification and linking of tasks.

Activity related to ongoing review of existing Recommendations needs to be accommodated as a general area of work.

2 Roles of the Sectors

Within a task-oriented approach, experts of both Sectors should be able to work as part of a well-managed team.

Principle 2

Standardization Sector work includes interworking arrangements required for either radio-based equipment within a public telecommunication network or radio systems requiring interconnection for the carriage of public correspondence²⁾.

In addition, the Recommendations developed by the Standardization Sector need to provide for the capabilities required to support the particular characteristics of radio systems. Similarly, the work of the Radiocommunication Sector should complement the work of the Standardization Sector, especially where it relates to the use of radio-based technology in telecommunication networks. The two Sectors will therefore both need to consider interface questions.

The term “public correspondence” should not be interpreted too restrictively in principle 2 (and elsewhere). The word “includes” is intended to imply that the carriage of related classes of traffic (e.g. government, service) or user applications are not excluded.

Principle 3

Radiocommunication Sector work related to network standards includes studies addressing the characteristics, performance, operation and spectrum aspects of radio-based equipment or radio systems as necessary to support the interconnection and interworking arrangements identified by the Standardization Sector.

The characteristics of radio-based equipment refer to those characteristics dealing with the equipment and the physical environment in which the equipment must work. Examples include performance, modulation, coding, error correction, maintenance and other aspects that may affect the interface signals and protocols that are able to be supported.

Principle 4

Before specific tasks are allocated, services, network architectures, and interfaces should be identified as clearly as possible.

For example, the Standardization Sector and the Radiocommunication Sector would jointly identify interfaces to be supported by the system under study. The Radiocommunication Sector will also need to identify the scope and capabilities of radio systems needed to meet the interface requirements and achieve optimum spectrum/orbit utilization.

Principle 5

Work unique to the Radiocommunication Sector covers matters related to spectrum and orbit utilization and efficiency and, *inter alia*, all aspects of services not used for public correspondence, for example radiodetermination, independent mobile radio services, broadcasting, safety and distress operation, remote sensing, amateur radio, and radioastronomy.

²⁾ *Public correspondence*: Any telecommunication which offices and stations must, by reason of their being at the disposal of the public, accept for transmission.

Principle 6

The studies in one Sector must complement those of the other Sector where a task crosses Sector boundaries noting that in some cases, joint studies may be required as the most practical option. To guide actual work allocations, the coordinating Sector (as user) could produce statements on “desirable/required characteristics”. The potential provider Sector (or Study Group) could on its own initiative, or in response, develop statements of technology capability in the form of “achievable/typical characteristics”.

Mutual dependency will require continued cooperation where both Sectors have an interest in the work. In establishing tasks toward standards for a service based on technology of both Sectors, the coordinating Sector must make best use of established sources of skill and knowledge. Joint ad hoc Groups could be established as needed to ensure the best possible progress and information exchange, where necessary.

3 Transition to new arrangements

It is important that suitable transition arrangements be put in place and be virtually complete within a reasonable period, e.g. by the 1994 Kyoto Plenipotentiary Conference. A key element of such arrangements is the maintenance of a satisfactory pace, quality of output and avoidance of delays in progressing current work.

In order to keep the work reasonably integrated, the work derived from CCIR Questions (or parts of Questions), should be allocated to the Standardization Sector in blocks to the extent practicable. Radiocommunication experts will wish to be able to concentrate in particular areas rather than to be distributed over many Study Groups and Working Parties.

Principle 7

Existing standardization work may continue in both Sectors while suitable arrangements are developed and put in place to maintain the current pace and quality of output.

The finalization of transfer required as part of the establishment of the Sectors should be monitored and reviewed by the proposed Advisory Groups (at a Sector level and in collaboration) for the purpose of ensuring a timely and progressive transfer.

Some study Questions include components which fall into both Sectors. In line with the project approach and efficient management practice, such Questions should be rewritten/revised so that the tasks for each Sector can be clearly identified, or joint arrangements established, if necessary.

Principle 8

In allocating existing study Questions to Sectors, those Questions which would require shared responsibility or study should be revised if necessary so that work required of each Sector is clearly identified in separate Questions.

The Standardization Sector would provide the lead role on the standardizing of telecommunications on a worldwide basis, including Recommendations on interconnection of radio systems in public telecommunication networks and on the performance required for these interconnections.

The Radiocommunication Sector would provide the lead on all other radio matters.

Questions which relate to complementary work in another Study Group or Sector should always refer to that related or complementary work.

Principle 9

Study Groups should continue as efficient and effective sources of special skills in the task-oriented environment.

Task orientation should not lead to numerous, independent project groups which potentially duplicate or diverge from established work. Where it is appropriate to establish a special group (e.g. to address interface or interworking issues) it should draw skills from the relevant Study Groups, appropriately limiting the scope of the

project group. In this way, compatibility and consistency across multiple applications is maintained. Recommendations from such special groups, in any case, have to be approved by the appropriate Study Group prior to submission to the ITU Members for approval.

ANNEX B

(to Resolution No. 18)

Procedural method of cooperation

With respect to *resolves* (3a), the following procedure should be applied:

- a) The joint meeting, as indicated in *resolves* (1) nominate the Sector which will be leading in the work and will finally approve the deliverable.
- b) The leading Sector will request the other Sector to indicate those requirements which it considers essential for integration in the deliverable.
- c) The leading Sector will base its work on these essential requirements and integrate them in its draft deliverable.
- d) During the process of development of the required deliverable the leading Sector shall consult with the other Sector in case it meets difficulties with these essential requirements.

In case of agreement on revised essential requirements the revised requirements shall be the basis for further work.

- e) When the deliverable concerned comes to maturity the leading Sector shall seek once more the views of the other Sector.

ANNEX C

(to Resolution No. 18)

Coordination of the radiocommunication and standardization activities through Intersector Coordination Groups

With respect to *resolves* (3c) the following procedure shall be applied:

- a) the joint meeting of the advisory groups as indicated in *resolves* (1), may, in exceptional cases, establish an Intersector Coordination Group (ICG) to coordinate the work of both Sectors and to assist the advisory groups in coordinating the related activity of their respective study groups;
- b) the joint meeting shall, at the same time, nominate the Sector which will be leading in the work;
- c) the mandate of each ICG shall be clearly defined by the joint meeting, based on the particular circumstances and issues at the time the group is established; the joint meeting shall also establish a target date for termination of the ICG;
- d) the ICG shall designate a Chairman and a Vice-Chairman, one representing each Sector;
- e) the ICG shall be open to members of both Sectors in accordance with Nos. 86 and 110 of the Constitution;
- f) the ICG shall not develop Recommendations;
- g) the ICG shall prepare reports on its coordinating activities to be presented to each Sector's Advisory Group; these reports shall be submitted by the Directors to the two Sectors;
- h) an ICG may also be established by the World Telecommunication Standardization Conference or by the Radiocommunication Assembly following a recommendation by the advisory group of the other Sector;
- i) the cost of an ICG shall be supported by the two Sectors on an equal basis and each Director shall include in the budget of his Sector, budgetary provisions for such meetings.

RESOLUTION No. 19

Inclusion of appropriate work from the Radiocommunication Sector into the programme of the Telecommunication Standardization Sector

(Helsinki, 1993)

The WTSC,

considering

(a) the Decisions of the Additional Plenipotentiary Conference (Geneva, 1992) to establish a new Telecommunication Standardization Sector (ITU-T);

(b) the need to ensure expeditious and harmonious integration of work appropriate for allocation to the new ITU-T into its work programme;

(c) the opportunity to coordinate the work programme of the ITU-T with that of the Radiocommunication Sector through WTSC-93 and the Radiocommunication Assembly (November 1993),

noting

(d) that a group composed mainly of Study Group Chairmen has reviewed the work items considered by the former CCIR Resolution 106 ad hoc Group to be of relevance to the charter of the ITU-T [see WTSC-93 document 55(rev.1)];

(e) that the group has prepared a programme toward the detailed analysis and initial integration of appropriate work [see WTSC-93 document number 55(rev.1)], and nominated Study Groups to coordinate the integration of this work;

(f) that in addition, Administrations may wish to examine the work proposed for transfer in conjunction with their colleagues in the Radiocommunication Sector and propose appropriate Questions for relevant Study Groups,

instructs the Director of the TSB

1 to provide to each Study Group Chairman relevant information on the Radiocommunication Sector Questions identified as relevant to the work of the ITU-T;

2 to seek from the Chairmen of the coordinating Study Group and other Study Groups the results of their analyses toward the integration of appropriate work including:

- identification of specific Study Groups;
- to conduct studies on the work items identified, and
- work items appropriate for integration into the ITU-T work programme;

3 to submit the results of the work of the coordinating and other involved Study Groups to the June 1993 meeting of the Telecommunications Standardization Advisory Group (TSAG), and

requests the Chairmen of the coordinating Study Group and other Study Groups

1 to analyse the work identified by the former CCIR Resolution 106 ad hoc Group, as relevant to the work of the ITU-T (the coordinating Study Group as appropriate with the relevant Study Groups of the Radiocommunication Sector);

2 to identify appropriate Study Groups for the conduct of the work (which may include their own and/or Radiocommunication Sector Study Groups);

3 to provide appropriate information (including any necessary draft revised or new Questions) to the Director of the TSB.

RESOLUTION No. 20

Procedures for allocation of country and network codes

(Helsinki, 1993)

The WTSC,

considering

(a) that the procedures governing the allocation of new telex destination codes, telephone ISDN country codes, data country codes and related codes, should be reviewed to ensure that these procedures meet current and foreseeable operational conditions;

(b) that the principles concerning future numbering plans to deal with emerging services will be studied under specific Questions approved by this Conference,

recognizing

that the allocation of future country and network codes is a responsibility of the TSB Director and the relevant Administrations,

requests

1 the relevant Study Groups:

- i) to review carefully the provisions in the relevant E-, F- and X-Series ITU-T Recommendations concerning the procedural aspects only of the allocation of country codes, network codes, etc.;
- ii) to determine in particular what circumstances require that the technical and operational expertise within the relevant Study Groups be consulted before allocations of codes are made; and
- iii) to review the provisions concerning promulgation, publication and the date of entry into effect of any such allocations;

2 the Chairman of Study Group 2 (in consultation with the Chairmen of Study Groups 1 and 7) to advise on consistency of approach in the code allocation procedures for the various services in order to assist the studies in (1) above;

3 the individual Study Groups to complete the studies in (1) above and to initiate approval by the Members of appropriate amendments to the relevant Recommendations (or of new Recommendations) as soon as practicable, and preferably so that the changes may enter into effect in mid 1994,

instructs

the Director of the TSB, pending approval of the appropriate amended or new Recommendations, to consult the Chairman of Study Groups 1, 2 or 7, as appropriate, (or the Chairman's delegated representative) and the Administrations concerned before approving any further changes concerning new telephone ISDN country codes, telex destination codes, telex network identification codes, data country codes and the first two characters in telegram destination codes.

RESOLUTION No. 21

Collection and dissemination of operational and service information by the Telecommunication Standardization Bureau

(Helsinki, 1993)

The WTSC,

in view of

- (a) Article 56 of the ITU Convention (Nairobi, 1982);
- (b) Article 8 of the International Telecommunication Regulations (Melbourne, 1988);
- (c) Resolution No. 7 of the Final Acts of the WATTC-88 (Melbourne, 1988);
- (d) Recommendation C.2 adopted by the WTSC-93,

considering

(e) the radical changes that have taken place in the telecommunication environment since many of the original service and operational publications were first specified;

(f) the need to carry out a review of service publications to determine if they still meet the present-day needs of users;

(g) the costs involved to the TSB and to Administrations¹⁾ in collecting, publishing and disseminating service documents;

(h) that technical evolution in the means of collecting and exchanging service and operational information in recent years needs to be reflected in how this information is disseminated,

mindful

(i) of Resolution No. 6 of the Final Acts of the WATTC (Melbourne, 1988) which recognizes "that certain rural areas and developing countries may need to rely on existing widely available services for international communications for a relatively long period of time";

(j) that such widely available services need to be supported by the availability of timely and economically disseminated service and operational information,

resolves

(1) that the responsible ITU-T Study Groups, with inputs coordinated by Study Group 1, carry out an extensive review of the service documents listed in Recommendation C.2, with a view to determining the most cost-effective and efficient manner of collecting and disseminating such information as is necessary, taking into account existing modern technologies and present-day user needs;

(2) that the responsible Study Groups should identify those service documents that should be discontinued or diminished since they no longer serve the needs of users;

(3) that the responsible Study Groups should submit a report to the Director of the TSB as early as possible, but no later than by the end of 1994, clearly indicating:

- which service documents should be discontinued;
- what more efficient and cost-effective means of collecting and disseminating service and operational information could be used instead of the present methods;
- how costs could be reduced, whilst still maintaining the dissemination of essential information pertinent to present-day needs,

¹⁾ or recognized operating agencies.

invites

(1) Administrations²⁾ to cooperate fully with the Study Groups concerned in preparing their report referred to in 3) above,

(2) Administrations²⁾ to advise the Director of the TSB which service documents or parts of service documents that they find essential for their operational needs, so that Study Group 1 only need to consider retention of those for which a genuine and widespread justification exists,

instructs

the Director of the TSB:

- to circulate a copy of this Resolution and the relevant background information to Administrations²⁾ by early May 1993 so that they may respond meaningfully to *invites* (2) above;
- to provide the study groups with information on collection difficulties, the demand for service documents and any proposals based on experience that might assist in making the production of service documents more efficient and cost-effective;
- to implement the proposals to be prepared by the Study Groups in a timely manner.

²⁾ or recognized operating agencies.

PART 2

Recommendations on the organization of the work of the ITU Telecommunication Standardization Sector (Series A)

CONTENTS

<i>Recommendation No.</i>	<i>Title</i>	<i>Page</i>
A.1	Presentation of Contributions relative to the Study of Questions assigned to the ITU-T	62
A.10	Terms and definitions	65
A.12	Collaboration with the International Electrotechnical Commission on the subject of definitions for telecommunications	66
A.13	Collaboration with the International Electrotechnical Commission on graphical symbols and diagrams used in telecommunications	66
A.14	Production maintenance and publication of ITU-T terminology	67
A.15	Elaboration and presentation of texts for Recommendations of the ITU Telecommunication Standardization Sector	68
A.20	Collaboration with other international organizations over data transmission	79
A.21	Collaboration with other international organizations on ITU-T-Defined Telematic services	80
A.22	Collaboration with other international organizations on information technology	81
A.23	Collaboration with other international organizations on Information Technology, Telematic services and data transmission	82
A.30	Major degradation or disruption of service	83

Recommendation A.1

PRESENTATION OF CONTRIBUTIONS RELATIVE TO THE STUDY OF QUESTIONS ASSIGNED TO THE ITU-T

(Malaga-Torremolinos, 1984; Melbourne, 1988; Helsinki, 1993)

1 With regard to the presentation of Contributions to the Study of Questions assigned to the ITU-T, the following general directives should be applied:

- a) Contributions should be concisely drafted, avoiding unnecessary details, tables or statistics that make no direct contribution to the study of a Question. They should be clearly written with a view to being universally understood, i.e. they should be as codified as possible, use international terminology and avoid the technical jargon peculiar to the author's country. When a Contribution deals with several Questions, these should be separated so that the text relating to each one begins on a fresh sheet of paper (not on the back of a page).
- b) A Contribution should not as a rule exceed about 2500 words (five pages), nor should it include more than three pages of figures (making eight pages in all). It should be accompanied by an abstract which is no more than 150-200 words, and which summarizes the aim of the Contribution and its technical content. Whenever possible, a section with the heading RATIONALE (or DISCUSSION), should be used for the main text which sets forth the essential information required for justifying the proposals or conclusions of the Contribution. The Contribution should end with a PROPOSAL or if not feasible, a CONCLUSION (both if required). For self-explanatory proposals, the rationale section may be omitted. These directives do not apply to draft Recommendations or to Contributions submitted by Rapporteurs.
- c) Documents of purely theoretical interest which are not directly related to the Questions under study should not be submitted.
- d) Articles which have been or are to be published in the technical press should not be submitted to the ITU-T, unless they relate directly to Questions under study.
- e) Passages of an unduly commercial nature included in a Contribution may be deleted by the Director of the TSB in agreement with the Chairman; the author of the Contribution shall be advised of any such deletions.

Detailed guidelines recommended for the preparation of Contributions are provided in Annex. Details on the presentation of the ITU-T texts can be found in Recommendation A.15.

2 Three copies of Contributions, drafted in one or more of the official languages of the Union, should be sent to the TSB; further copies should be sent directly by the authors to the Chairman and Vice-Chairmen of Study Groups as well as to the Working Party Chairmen and Rapporteurs concerned.

It is recommended that a translation of the Contribution into another working language should be sent to the TSB.

It is recommended for delayed Contributions that a translation of the abstract into at least one other working language if possible should be sent to the TSB as part of the Contribution.

3 Contributions should be submitted on very white paper of A4 format, in clear black type. If the paper is not of that format, the text on each sheet should not exceed the A4 format. The first page must have the standard layout of ITU-T Contributions. When existing ITU-T texts already translated have been used in some parts of a Contribution, a copy of the Contribution with a precise reference to the original sources also should be sent to the TSB. If ITU-T figures are used in the Contributions, the ITU-T number must not be deleted, even if the figure has been modified.

4 Normal Contributions which are to be considered at a Study Group or Working Party meeting should reach the TSB at least two months before the date fixed for the opening of the meeting. Delayed Contributions should arrive in TSB at least seven working days before the meeting.

ANNEX A
(to Recommendation A.1)

**Detailed guidelines for the preparation of Contributions
relative to the study of ITU-T Questions**

The guidelines in this Annex supplement the general directives set out in Recommendation A.1. For ease of reference, they are organized under relevant headings in two categories: one deals with the contents of the Contribution and the other the mechanics of its presentation.

A.1 *Contents of Contribution*

A Contribution should be clear, concise and comprehensive in itself. It should start with the Heading and the Abstract which are independent sections. The main text of the Contribution should contain two sections: Rationale (or Discussion) and Proposal (or Conclusion). Supplementary sections such as annexes, if necessary, should follow the main text. The guidelines for the structure of the main text do not apply to draft Recommendations or to submission by Rapporteurs.

A.1.1 *Heading* – The heading of a Contribution should provide:

- Study Period;
- language in which the Contribution is originated;
- Study Group Question number(s) which the Contribution is addressing;
- date of the Contribution;
- name of the Study Group to which the Contribution should be submitted;
- source of the Contribution: originating country and/or organization and address, telephone and fax numbers of author or contact person;
- title of the Contribution.

An example of the recommended format is given in Figure A-1/A.1.

<p>ITU Telecommunication Standardization Sector (ITU-T) Period 1993-1996</p> <p>Questions: 6, 10, 19, 27 and 33/12</p> <p style="text-align: center; margin: 20px 0;">STUDY GROUP 12 – CONTRIBUTION 97</p> <p>SOURCE: BRITISH TELECOM</p> <p>CONTACT: William A. Smith 1, Cutler Street Ipswich IP1 1UX England Tel. + 44 473 123-456, Fax -789</p> <p>TITLE: CONSIDERATIONS OF ECHO CAUSED BY THE ACOUSTIC LOSS PATH OF TELEPHONE SETS</p> <hr style="width: 20%; margin-left: auto; margin-right: 0;"/>	<p><u>COM 12-97-E</u> April 1993 <u>Original: English</u></p>
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FIGURE A-1/A.1

A.1.2 *Abstract* – The abstract should outline clearly and concisely the aim (for example, proposal for a new Recommendation) and the content (proposals and/or conclusions of the Contribution. In addition, it should enable prospective readers to determine quickly whether the Contribution contains information in their area of interest, and often which Working Party(ies) should review the Contribution. This is a very important part of the document and would normally be prepared after the other sections are written. An abstract should not exceed 150-200 words. It should be understandable by other Study Groups and not just the intended readers of the Contribution.

A.1.3 *Rationale (Discussion)* – This section should provide discussion, reasons and justification for the proposals or conclusions. It develops the theme, describing the methods used and the observations or findings, and comments on their significance.

A.1.4 *Proposal (Conclusion)* – The main text should end with a conclusion which, whenever possible, should be in the form of a concrete proposal indicating the intended disposition of the Contribution. It would be useful to make the following distinction between PROPOSAL and CONCLUSION, so that a standard approach to their application may be adopted. The heading PROPOSAL should be used when the section offers suggestions for acceptance (such as solutions, plans and changes the contributor expects to be implemented) and when decisions or actions are requested. The heading CONCLUSION should be used when it is merely informational, such as summarizing observations; and no decision about a course of action is expected. If both appear in a Contribution, the proposals should follow the conclusions.

A.1.5 *Supplementary Sections* – Supporting or more detailed information which might interrupt the flow of ideas in the main text should be placed in the sections containing annexes, appendices, references and attachments. A solid line can be used to separate such sections from the main text. Recommendation A.15, describes the distinction between the uses of Annex and Appendix.

A.2 *Mechanics and presentation*

A.2.1 *Section numbering* – The Contribution should be structured logically and, whenever clarity and flow demand, hierarchically with discrete sections and subsections for presenting different levels of detail. Different sections and subsections in the main text should be designated with decimal numbers, adhering as much as possible to the hierarchical numbering system recommended for ITU-T texts (Recommendation A.15); for example, 1.1, 1.2.3. Examples for numbering the supplementary sections are A.1.1 of Annex A and VI.3.4 of Appendix VI.

A.2.2 *Page numbering* – The title page should be left unnumbered. All the following pages should be numbered consecutively from page 2, including tables, annexes, appendices or attachments. Page numbers should normally be centered at the top of the page. Each page should include the document number (if available) immediately below the page number. It is useful to show the total number of pages with the page number, e.g. 2 of 10.

A.2.3 *Figures and diagrams* – In order to facilitate the reproduction in different languages no explanatory text or reference should appear in the figures, with the exception of standard abbreviations. Such textual matter should be given separately.

A.2.4 *Formulas* – Mathematical formulas should only be presented for explaining texts. Details of how they are derived should be avoided.

A.2.5 *Quotations* – Simple reference to the document number or paragraph number of an existing text or key phrase should be used instead of lengthy quotes. Material available elsewhere in the ITU-T should not be reproduced or quoted at length. Excerpts or brief summaries may be included in the Contribution when it is known that the members of the ITU-T Study Group do not have ready access to such material.

A.2.6 *References* – Reference to other ITU-T Contributions should be made by using the official document number, e.g. COM 14-10. If the referenced Contribution belongs to a previous Study Period, this fact should be noted as well.

References should only be made to publications which are available via the ITU Library services. In exceptional cases, a copy of the article should be provided with the Contribution.

(See Recommendation A.15 for more information on references and bibliographies.)

A.2.7 *Revision to existing text* – If a Contribution proposes modifications to an existing text, e.g. draft Recommendation, the portions of the text to be modified should be clearly separated from those parts of the Contribution supporting the proposals. Adequate indications should also be given to identify any changes proposed with regard to the previous version of the same text.

Such indications could be made either by bold face letters or by vertical revision bars (!) appearing at the margin of the page.

A.2.8 *Machine readable Contributions* – The ITU encourages the submission of material in machine readable form. “Guidelines” prepared by the ITU Computer Department are available directly from that department.

Recommendation A.10

TERMS AND DEFINITIONS

(New Delhi, 1960; Geneva, 1964, 1972 and 1980; Melbourne, 1988; Helsinki, 1993)

The WTSC,

considering

- (a) the importance of the work on terms and definitions;
- (b) that the organization and conduct of vocabulary work have been the subject of certain WTSC texts;
- (c) the importance of avoiding misunderstanding with the ITU-T and between the ITU-T and the ITU-R and IEC, respectively, in the use of terms and definitions;
- (d) the need to establish lists of terms and definition for information within the ITU-T and for information to ITU-R and IEC, and to update such lists regularly;

recommend

- (1) that the ITU-T, within its terms of reference, should continue its work on technical and operational terms and definition which may be required by Study Groups in the course of their work, these terms and definitions being published regularly by the ITU-T;
- (2) that each Study Group take the responsibility for terminology in its particular area of responsibility; all new terms used shall be defined and listed in a specifically labelled section of each report prepared by Study Group, Working Party or Rapporteur; the final decision on the definition of a “new term” rests with the Study Group.
- (3) that when establishing the use and definition of a new term, the Study Group, and those entities responsible to the Study Group, shall take into account the established use of relevant terms and definitions by other Study Groups in ITU-T or ITU-R as well as those found in the IEC to the extent it can do so without losing precision in its development of Recommendations;
- (4) that each Study Group shall assign a Rapporteur for terminology to coordinate its efforts regarding terms and definitions and to act as a contact person for the Study Group in this domain;
- (5) that the ITU-T establish a Terminology Coordination Committee with three members, respectively capable in the French, English and Spanish languages; the Chairman of such Committee shall be chosen by the Plenary Assembly;
- (6) that the existing ITU-T Editing Group should collect all proposed new terms and definitions, such as they are noted in each Study Group, Working Party and Rapporteur reports and provide them to the Terminology Coordinating Committee which shall act as a central information transfer point with the ITU-R and the IEC;

(7) that the ITU-T Terminology Coordination Committee shall communicate with individual Rapporteurs for Terminology where inconsistencies are found between the use, or proposed use, of terms and definitions in the ITU-T, the ITU-R and the IEC in its preparation of the IEV. These mediation efforts should seek voluntary agreement to the extent such agreement is feasible with remaining inconsistencies duly noted;

(8) that the TSB should periodically circulate terms and definitions proposed during a given study period to permit an awareness of emerging terminology; where more than one Study Group is defining the same term, efforts should be made by the respective Rapporteurs and Study Group Chairmen to select one Study Group to be responsible for its definition;

(9) that ITU-T Rapporteurs utilize any available ITU-R list of emerging terms and the IEC documents and publications as reference to seek consistency of ITU-T terms wherever practical.

Recommendation A.12

COLLABORATION WITH THE INTERNATIONAL ELECTROTECHNICAL COMMISSION ON THE SUBJECT OF DEFINITIONS FOR TELECOMMUNICATIONS

*(Geneva, 1964; amended at Mar del Plata, 1968;
Geneva, 1972; Melbourne 1988; Helsinki, 1993)*

The WTSC,

unanimously recommends

that in order to provide an internationally agreed vocabulary of telecommunications, the ITU-T should cooperate with the ITU-R and the International Electrotechnical Commission for the purpose of preparing those sections concerned with telecommunications in a new edition of the International Electrotechnical Vocabulary.

It is understood that for this purpose there is established:

- a joint coordination group (JCG) composed of members of the IEC and of the ITU;
- a number of groups of technical experts set up by the joint coordination group to prepare the drafts of the various sections of the *Telecommunications vocabulary*.

Recommendation A.13

COLLABORATION WITH THE INTERNATIONAL ELECTROTECHNICAL COMMISSION ON GRAPHICAL SYMBOLS AND DIAGRAMS USED IN TELECOMMUNICATIONS

*(New Delhi, 1960; amended at Geneva, 1964, Mar del Plata, 1968,
Geneva, 1972; Geneva, 1980; Helsinki, 1993)*

The WTSC,

recommends

that the ITU-T and ITU-R should continue to cooperate in the work of the ITU/IEC Joint Working Group which has been set up to prepare, for international telecommunications:

- an approved list of graphical symbols for diagrams and for use on equipment;
- approved rules for the preparation of diagrams, charts and tables and for item designation,

it being understood that

(a) within the Joint Working Group, the ITU (represented by equal numbers of members from the ITU-R and ITU-T) is represented on an equal footing with the IEC;

(b) the Joint Working Group, while being fully representative, is as small as possible to be able to work effectively and quickly;

(c) ITU members of the Joint Working Group are empowered to take decisions on questions relating to symbols and the rules referred to above, so that the publication of an approved list does not have to await formal approval by a following Conference of the ITU-T or ITU-R.

Recommendation A.14

PRODUCTION MAINTENANCE AND PUBLICATION OF ITU-T TERMINOLOGY

(Mar del Plata, 1968; Geneva, 1972, 1980; Helsinki, 1993)

The WTSC,

considering

(a) that new production methods for Recommendations have been adopted and that new information technology methods are in use by the TSB;

(b) that telecommunication terminology is in constant evolution due to developments and changes which occur in the domains of telecommunications covered by ITU-T activities;

(c) that all terminology (terms, definitions and abbreviations) developed in the various ITU-T Study Groups is stored in a trilingual database maintained by the TSB;

(d) that accurate, up-to-date terminology is an indispensable tool for both users and developers of ITU-T Recommendations,

recommends

that the Telecommunication Standardization Bureau ensure continued development and maintenance of the existing database and enhancement of publication and access facilities in order to ensure attainment of the following objectives:

(1) support by the TSB of terminology activities in the Study Groups and in the ITU Linguistic Division;

(2) continued optimization of the data in collaboration with Study Groups and the ITU Linguistic Division;

(3) production of printed/published lists of terms and definitions according to agreed logical divisions (e.g. Recommendation Series/Partial Series) by conventional and electronic means (e.g. CD-ROM);

(4) provision of local access in ITU headquarters to Study Group Rapporteurs and other users;

(5) permit remote access to the terminology database by authorized users.

Recommendation A.15

ELABORATION AND PRESENTATION OF TEXTS FOR RECOMMENDATIONS OF THE ITU TELECOMMUNICATION STANDARDIZATION SECTOR

(Geneva 1980; Helsinki, 1993)

Recommendation A.15 was approved in 1980 in order to rationalize and provide a standard format for texts prepared by Study Groups and other groups for publication. The goal was to arrive at a normalized paragraph numbering system and text presentation and to simplify working procedures within the Secretariats of both CCITT and ITU. The result was a standard final product for users and was the logical adjunct to electronic text storage and processing which was being introduced about the same time.

Between 1980 and 1993 the volume of text treated per study period has more than tripled, treatment techniques (equipment, software, methods, and publication media) have greatly evolved and working methods within the Study Groups and the Secretariat have changed. Given the accelerating pace of change, it is both practical and logical to provide an "elaboration and presentation guide" which will be able to follow the evolution in this domain.

The Guide is contained in Appendix I (see note). Appendix I does not form an integral part of this Recommendation thus permitting the Director of the Telecommunication Standardization Bureau to modify the Guide from time to time to accommodate the more important changes in the publications production environment. The Telecommunication Standardization Advisory Group should be made aware when any such modification is proposed.

It is recommended:

- 1) that a procedure for rational elaboration, hierarchical numbering and standardized presentation and layout of texts be applied to all Recommendations of the ITU Telecommunication Standardization Sector;
- 2) that such a procedure be provided in the "Guide for the elaboration and presentation of texts for Recommendations of the ITU Telecommunication Standardization Sector" which constitutes Appendix I to this Recommendation;
- 3) that the Director of the Telecommunication Standardization Bureau ensure the application of this procedure;
- 4) that the Director of the Telecommunication Standardization Bureau ensure periodic updating of the "Guide for the elaboration and presentation of texts for Recommendations of the ITU Telecommunication Standardization Sector" in response to changes in the publications production environment.

Note – A similar guide which deals exclusively with ITU-T / ISO/IEC common text has been elaborated jointly with ISO/IEC and is available from the ITU Telecommunication Standardization Bureau.

APPENDIX I

(This appendix does not form an integral part of Recommendation A.15)

GUIDE

FOR THE ELABORATION AND PRESENTATION OF TEXTS FOR RECOMMENDATIONS OF THE ITU TELECOMMUNICATION STANDARDIZATION SECTOR

Summary

This Guide for preparing ITU-T texts (e.g. draft Recommendations) when used by authors will permit a standard, and thus more efficient, approach to the preparation of texts by the Secretariat of the ITU-T for publication. It covers the rules for drafting a Recommendation in a standard manner. Its provisions should be applied in all instances where texts (such as draft Recommendations) are being prepared by Study Group authors for approval and publication. The methods presented in this Guide will remain stable until changes to current text treatment procedures necessitate its modification.

GUIDE FOR THE ELABORATION AND PRESENTATION OF TEXTS FOR RECOMMENDATIONS OF THE ITU TELECOMMUNICATION STANDARDIZATION SECTOR

1 Scope

This Guide is intended to provide a common approach to the preparation of ITU-T texts which are destined for publication, e.g. draft Recommendations. It attempts to cover all the questions likely to arise in the preparation of an ITU-T Recommendation and provides, through application of its own rules, an illustration using the normal order of the elements of the drafting of a typical Recommendation. To avoid confusion which may result from this approach for a first-time reader, detailed explanations of the contents of each heading are given in 2 “Elements of a Recommendation” below. Table 1 shows the normal order and arrangement of the elements that may comprise a Recommendation.

TABLE 1/A.1500
Arrangement of elements (typical)

Element	Clause number
Title page ^{a)}	None
Foreword ^{a)}	None
Contents ^{a)} (optional)	None
Summary ^{a)}	None
Introduction ^{a)} (optional)	None
Background ^{a)} (optional)	None
Keywords ^{a)} (optional)	None
Title	None
Scope	1 ^{b)}
References	2 ^{b)}
Definitions	3 ^{b)}
Abbreviations	4 ^{b)}
Conventions	5 ^{b)}
Text of Recommendation	6 onwards ^{b)}
Annexes (form an integral part of the Recommendation)	A onwards
Appendixes (do not form an integral part of the Recommendation)	I onwards
Bibliography	None
Index (optional)	None
^{a)} These elements are considered as up-front material (outside the main body of the Recommendation). ^{b)} These clause numbers are given for guidance and are not fixed since some of the elements may not be present.	

2 Elements of a Recommendation

2.1 Cover or title page

The cover or title page shall be supplied by the Telecommunication Standardization Bureau. It shall provide the title of the Recommendation as decided by the Study Group and, in addition, will provide the name of the heirarchically superior division of the Series into which the Recommendation falls.

2.2 Foreword

The Foreword is the first text element, placed on the back of the title page and provides administrative, copyright and other information which is determined and prepared by the Telecommunication Standardization Bureau.

2.3 Contents (optional)

The "Contents" element is provided to assist the reader and depending on the length and complexity of the Recommendation, may list all the subclauses of the main text and annexes, or only the main clause plus one level of the subclauses. The general rule is to keep it as short as possible while providing the necessary minimum of aid to the reader. The ITU Secretariat may generate a table of contents if none is included with the manuscript. All items listed shall be cited with their full titles.

2.4 Summary

This element is mandatory and is placed in front of the main body of the Recommendation. It provides a brief overview of the purpose and contents of the Recommendation thus permitting readers to judge its usefulness for their work.

2.5 Introduction (optional)

This element, which is placed in front of the main body of the Recommendation, introduces the subject and may give, for example, the reasons leading to its preparation, the technical content of the text and any other information that the author deems appropriate.

2.6 Background (optional)

This element, which is placed in front of the main body of the Recommendation, provides information which describes the framework of the Recommendation. It can include the history (for example, if the Recommendation was originally written a number of years ago and has since been modified a number of times) and describe any association with other Recommendations.

2.7 Keywords (optional)

This element, which is placed in front of the main body of the Recommendation, lists words which identify the main topics in the Recommendation and which serve in electronic text searches. A manual of accepted keywords may be used in the selection of appropriate words. Work on the use of keywords as a search tool is proceeding in conjunction with the implementation of electronic mail to provide access to stored Recommendations at ITU .

2.8 Title

The title should not be unnecessarily long and should provide an indication of the main topics covered. The Recommendation proper commences on page 1 with the number and title.

2.9 Scope

This element shall appear, as clause 1, at the beginning of every Recommendation, to define, without ambiguity, the intent or object and the aspects covered, thereby indicating the limits of applicability.

2.10 References

This element permits the author to list the CCITT Recommendations, ITU-T Recommendations and other (international) standards referred to in the body of the Recommendation. The references should be introduced with a standard text as follows:

“The following ITU-T Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision; all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.”

Reference to any other texts may be made through a bibliography in an appendix at the end of the Recommendation.

2.11 Terms and definitions

This element gives the definitions necessary for the understanding of certain terms used in the Recommendation. When present, it should be introduced by the following text: “For the purposes of this Recommendation, the following definitions apply”.

The terms with their definitions used in the Recommendation shall be extracted from the text and listed. An example is given as follows :

“For the purpose of this Recommendation, the following definitions apply:

clause: The word “clause” shall be used to denote the main (i.e. single digit numbered) text passages.

subclause: The word subclause shall be used to denote text passages that are subdivisions (i.e. multiple digit numbered parts) of a clause.

annex: An annex to a Recommendation contains material (e.g. technical detail or explanation) which is necessary to its overall completeness and comprehensibility and is therefore considered an integral part of the Recommendation (the term “integral annex” is used in joint ITU-T | ISO/IEC texts)

appendix: An appendix to a Recommendation contains material which is supplementary to and associated with the subject matter of the Recommendation but is not essential to its completeness or comprehensibility and is therefore not considered to be an integral part of the Recommendation (the term “non-integral annex” is used in joint ITU-T | ISO/IEC texts).”

Individual numbering of terms and their definitions is not required but may be used for special reasons. If terms defined elsewhere are used, they shall be grouped in a subclause and introduced as in the following example: “This Recommendation uses terms defined in ITU-T Rec....”, followed by a list of the terms used.

2.12 Abbreviations

This element lists all the abbreviations from throughout the Recommendation, in alphabetical order and with their complete text. The first letter of the first word of the text shall be capitalized; all other words shall not be capitalized unless they are special terms. An example is given as follows :

“For the purpose of this Recommendation the following abbreviations are used:

CCITT International Telephone and Telegraph Consultative Committee

IEC International Electrotechnical Commission

ISO International Organization for Standardization

ITU-T International Telecommunication Union – Telecommunication Standardization”

2.13 Conventions

This element, which is optional, shall list particular notations, styles, presentation, etc., used within the Recommendation.

The unnecessary use of “capitalized” words shall be avoided. Special classes of terms or other texts which are to be capitalized throughout the Recommendation shall be listed in the Conventions.

2.14 Text of the Recommendation

The text of the first line of each clause or subclause shall start at the margin, except for listings.

2.14.1 Clause and subclause numbers

Subclauses shall be numbered with the digits of the number in bold and separated by periods. In the case of a clause number, no period shall be present.

The clause or subclause number shall appear (together with the title) on a line separate from the text.

2.14.2 Clause and subclause titles

The title, in bold, indicating the content of the clause or subclause, shall appear to the right of the subclause number. Untitled subclauses shall be avoided.

2.14.3 Lists

Although a great number of forms are possible for multiple level lists, it is desirable to restrict the number of variants. In the interest of simplicity, authors should avoid lists with more than three levels. Two possible variants, used for one-level-only lists, are shown below (others may use letters/numbers) :

- first item;
- second item;
- etc.

or

- first item;
- second item;
- etc.

The second form, which may apply to either one- or two-level lists is shown below:

- a) first item;
- b) second item;
- c) etc.

When sublists appear within a list as a second level, the list takes the following form:

- a) first item:
 - 1) first sub-item;
 - 2) second sub-item.
- b) second item:
 - 1) first sub-item;
 - 2) second sub-item.

Lists with three levels would use a combination of the above forms; lists with more than three levels should be avoided if possible.

2.15 Mathematical expressions and symbols (formulas, equations, etc.)

2.15.1 Presentation

Equations, formulas and other expressions shall be in the mathematically correct form and shall occupy one or more lines with no text, unless text is an integral part of the expression. For reference purposes, each expression shall be given a number (placed at the right margin) which contains the clause number plus a number in sequence from the beginning of the clause, e.g. Formula 6-3/K.35 is the third mathematical expression in clause 6 of Recommendation K.35. Given the complicated nature of mathematical expressions, great care shall be exercised to ensure that manuscripts are abundantly clear (e.g. for the vertical placement of sub- or super-scribed numbers or variables) and leave no room for misinterpretation by the secretariat.

If the text treatment software used by the author has limited possibilities to produce mathematical expressions with the correct layout (giving relative positions and sizes of all elements), it is preferable to produce them accurately by hand.

2.15.2 Equations

Equations and other expressions shall start on a new line, indented from the left margin. Successive iterations of the right hand side of an equation (i.e. after the equals sign) shall occupy successive lines and the equals signs shall be aligned vertically.

2.15.3 Quantities, units and symbols

The use of quantities, units and symbols shall follow the International System of units (SI) as defined by ISO, in ISO 31 and ISO 1000, which give the standard name of physical quantities with their agreed symbol. Letter symbols used to express quantities in an expression shall be listed with their explanations below the expression, or group of expressions, using them. Symbols for variable quantities are written in italics, non variable or constant quantities are expressed by roman characters.

2.16 Figures and tables

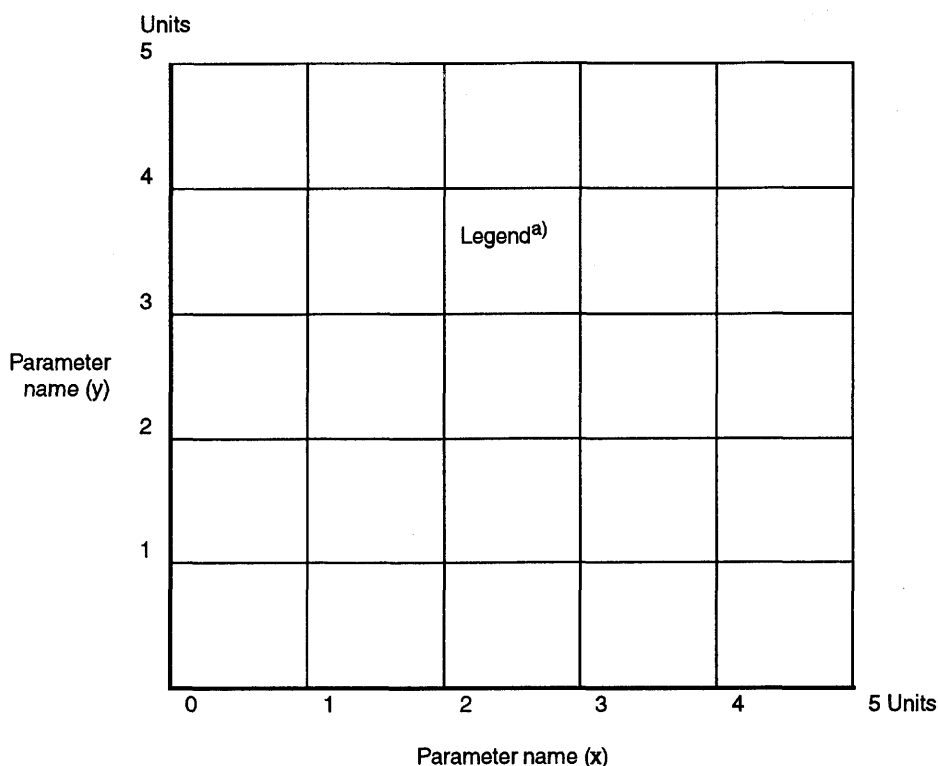
2.16.1 Figures

Each figure shall be referred to explicitly in the text.

Figures shall be numbered with arabic numerals, beginning with 1 (within annexes there will be a letter-plus-period prefix) followed by a fraction bar and the number of the Recommendation e.g. "FIGURE 5/X.440", "FIGURE A.3/G.121". This numbering shall normally be independent of the numbering of the clause and of any tables. For Recommendations which are very long or complex, however, the author may number figures sequentially with respect to the single digit clause number, e.g. "FIGURE 4-3/M.450" which denotes the third figure in clause 4 of Recommendation M.450.

The number and title shall be placed on separate lines and centred, below the figure. References in the text to specific figures (see 2.18) should use the word "Figure" with an uppercase "F", e.g. "see Figure 1". The first letter of the title shall be capitalized; all other words shall not be capitalized unless they are special terms that are capitalized throughout the Recommendation in accordance with the conventions given.

When a figure is continued over two or more pages, the following text shall appear on intermediate pages: "Figure number + figure title (*continued*)" and the following text shall appear on the last page: "Figure number + figure title (*concluded*)".



a) Explanatory comments are placed immediately below the figure

NOTE – General notes to the figure are placed above the number and title of the figure.

FIGURE 1/A.1500

Example of presentation of figures

2.16.2 Tables

Each table shall be referred to explicitly in the text.

Tables shall be numbered with arabic numerals, beginning with 1 (within annexes there will be a letter-plus-period prefix) followed by a fraction bar and the number of the Recommendation e.g. “TABLE 5/X.440”, “TABLE A.3/G.121”. This numbering shall normally be independent of the numbering of the clause and of any figures. For Recommendations which are very long and complex, the author may number sequentially with respect to the single digit clause number e.g. “TABLE 4-3/M.450” which denotes the third table in clause 4 of Recommendation M.450.

The number and title shall be placed on separate lines and centred, above the table. References in the text to specific tables (see 2.18) should use the word “Table” with an uppercase “T”, e.g. “see Table 1”. The first letter of the title shall be capitalized; all other words shall not be capitalized unless they are special terms that are capitalized throughout the Recommendation in accordance with the conventions given.

The first letter in the heading of each column shall be capitalized. Columns shall, if possible, be separated by vertical lines. The heading shall, if possible, be separated from the contents by a horizontal line. The table shall, if possible, be surrounded by lines forming a box.

When a table is continued over two or more pages, the following text shall appear on intermediate pages: “Table number + table title (*continued*)” and the following text shall appear on the last page: “Table number + table title (*concluded*)”. Column headings shall be repeated on each page.

2.16.3 Text references to figures and tables

Table 2 explains the meaning of the text references to tables and figures.

TABLE 2/A.1500
Text references to figures and tables

Reference term	Meaning
Table 1/W.1001	First table in Recommendation W.1001
Figure 2/W.1001	Second figure in Recommendation W.1001
Table A.3/W.1001	Third table in Annex A of Recommendation W.1001
Table II.2/W.1001	Second table in Appendix II of Recommendation W.1001

2.17 Notes and footnotes

2.17.1 Notes and footnotes to the main text

Proliferation of notes should be avoided. If the text is written in a clear manner the need for notes should be minimal. If supplementary or complementary information is necessary, notes may be integrated in the text of a Recommendation. They shall not contain requirements. They shall normally be placed after the clause, subclause or paragraph to which they refer.

A single note within a subclause shall start with the text “NOTE –”, placed at the beginning of the first line of the text of the note. If two or more notes are grouped together, they shall be placed under the title “NOTES”, this word being on a line by itself; the text of each note shall then be preceded only by an arabic numeral at the beginning of its first line. Each group of notes shall be numbered independently, i.e. 1, 2, 3, etc. If individual notes occur at separate places within the same numbered sub-division of text, they shall be designated “NOTE 1 –”, “NOTE 2 –”, “NOTE 3 –”, etc. An alternative manner of numbering is for all notes integrated in the text to be numbered in a continuous sequence throughout the document.

NOTE – The first line of all paragraphs of a note shall be indented (at tab1) from the margin of the main text to help identify the extent of the note.

Footnotes may be used to provide information regarding a particular item, word or concept. They shall be indicated by a superior positioned arabic numeral plus right hand parenthesis at the appropriate location in the text and shall be numbered consecutively throughout the Recommendation. Both the indicator and the footnote itself shall be printed with a font one or two sizes lower than the main text.

2.17.2 Notes and footnotes to figures and tables

Notes and footnotes to tables and to figures shall be treated independently from footnotes and notes integrated in the text. They shall be located within the frame of the relevant table or immediately above the title of the relevant figure. Notes for each table and each figure shall be numbered independently. Such notes may contain requirements. Footnotes to a table or figure shall be indicated by a superior positioned lower case letter. Both the indicator and the footnote itself shall be printed in a font smaller than the main text.

2.18 Citing of references

When reference is made to other text passages, tables, figures, etc. **within the same** Recommendation it is sufficient to cite the appropriate number without the Recommendation number, e.g. "see Table 4" or "see 5.4.7". For references to **parts of another** Recommendation, its number should be included in the reference e.g. "see Figure 6/Q.555" or "see 3.8.2/Q.560".

2.19 Annexes

Annexes that form an integral part of the Recommendation shall appear immediately after the text of the Recommendation. The annexes shall be designated A, B, C etc. A single annex shall be designated "Annex A"

The title of the annex shall be immediately followed by the following text, centered: "(This annex forms an integral part of this Recommendation.)".

Numbers given to the clauses, subclauses, tables, figures and equations of an annex shall be preceded by the letter assigned to that annex, e.g. "see Figure B.3". The numbering shall start afresh with each annex.

2.20 Appendixes

Appendixes do not form an integral part of the Recommendation and shall appear immediately after the last (integral) annex of the Recommendation, or after the text, if there are no annexes. The appendixes shall be designated with roman numerals (i.e. I, II, III, ...). A single appendix shall be designated "Appendix I".

The title of the appendix shall be immediately followed by the following text, centered: "(This appendix does not form an integral part of this Recommendation.)".

Numbers given to the clauses, subclauses, tables, figures and equations of an appendix shall be preceded by the numeral assigned to that appendix, e.g. "see Table IV.2". The numbering shall start afresh with each appendix.

2.21 Bibliography

This element may be present in order to cite reference or source not covered by the reference element.

2.22 Index

This element is optional, but can be a useful tool for users. If included, the index is the last element of the Recommendation. It is preferable that the index entries should provide clause or subclause number references and not page number references which are subject to change during processing in the Secretariat.

Annex A

Treatment of machine readable text

(This annex forms an integral part of this Recommendation)

A.1 Document processing limitations

An objective of ITU-T is to be able to accept, process and distribute information in machine readable form. The realization of this objective has started but there are some practical constraints which will take some time to resolve. For example, shortly before an ITU-T meeting, many documents may be received which require a minimum of processing before being reproduced for distribution at the start of the meeting. In the "paper era", these documents could be registered, numbered, etc., and then reproduced rapidly within acceptable delays. With machine readable texts, if the author's word processor and graphics software are different from that used in-house by the ITU [Microsoft Word for Windows, Designer and SDT (for SDL diagrams)], time consuming conversion plus the associated checking has to be performed before printouts can be made for reproduction and distribution. With large numbers of documents arriving, this delay would become unacceptable.

Documents stored using the current ITU text and graphics software (Word for Windows, Designer and SDT) would require, apart from a minimum of processing, only to be printed out and would not (unless very large numbers of documents are involved) introduce undue delays.

In view of the foregoing, documents in machine readable form (i.e. other than Word for Windows, Designer and SDT), submitted to ITU-T shortly before a meeting must be accompanied by a hard copy. A Word for Windows "template" for ITU-T texts is available from the Telecommunication Standardization Bureau to assist authors and further facilitate text processing in the ITU-T Secretariat. In order to facilitate updating of author's templates it is planned in future to have the latest version available on-line at ITU.

A.2 Version identification

The means adopted by ITU-T for version identification of new or modified Recommendations when they are published is to indicate the date (month/year) of approval (e.g. 08/92) under the Recommendation number.

Experience has shown that failure to identify changes in successive versions of text can entail considerable duplication of effort in technical editing, translation (leading to confusing differences between versions and high added costs) and publication. Indication should therefore be given what version of a particular text is being dealt with when new Contributions or Reports appear. The final draft should clearly indicate all changes to show how that version relates to the last version stored in ITU and to the last translated version (in case they do not coincide).

Appendix I

ITU-T | ISO/IEC joint Recommendations | International Standards

(This appendix does not form an integral part of this Recommendation)

Collaboration between ITU-T and ISO/IEC takes place in the domain of information technology (covered by WTSC-93 Recommendation A.23) and this results in joint Recommendations | International Standards which are published separately but have identical content. To facilitate preparation of identical text by authors from either the ITU-T or ISO/IEC side, a set of presentation rules has been prepared and is available from the TSB under the title "Information technology – Rules for presentation of ITU-T | ISO/IEC common text"

Recommendation A.20

COLLABORATION WITH OTHER INTERNATIONAL ORGANIZATIONS OVER DATA TRANSMISSION

(Geneva, 1964; Mar del Plata, 1968; Geneva, 1972, 1976 and 1980;
Malaga-Torremolinos, 1984; Helsinki, 1993)

The WTSC,

considering

(a) that, according to Article 1 of the agreement between the United Nations and the International Telecommunication Union, the United Nations recognizes the International Telecommunication Union as the specialized agency responsible for taking such action as may be appropriate under its basic instrument for the accomplishment of the purposes set forth therein;

(b) that Article 4 of the *International Telecommunication Convention* (Nairobi, 1982) states that the purposes of the Union are:

- “a) to maintain and extend international cooperation between all Members of the Union for the improvement and rational use of telecommunications of all kinds, as well as to promote and to offer technical assistance to developing countries in the field of telecommunications;
- b) to promote the development of technical facilities and their most efficient operation with a view to improving the efficiency of telecommunication services, increasing their usefulness and making them, so far as possible, generally available to the public;
- c) to harmonize the actions of nations in the attainment of those ends”;

(c) that Article 40 of the Convention (Nairobi, 1982) states that, in furtherance of complete international coordination on matters affecting telecommunication, the Union shall cooperate with international organizations having related interests and activities;

(d) that in the study of data transmission the ITU-T has to collaborate with the organizations dealing with data processing and office equipment and particularly the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC);

(e) that this collaboration has to be organized in a manner that will avoid duplication of work and decisions that would be contrary to the principles set out above;

unanimously declares the view

that international standards for data transmission should be established with the following considerations in mind:

(1) Clearly it will be the responsibility of the ITU-T to lay down standards for *transmission channels*, i.e. aspects of data transmission which require a knowledge of telecommunication networks or affect performance of these networks.

(2) The standardization of signal conversion terminal equipment (modems) is the province of the ITU-T; the standardization of the junction (interface) between modem and the data terminal equipment is a matter of agreement between the ITU-T and the ISO or the IEC.

(3) Devices designed to detect and (or) correct errors must take account of:

- the error rate tolerable to the user;
- the line transmission conditions;
- the code, which has to meet the exigencies of the data alphabet and the requirements of error control (this must be such as to give an output satisfactory to the user) together with the requisite signalling (synchronism, repetition signals, etc.).

Standardization here may not come wholly within the ITU-T's province, but the ITU-T has very considerable interests at stake.

(4) The alphabet (definition 52.02 in the *List of definitions*) is a “table of correspondence between an agreed set of characters and the signals which represent them”.

The ITU-T and the ISO reached agreement on an alphabet for general (but not exclusive) use for data and message transmission and have standardized a common alphabet which is known as International Alphabet No. 5 (ITU-T Recommendation T.50) (ISO/646-1983: seven-bit coded character sets for information processing interchange).

Complementary study of some control characters of the alphabet should be effected in cooperation with each other.

(5) Coding (definition 52.02 in the *List of definitions*) is “a system of rules and conventions according to which the telegraph signals forming a message or the data signals forming a block should be formed, transmitted, received and processed”. Hence, it consists of a transformation of the format of the signals in the alphabet for taking account of synchronous methods, and introduction of redundancy in accordance with the error control system. This is not a field in which the ITU-T alone may be able to decide; however, no decision should be taken without reference to the Committee, because of the possible restrictions which transmission and switching peculiarities may impose on coding.

When the general switched network is used (telephone or telex) and when the error-control devices are subject to restrictions (switching signals – reserved sequences), it is the ITU-T which is in fact responsible for any necessary standardization in conjunction with other bodies.

(6) The limits to be observed for transmission performance on the transmission path (modem included) fall within the competence of the ITU-T; the limits for the transmission performance of the sending equipment and the margin of terminal data equipment (depending on the terminal apparatus and the transmission path limits) should be fixed by agreement between the ISO and the ITU-T.

(7) In all instances, the ITU-T alone can lay down manual and automatic operating procedures for the setting-up, holding and clearing of calls for data communications when the general switched networks are used, including type and form of signals to be interchanged at the interface between data terminal equipment and data circuit-terminating equipment.

(8) When a public data network is involved, the ITU-T has the responsibility to provide the Recommendations which apply. Where these Recommendations have an impact on the basic design and features of data processing systems and office equipment (normally DTE), they shall be the subject of consultation between ITU-T and ISO and in some cases a mutual agreement may be desirable. Likewise when the ISO is developing or changing standards that may affect compatibility with the public data network there shall be consultation with the ITU-T.

Recommendation A.21

COLLABORATION WITH OTHER INTERNATIONAL ORGANIZATIONS ON ITU-T-DEFINED TELEMATIC SERVICES¹⁾

(Geneva, 1980; Malaga-Torremolinos, 1984; Helsinki, 1993)

The WTSC,

considering

(a) that, according to Article 1 of the agreement between the United Nations and the International Telecommunication Union, the United Nations recognizes the International Telecommunication Union as the specialized agency responsible for taking such action as may be appropriate under its basic instrument for the accomplishment of the purposes set forth therein;

¹⁾ “Telematic services” is used for such services as Videotex, Teletex, facsimile, etc.

(b) that Article 4 of the *International Telecommunication Convention* (Nairobi, 1982) states that the purposes of the Union are:

- “a) to maintain and extend international cooperation between all Members of the Union for the improvement and rational use of telecommunication of all kinds, as well as to promote and to offer technical assistance to developing countries in the field of telecommunications;
- b) to promote the development of technical facilities and their most efficient operation with a view to improving the efficiency of telecommunication services, increasing their usefulness and making them, as far as possible, generally available to the public;
- c) to harmonize the actions of nations in the attainment of those ends;”

(c) that Article 40 of the Convention (Nairobi, 1982) states that in furtherance of complete international coordination on matters affecting telecommunication, the Union shall cooperate with international organizations having related interests and activities;

(d) that this cooperation has to recognize the advisory capacity of organizations participating in the work of ITU-T;

(e) that, in the study of terminals for new ITU-T-defined telematic services (e.g. Teletex, Telefax, Datafax, Bureaufax, Videotex), ISO in particular is invited to give advice to ITU-T based on their work on data systems and data communications;

(f) that this cooperation has to be organized in a manner that will avoid duplication of work and of decisions that would be contrary to the principles set out above,

recognizes the following principles

(1) it is the responsibility of the ITU-T alone to make the decisions regarding the operational, technical (including factors needed to ensure international interworking) and tariff principles of the ITU-T-defined services;

(2) while the ITU-T will define many of the relevant factors for the ITU-T-defined telematic services, other international organizations will be invited to give specialist advice to ITU-T on subjects that are of mutual interest, such as:

- character sets and coding;
- end-to-end control procedures including error protection;
- interfaces between terminals and circuit terminating equipment;
- terminal transmitter distortion and receiver margin;
- paper sizes and text formatting;

(3) standardization, if required, of hardware and software implementation of terminals, such as printing systems, paper feed, character type fonts, paper characteristics, etc., are outside the scope of ITU-T.

Recommendation A.22

COLLABORATION WITH OTHER INTERNATIONAL ORGANIZATIONS ON INFORMATION TECHNOLOGY

(Melbourne, 1988; Helsinki, 1993)

The WTSC,

considering

(a) that the purposes of the International Telecommunication Union and the recognition of ITU-T relations with other organizations were given in 1964 and later, in Recommendation A.20 which concerns data transmission; and

(b) that the principles of responsibility in regard to ITU-T-defined Telematic services were given in 1980 and later, in Recommendation A.21 which mentions some subjects of mutual interest; and

(c) that Resolution No. 7 in 1984 further recognized common interests with ISO and IEC concerning Information Technology and cooperation with them by appropriate means;

recognizes the following principles

(1) that in accordance with Recommendations A.20 and A.21 and Resolution No. 7, every effort should be made in establishing respective study programmes to identify overlapping studies with a view to avoiding duplication of work;

(2) that where subjects are identified in which coordination seems desirable, text should be drawn up mutually and kept aligned;

(3) that in carrying on the respective programmes of Information Technology studies, collaborative meetings at appropriate levels should be scheduled, where necessary. In drafting aligned text, it is necessary to take into account the respective timing for approvals and publication, particularly with the ISO/IEC Joint Technical Committee 1 (JTC 1) on Information Technology;

(4) that commonality of text with ISO/IEC and cross-references is considered desirable in certain areas of mutual interest, such as:

- Message Handling Systems,
- Directory Systems,
- Open Systems Interconnection (OSI) architecture, service definitions and protocol specifications,
- certain areas of Interworking,
- certain aspects of Telematic Services,
- Document Architecture,
- certain aspects of ISDN.

Recommendation A.23

COLLABORATION WITH OTHER INTERNATIONAL ORGANIZATIONS ON INFORMATION TECHNOLOGY, TELEMATIC SERVICES AND DATA TRANSMISSION

(Helsinki, 1993)

Introduction

The purposes of the International Telecommunication Union and the recognition of ITU-T relations with other organizations were given in 1964 and later, in Recommendation A.20 which concerns data transmission.

The principles of responsibility in regard to ITU-T-defined Telematic services were given in 1980 and later, in Recommendation A.21 which mentions some subjects of mutual interest.

Resolution No. 7 in 1984 and later, further recognized common interests with ISO and IEC concerning Information Technology and cooperation with them by appropriate means.

The principles of collaboration on Information Technology, particularly with the ISO/IEC Joint Technical Committee 1 (JTC 1), were given in 1988 in Recommendation A.22.

The WTSC decides that the following principles should be applied

- 1 that in accordance with Recommendations A.20, A.21 and A.22 and Resolution No. 7, every effort should be made in establishing respective study programmes to identify overlapping studies with a view to avoiding duplication of work;
- 2 that where subjects are identified in which coordination seems desirable, text should be drawn up mutually and kept aligned;
- 3 that in carrying on the respective programmes of Information Technology studies, collaborative meetings at appropriate levels should be scheduled, where necessary. In drafting aligned text, it is necessary to take into account the respective timing for approvals and publication, particularly with the ISO/IEC Joint Technical Committee 1 (JTC 1) on Information Technology.

A Guide¹⁾ for ITU-T and ISO/IEC JTC 1 Cooperation exists, which includes drafting rules for presentation of common text, is associated with this Recommendation. These procedures, which have also been adopted by ISO/IEC JTC 1, should be used, with flexibility, according to need.

Recommendation A.30

MAJOR DEGRADATION OR DISRUPTION OF SERVICE

(Melbourne, 1988; Helsinki, 1993)

When exceptional circumstances causing a major degradation or disruption of service (e.g. natural disasters, strikes, facility outages, etc.) occur, Administrations should notify the Secretary-General of such conditions and of the return to normal conditions. The Secretary-General shall use the most appropriate means of telecommunications to bring the information received to the attention of affected Administrations. Other Recommendations specifically dealing with measures to be taken under such circumstances should be consulted for the procedures to be followed.

¹⁾ The Guide, the drafting rules and a template for applying these rules are available as separate items from the TSB for persons preparing ITU-T/ISO/IEC texts.

PART 3

Study Groups, Study Group Chairmen and Study Group Vice-Chairmen of the ITU Telecommunication Standardization Sector

List of study groups of the ITU Telecommunication Standardization Sector

Study Group 1 – Service definition

Chairman: M. ISRAEL (CAN)
Vice-Chairmen: A.K. CABRERA (AUS)
J. MARTORY (F)
R. SMITH (USA)

Study Group 2 – Network operation

Chairman: G. GOSZTONY (HNG)
Vice-Chairman: T. OHTA (J)

Study Group 3 – Tariff and accounting principles

Chairman: B. ROUXEVILLE (F)
Vice-Chairmen: T. MATSUDAIRA (J)
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Chairman: J. SHRIMPTON (USA)
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Study Group 7 – Data networks and open system communications

Chairman: H.V. BERTINE (USA)
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Study Group 8 – Terminals for telematic services

Chairman: W. STAUDINGER (D)
Vice-Chairmen: A. PUGH (G)
A. MACCHIONI (I)

Study Group 9 (former CMTT) – Television and sound transmission

Chairman: Will be appointed at the Radiocommunication Assembly
Vice-Chairman: (November 1993)

Study Group 10 – Languages for telecommunication applications

Chairman: O.F. FAERGEMAND (DNK)
Vice-Chairman: K. SCHULZ (D)

Study Group 11 – Switching and signalling

Chairman: S. KANO (J)
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Study Group 12 – End-to-end transmission performance of networks and terminals

Chairman: P. LORAND (F)
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Study Group 13 – General network aspects

Chairman: B.W. MOORE (G)
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Chairman: K. KERN (D)
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Study Group 15 – Transmission systems and equipment

Chairman: P.A. PROBST (SUI)
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TAF Group – Tariff Group for Africa

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Vice-Chairmen:**) F. BACHABI (BEN)
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TAL Group – Tariff Group for Latin America

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*) The Telecommunication Standardization Advisory Group will appoint any additional Vice-Chairmen, if appropriate, at its first meeting (see WTSC-93 Resolution No. 1, Section 1, § 3.9).

**) Decisions of the World Telecommunication Standardization Conference (Helsinki, 1993), only the Chairmen of the Tariff Groups of Study Group 3 have been appointed. The Vice-Chairmen are to be confirmed by the Groups themselves at their first meeting.

TAS Group – Tariff Group for Asia and Oceania

Chairman: P. WATT (NZL)

Vice-Chairmen:**) A. LOFTI KAZEMI (IRN)
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TEUREM Group – Tariff Group for Europe and the Mediterranean Basin

Chairman: G. REPICI (I)

Vice-Chairmen:**) U. JACKOWSKA-SELWET (Mrs.) (POL)
J. MARTORY (F)
J. VAN BOLHUIS (HOL)
P. NAMMOUR (LBN)

***) Decisions of the World Telecommunication Standardization Conference (Helsinki, 1993), only the Chairmen of the Tariff Groups of Study Group 3 have been appointed. The Vice-Chairmen are to be confirmed by the Groups themselves at their first meeting.

PART 4

Questions approved for study by the ITU Telecommunication Standardization Sector

STUDY GROUP 1

<i>Question</i>	<i>Title</i>
1/1	Bureau services
2/1	The international telex service
3/1	Further evolution of the INTEX* service
4/1	Development of PSTN-based telecommunication services
5/1	Computerized directory assistance
6/1	International telecommunication charge card service
7/1	Universal Personal Telecommunication (UPT)
8/1	Mobile/personal telephone, telegraph, Telematic, data and audiovisual services
9/1	International multipoint communications services via satellite
10/1	Telefax services
11/1	Enhanced facsimile services
12/1	Message handling services
13/1	International public directory services
14/1	International public data transmission services
15/1	Common components for document communication services
16/1	Videotex service
17/1	Human factors issues arising in more than one service
18/1	Human factors aspects of voice and non-voice services using public terminals
19/1	Human factors on telecommunications not specifically related to new services
20/1	Audiovisual multimedia services
21/1	New services for broadband ISDN (B-ISDN)
22/1	Enhancements to existing services due to ISDN capabilities
23/1	The suitability of new services to meet the needs of users
24/1	New services for the ISDN

* Provisional name (see Recommendation F.150).

STUDY GROUP 2

<i>Question</i>	<i>Title</i>
2/2	Facsimile service, quality on switched telephone networks
5/2	Application of numbering and addressing plans for fixed and mobile services
6/2	Routing and interworking plans for fixed and mobile networks
8/2	Service quality of networks
9/2	Network Management
11/2	Terms and definitions for network operations including Quality of Service and traffic engineering
12/2	Traffic considerations for Intelligent Networks and SS No. 7
13/2	Traffic engineering for PSTN
14/2	Traffic engineering for N-ISDN
15/2	Traffic measurements to support network operations
16/2	Traffic engineering for networks supporting mobile and UPT services
17/2	Traffic engineering for broadband ISDN

STUDY GROUP 3

<i>Question</i>	<i>Title</i>
1/3	General principles for the lease of international private telecommunication circuits
2/3	Tariff principles for the lease of international private telecommunications circuits (IPTCs and Global Virtual Network Services (GVNSs))
3/3	General charging and accounting principles applicable to Data Communication on public networks
4/3	General charging and accounting principles applicable to the telegram, Teletex, telemessage, telex, facsimile and Videotex services
5/3	Charging and accounting principles in the international telephone service
6/3	Tariff principles for the occasional provision of circuits for international sound and television programme transmissions
7/3	General tariff principles for telecommunications provided via mobile terminals
8/3	Charging and accounting principles to be applied to services defined expressly for the ISDNs
9/3	Charging and accounting principles to be applied to enhancements to existing services defined to take advantage of ISDN's capabilities
10/3	General charging and accounting principles for non-voice services provided by inter-working between the ISDN and existing public data networks
11/3	Tariff and accounting principles to be applied to permanent and reserved services within the ISDN
12/3	General charging and accounting principles to be applied to non-mobile international telecommunications services provided via satellite
13/3	Cost studies for determining the basic tariff components for telecommunication services (telegraph, telephone, telex, data, etc.)
14/3	Cost studies for determining the basic tariff components for sound and television programme transmissions

15/3	Terms and definitions for Recommendations dealing with tariff and accounting principles
16/3	General charging and accounting principles for the international videoconference service
17/3	Charging and accounting principles to be applied to universal personal telecommunications
18/3	General charging and accounting principles applicable to Message Handling services
19/3	General charging and accounting principles applicable to Public Directory services
20/3	General charging and accounting principles for services supported by the Intelligent Network
21/3	Study of the possible extension of Recommendation ITU-T D.7 to services to which One Stop Shopping may be applied
22/3	Tariff and accounting principles for the Global Virtual Network Services (GVNSs)

STUDY GROUP 4

<i>Question</i>	<i>Title</i>
1/4	Terms and definitions
2/4	TMN capabilities on the F interface
4/4	Maintenance of mobile telecommunications systems
5/4	TMN capabilities on the X interface and the evolution of information exchange to a TMN environment
6/4	Maintenance philosophy, principles and organization for networks and services
8/4	Assessment of network performance and exchange of information for maintenance purposes
12/4	Maintenance of international sound programme circuits, links and systems
13/4	Maintenance of international television circuits
15/4	Maintenance of international videoconference and videophone systems
16/4	Maintenance of digital transport networks
17/4	Designations in the international networks
18/4	Maintenance of switched telephone-type circuits (other than mobile circuits) including channel associated signalling equipment
19/4	Common channel signalling maintenance
20/4	Maintenance of leased and special circuits
21/4	Fault, performance and configuration management of ISDNs and B-ISDNs
22/4	Maintenance of international data transmission systems
23/4	Telecommunication management network
24/4	Test and measurement techniques and equipments for use on transmission paths
25/4	General aspects of test and measurement techniques and equipments

STUDY GROUP 5

<i>Question</i>	<i>Title</i>
1/5	Electromagnetic resistibility of switching and subscriber equipment
2/5	Protective components and assemblies

3/5	Interference testing and measurement
4/5	Unbalance of telecommunication installations
5/5	Power and traction lines harmonics and transients
6/5	Admissible limits for low frequency induction
7/5	Fast transient and radio frequency phenomenon compatibility
8/5	Emissions from telecommunications equipment
9/5	Immunity against radio-frequency and transient interference
10/5	Electromagnetic resistibility of transmission equipment
11/5	Protection of telecommunication lines and installations against lightning
12/5	Bonding configurations and earthing of telecommunication systems
13/5	Updating the «Directives»

STUDY GROUP 6

<i>Question</i>	<i>Title</i>
1/6	Environmental issues for the outside plant
2/6	Fire safety of telecommunication installation
3/6	Application of computers and microprocessors to the construction, installation and protection of telecommunication cables
4/6	Coordinated protection schemes for telecommunication cables
5/6	Amendments and additions to the Manual «Outside plant technologies for public networks»
6/6	Copper networks for ISDN services
7/6	Optical fibre cable installation
8/6	Optical fibre cable maintenance
9/6	Optical fibre cable construction
10/6	Performance and acceptance tests for optical fibre cables and associated hardware
11/6	Optical fibre cable for shallow water submarine systems without submerged repeaters
12/6	Optical fibre cable distribution network
13/6	Passive optical components

STUDY GROUP 7

<i>Question</i>	<i>Title</i>
1/7	Standardization of the technical characteristics of international data transmission services, user classes of service, optional user facilities, and call progress signals in public data networks (PDNs) and ISDNs and the categories of access for DTEs to such services
2/7	Network Performance and Quality of Service in Data Communication Networks
3/7	Numbering Plan for Public Data Networks
4/7	Routing Principles for Public Data Networks
5/7	Multicast
6/7	Further study of interworking cases specific to public data networks

7/7	Further study of the DTE/DCE interfaces for packet-mode data terminal equipments
8/7	Study of DTE/DCE interface procedures for Dissimilar Terminal Interworking
9/7	Packet mode signalling between public networks providing data transmission service
10/7	Requirements, arrangements and interface characteristics for the provision of data services, in PSDNs when accessed via the ISDNs, and in ISDNs
11/7	Principles of management for public data networks and for the Customer Network Management Service
12/7	Management aspects of interworking between public data networks and between public data networks and other networks
13/7	Open Systems Interconnection (OSI) Systems Management
14/7	Message Handling Systems (MHS)
15/7	Directory Systems
16/7	Reference Model and Components for Open Distributed Processing
17/7	Testing of Data Communications Protocols
18/7	X.400/X.500 Conformance Testing
19/7	Open System Interconnection (OSI) Architecture
20/7	Security services, mechanisms and protocols for ITU-T applications
21/7	Open Systems Interconnection (OSI) Application Layer
22/7	Open Systems Interconnection (OSI) Presentation and Session Layers
23/7	Open Systems Interconnection (OSI) Transport and Network Layers
24/7	Open Systems Interconnection (OSI) Data Link and Physical Layers
25/7	Revision of Recommendations

STUDY GROUP 8

<i>Question</i>	<i>Title</i>
1/8	APPLICOM
2/8	Syntax Videotex
3/8	Open Document Architecture
4/8	Colour for Telematic Applications
5/8	Group 3 Facsimile Apparatus
6/8	Facsimile Test Chart and Test Documents
7/8	Protocol Aspect of Videotex
8/8	Document Transfer and Manipulation
9/8	Group 4 Facsimile
10/8	Audiographic Conferencing
11/8	Protocols for Interactive Audiovisual Services
12/8	Conversion Rules
13/8	Telematics on ISDN
14/8	ODA Application Profiles
15/8	Cooperative Document Handling
16/8	Common Component for Image Communication
17/8	Coding of Alphanumeric Characters

18/8	Teletex
19/8	Modulation Technic
20/8	General Architecture of PCI
21/8	Description and Specification of PCI

STUDY GROUP 9

Study Group 9 is the successor to the former CCIR/CCITT Joint Study Group CMTT. As CMTT was administered by CCIR, work on the Questions of CMTT/Study Group 9 will continue under the auspices of the Radiocommunication Sector until November 1993. Following the Radiocommunications Assembly and World Radiocommunication Conference to be held at that time, the Questions will be transferred to the Telecommunication Standardization Sector.

STUDY GROUP 10

<i>Question</i>	<i>Title</i>
1/10	Improved methodology to specify Human-Machine Interfaces (HMI)
2/10	Specification techniques for the presentation and manipulation of data at the Human-Machine Interface
3/10	Specification of Human-Machine Interfaces to support management of telecommunication networks
4/10	Software quality for telecommunication systems
5/10	Software architectures and platforms for distributed systems in the telecom domain
6/10	Maintenance and support of SDL
7/10	Modelling techniques for telecommunication systems
8/10	Testing based on formal specifications and verification of formal specifications
9/10	Message sequence charts (MSC) syntax and semantics
10/10	Maintenance and evolution of CHILL

STUDY GROUP 11

<i>Question</i>	<i>Title</i>
1/11	Switching functions and signalling information flows for implementation of basic and supplementary services
2/11	Structure and performance of signalling networks
3/11	Signalling and OAM protocol architecture
4/11	Signalling System No. 7 – Management
5/11	Long Term Intelligent Network Architecture
6/11	Intelligent Network Capability Sets
7/11	Signalling, Call Handling and Management Requirements for Universal Personal Telecommunications
8/11	Signalling requirements for existing and future land mobile and satellite mobile networks
9/11	Signalling requirements for new transmission equipments
10/11	Signalling requirements for Broadband ISDN

11/11	Application of the Stage 2 Recommendations to the signalling protocols for Operation, Administration and Maintenance
12/11	Updating and enhancements of ISDN user-network interface data link layer protocol
13/11	ISDN user-network protocol (DSS 1) conformance
14/11	Asynchronous Transfer Mode Adaptation Layer for Signalling
15/11	Updating and enhancement of ISDN user-network interface call control protocols
16/11	Common Channel Signalling System No. 7 – Message Transfer Part
17/11	Common Channel Signalling System No. 7 – Signalling Connection Control Part
18/11	Common upper layer protocols to support current and new Signalling System No. 7 applications
19/11	Signalling System No. 7 – Protocol Test Specifications
20/11	Reliability aspects of Signalling System No. 7
21/11	Updating and enhancement of ISDN network node-to-node interface call control protocols
22/11	Evolutionary call control protocols for the support of broadband services
23/11	Interworking of signalling systems
24/11	Functional definition of call handling and signalling capabilities in digital exchanges and other network control elements
25/11	Definitions of managed objects in switching and signalling network elements used for the definition of the TMN interface
26/11	Protocols for remote operation of Management Applications
27/11	Updating of Q-Series Recommendations
28/11	Definitions for switching and signalling

STUDY GROUP 12

<i>Question</i>	<i>Title</i>
1/12	Future programme of work
2/12	Hands-free telephony
3/12	Definition in the field of telephonometry and of characteristics of international connections and circuits
4/12	Updating of the «Handbook on telephonometry»
5/12	Speech synthesis/recognition systems
6/12	Harmonization of G.100- and G.200-Series ITU-T Recommendations
7/12	Test signals and analysis techniques for evaluating the speech transmission characteristics of terminal equipment
8/12	Improvement of the methods for the determination of frequency responses and loudness ratings of electroacoustic terminals
9/12	Sidetone
10/12	Speech transmission characteristics and measurement methods for digital handset telephones
11/12	Noise aspects in the evolving network
12/12	Artificial mouths and ears
13/12	Methods for measuring and modelling the effects of non-linear processes on the speech quality of transmission systems

14/12	Harmonization of P.10-P.60 Series ITU-T Recommendations
15/12	Interconnection of Private Networks with the Public ISDN/PSTN
16/12	Transmission performance of wireless personal communications systems
17/12	Speech levels and measurements
18/12	Evaluation tools for the assessment of digital transmission systems
19/12	Speech performance requirements for acoustic echo control devices and speech enhancement functions in audio terminals for proper inter-working through international network
20/12	Wideband telephony
21/12	Echo transmission time and stability in telephone networks, ISDN and interconnection with ISDN
22/12	Audiovisual quality in multimedia services
23/12	Coupling of hearing aids to telephone receivers
24/12	In-service non-intrusive assessment of telephone channel transmission performance
25/12	Transmission impairments in the evolving mixed analogue/digital and ISDN networks

STUDY GROUP 13

<i>Question</i>	<i>Title</i>
1/13	Network capabilities for networks other than B-ISDN
2/13	Network capability description for support of B-ISDN services
3/13	Network capabilities for the support of multimedia services in 64k-ISDN and B-ISDN
4/13	Network requirements for B-ISDN signalling
5/13	ATM Layer
6/13	ATM Adaptation Layer
7/13	Requirements for OAM and network management in B-ISDN
8/13	B-ISDN resource management
9/13	Interworking of B-ISDNs with other networks
10/13	Interworking of 64k-ISDNs with other networks
11/13	ISDN Frame Mode Bearer Service (FMBS)
12/13	Refinements and enhancements to Layer 1 64 kbit/s-based ISDN Recommendations
13/13	Refinements and enhancements to B-ISDN customer access Recommendations
14/13	Functional characteristics of interfaces in access networks
15/13	ISDN architecture and reference models
16/13	General performance issues
17/13	Availability performance
18/13	Security performance
19/13	Error performance
20/13	Performance for ISDN connection processing
21/13	Network synchronization and timing performance
22/13	Universal Personal Telecommunications (UPT) performance

23/13	Transport network architecture
24/13	Network applications of SDH
25/13	NNI and transport network interworking principles
26/13	Vocabulary for general network aspects
27/13	Support of broadband connectionless data service on B-ISDN
28/13	Integrated Video Services (IVS) principles for B-ISDN

STUDY GROUP 14

<i>Question</i>	<i>Title</i>
1/14	Modems for switched telephone network and telephone-type leased circuits
2/14	DCE-DCE protocols
3/14	DCEs for digital leased circuits
4/14	Network management
5/14	ISDN Terminal Adaptors and interworking of DTEs on ISDNs with DTEs on other networks
6/14	DTE-DCE interchange circuits
7/14	DTE-DCE protocols
8/14	The use of modems in communicating with the hearing impaired
9/14	Wireless DCEs
10/14	Modem testing
11/14	Standardization in R-Series Recommendations of modems for telegraph TDM systems and equipment for transmission of telegraph and data signals over subscriber lines simultaneously used for telephone communication
12/14	Muldexes and statistical muldexes for telegraphy and data transmission using digital bearer channels
13/14	Telegraph TDM systems for use on telephone-type bearer circuits

STUDY GROUP 15

<i>Question</i>	<i>Title</i>
1/15	Equipment for digital sound-programme and television transmission
2/15	Visual telephone systems including videoconferencing and videophone
3/15	Harmonization of audiovisual systems
4/15	Algorithmic techniques in voice-band telecommunication networks
5/15	Variable bit-rate/embedded operation of LD-CELP
6/15	Audio and wideband speech coding in public telecommunication networks
7/15	Encoding of speech signals at bit rates around 4 kbit/s
8/15	Interaction of facsimile and high speech voice-band data with algorithmic processing in voice networks
9/15	Speech packetization and wideband packet systems
10/15	Software and hardware tools for standardization of speech and audio coding algorithms
11/15	Equipment for stored digitized coded information

12/15	Encoding of speech signals at bit rates around 8 kbit/s
13/15	Digital circuit multiplication equipment (DCME) and systems (DCMS)
14/15	Design and network interaction of acoustic processing devices
15/15	Network echo control
16/15	Speech, voice-band and audio transmission in ATM/B-ISDN systems
17/15	SDH equipment
18/15	ATM equipment
19/15	SDH ring structures
20/15	Transmission characteristics at analogue interfaces of digital transmission systems and digital exchanges
21/15	Flexible multiplex equipment in the access network
22/15	Hierarchical bit rates, interfaces and multiplexing structures
23/15	Characteristics and test methods of optical fibres and cables
24/15	Characteristics of optical systems for use in local access networks
25/15	Characteristics of optical systems for inter-office and long distance networks
26/15	Transmission-related characteristics of optical components and sub-systems, including optical amplifiers
27/15	Characteristics of optical fibre submarine cable systems
28/15	Reliability and availability of optical systems
29/15	Transmission equipment management information model
30/15	Management of the transmission network
31/15	Terminology for transmission systems and equipment