INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Book 1

WORLD TELECOMMUNICATION STANDARDIZATION
CONFERENCE

Geneva, 9 - 18 october 1996

Resolutions

**ITU-T Series A Recommendations:
Organization of the work of the ITU-T**

Study Groups and other groups

List of study Questions (1996-2000)

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

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PART 1

Resolutions adopted by the Conference
of the ITU Telecommunication Standardization Sector

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RESOLUTION No. 1

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

(Geneva, 1996)[1]

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 worldwide 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 States 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 and Kyoto, 1994);

e)   that 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 States 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

1.1   Preparations for the World Telecommunication Standardization Conference (WTSC)

1.1.1   If the WTSC meets at the seat of the Union, the precise date of the meeting shall be decided by the Director of the Telecommunication Standardization Bureau (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.

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[1]   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; Helsinki, 1993).

1.1.2 The Secretary-General of the ITU shall send an invitation to participate in the WTSC to all Member States 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.

1.1.3 Member States and Sector Members of the ITU-T (Constitution 110-112) (Geneva, 1992 and Kyoto, 1994) 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.

1.1.4 The Secretary-General of the ITU shall invite the Director of the Radiocommunication Bureau (BR), the Director of the Telecommunication Development Bureau (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 provide the names of their observers in the manner specified in 1.1.3 above for Sector Members of the ITU-T.

1.1.5 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.

1.2   Committees

1.2.1 In general, the following Committees are proposed:

a)   "Committee on Working Methods of the ITU-T", which considers the Telecommunication Standardization Advisory Group (TSAG) report and submits to the WTSC for consideration, proposals on the working methods of the ITU-T providing an efficient implementation of the ITU-T work programme.

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 1.3);

This Committee shall include:

–   the Chairmen of the Study Groups, the Chairman of 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 ITU-T 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" which coordinates all matters connected with the smooth execution of work and plans the order and number of meetings, avoiding overlapping wherever possible in view of the limited number of members of some delegations.

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

1.3   Programme of work

1.3.1   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, TSAG and any other groups established by the WTSC (see Section 2).

1.3.2   The WTSC shall set up the committees listed in 1.2.1 and 1.2.2 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.

1.3.3   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 programme of work should include:

1.3.3.1 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 and the TSAG report on fulfilment of specific functions delegated to it by the previous WTSC. 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.

1.3.3.2 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 normal procedure is not being applied.

1.3.3.3 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.

1.3.3.4 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.

1.3.3.5 The Committee on Working Methods of the ITU-T shall meet to prepare proposals on the ITU-T work methods on the basis of the results of the TSAG activity presented in the TSAG report to the Conference and the proposals of ITU-T Sector Members.

1.3.3.6 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).

1.3.3.7 After considering the proposals made by the Heads of Delegation, the WTSC shall appoint the Chairmen and Vice-Chairmen of Study Groups, and the TSAG. See Article 20 of the Convention (Geneva, 1992) and subclause 3.1.

1.4   Voting

1.4.1   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.

1.4.2   When a country is not represented by an Administration, the representatives of the entities and organizations approved by the Member State concerned 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 (Geneva, 1992, modified in Kyoto, 1994).

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SECTION 2

STUDY GROUPS AND OTHER GROUPS

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2.1   Classification of Study Groups and other groups

2.1.1   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.

2.1.2   See Section 4 regarding the role of the TSAG, which functions in a manner analogous to a Study Group.

2.1.3   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 clause 2 of Recommendation A.1).

2.1.4   A Joint Working Party shall submit draft Recommendations to its Lead Study Group.

2.1.5 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).

2.1.6 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 Group[2], 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.

2.1.7 A Study Group may be designated by the WTSC or TSAG as the Lead Study Group for ITU-T studies forming a defined programme of work involving a number of Study Groups. This Lead Study Group should be responsible for the study of the appropriate core questions. In addition, in consultation with the relevant Study Groups and in collaboration, where appropriate, with other standards bodies, the Lead Study Group has the responsibility to define and to maintain the overall framework and to coordinate, to assign (recognizing the mandates of the Study Groups) and to prioritize the studies to be done by the Study Groups and to ensure the preparation of consistent, complete and timely Recommendations.

2.2 Meetings outside Geneva

2.2.1 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 Member States 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 to an 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.

2.2.2 The invitations mentioned in 2.2.1 above shall be issued and accepted and the corresponding meetings outside Geneva organized only if the conditions laid down in Resolution 5 of the Plenipotentiary Conference (Kyoto, 1994) and the ITU Administrative Council Decision No. 304 are met.

2.2.3 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.

2.3 Participation in meetings

2.3.1 Administrations and other duly authorized entities shall be represented in the Study Groups and other groups, such as Working Parties and Rapporteur Groups, in whose work they wish to take part, by participants registered by name and chosen by them as qualified to investigate technically and operationally 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. Chairs of meetings may invite individual experts as appropriate.

2.3.2 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

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

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.

2.4 Reports of Study Groups to the WTSC

2.4.1 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.

2.4.2 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 Recommendations (new or revised) that have been approved by the Member States during the study period;

– reference to the final text of all draft Recommendations (new or revised) that are forwarded exceptionally for consideration by the WTSC;

– the list of new or revised Questions proposed for study;

– review of Joint Coordination Group activities for which it is the Lead Study Group (see 2.2.2 of Recommendation A.1).

SECTION 3

STUDY GROUP MANAGEMENT

3.1 Chairmen and Vice-Chairmen

3.1.1 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.

3.1.2 Appointment of Chairmen and Vice-Chairmen shall be primarily based upon proven competence both in technical content of the Study Group concerned, and the management skills required. Other considerations, including incumbency, shall be secondary.

3.1.3 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.

3.1.4 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.

3.1.5 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 States as possible.

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

SECTION 4

TELECOMMUNICATION STANDARDIZATION ADVISORY GROUP

4.1 In accordance with Resolution 17 of the Plenipotentiary Conference (Kyoto, 1994), the TSAG 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 the ITU-T's activities, 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 ITU-T and with the Radiocommunication and Development Sectors and with the Strategic Planning Unit in the General Secretariat, and with other standardization organizations, forums and consortia outside the ITU.

4.2 TSAG 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 (and between Sectors), giving due regard to the cost and availability of resources within the TSB and the Study Groups. TSAG will monitor the activities of any Joint Coordination Groups and may also recommend the establishment of such groups, if appropriate. TSAG may also advise on further improvements to ITU-T working methods.

4.3 TSAG shall 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 TSB.

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

4.5 However, in addition to TSAG's advisory role, a WTSC may assign temporary authority to TSAG to consider and to act on matters specified by the WTSC. TSAG may consult with the Director on these matters, if necessary. The WTSC should assure itself that the special functions entrusted to TSAG do not require financial expenses exceeding the ITU-T budget. The report on the TSAG activity on the fulfilment of specific functions shall be submitted to the next WTSC. Such authority shall terminate when the following WTSC assembles, although the WTSC may decide to extend it for a designated period.

4.6 TSAG holds regular scheduled meetings, included on the ITU-T timetable of meetings and announced in accordance with 1.1 of Recommendation A.1. The meetings should take place as necessary, but at least once a year[3]. In principle, these meetings should be scheduled to enable joint meetings with the Radiocommunication Advisory Group, as required.

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

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

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[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 4.4 and 4.5 above.

4.9 TSAG 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 TSAG's activities and offer advice on allocation of work, proposals on ITU-T working methods and relations with other relevant bodies inside and outside the ITU, as appropriate.

SECTION 5

DUTIES OF THE DIRECTOR

5.1 The Director of the TSB shall take the necessary preparatory measures for meetings of the WTSC, TSAG, 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 and of other ITU resources.

5.2 The Director manages the allocation of the ITU-T financial and TSB human resources required for meetings administered by the TSB, for the dissemination of the associated documents to ITU-T Member States and Sector Members (meeting reports, contributions, etc.), for ITU-T publications, for the authorized operational support functions for the international telecommunication network and services (Operational Bulletin, code assignments, etc.) and for operation of the TSB.

5.3 In the Director's 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.

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

5.5 The Director 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.

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

5.7 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.

5.8 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 Delegation.

5.9 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 requesting them to advise him/her of the Study Groups or other groups in which they wish to take part.

Furthermore, the Director 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/her of the Study Groups or other groups in which they wish to participate in an advisory capacity.

5.10 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 Director's circular, and to update them regularly.

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

5.12 In the interval between WTSCs, the Director may request assistance from the Study Group and TSAG Chairmen regarding the allocation of available financial and human resources to be able to assure the most efficient work of the ITU-T.

5.13 In consultation with the Chairmen of the Study Groups and the Chairman of TSAG, the Director should ensure an appropriate flow of executive summary information on the work of the Study Groups. This information should be designed to assist the decision-makers in particular in ITU-T Sector Member organizations, to follow and to appreciate the overall significance of the work progressing in ITU-T.

SECTION 6

CONTRIBUTIONS

6.1 Contributions are submitted and formatted according to Recommendation A.1 and Recommendation A.2, respectively.

SECTION 7

DEVELOPMENT AND APPROVAL OF QUESTIONS

7.1 Development of Questions

7.1.1 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).

7.1.2 Each proposed Question should be formulated in terms of specific task objective(s) and shall be accompanied by appropriate information as listed in Appendix I of this Section. This information should clearly justify the reasons for 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.

7.1.3   The TSB shall circulate the forms received proposing the Questions to the Member States and Sector 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).

7.1.4   New or revised Questions may also be proposed by a Study Group itself during a meeting.

7.1.5   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.

7.1.6   Agreement by a Study Group to submit proposed Questions for approval is achieved by reaching consensus among the Member States and Sector Members present that the above criteria have been satisfied.

7.1.7   The TSAG, to the extent practicable, shall be made aware of all proposed Questions in the Collective-letter announcing the TSAG meeting, 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 7.1.5 above.

7.1.8   The opportunity for review by TSAG of the Questions prior to approval 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 TSAG and the Chairman of any other Study Groups where overlay or liaison problems could arise.

7.1.9   In summary, there are three possible methods of developing a draft Question for approval for inclusion in the work programmes of the ITU-T:

a)   processing through a Study Group and 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.

7.1.10   If, despite the above provisions, a Member State proposes a Question directly to a WTSC, the Member State should be invited to submit the proposal to the next meeting of the TSAG to allow time for its thorough examination.

7.1.11   In order to allow for the specific characteristics of the developing countries, the TSB must take account of the relevant provisions of WTSC Resolution 17 (Geneva, 1996) 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 ITU-D Study Groups and the technical assistance required for the examination of certain questions by the ITU-D Study Groups.

7.2   Approval of Questions by the WTSC (see Figure 7.1a)

7.2.1   At least two months prior to the WTSC, TSAG shall meet to consider, review and, where appropriate, recommend changes to 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 monitoring overall progress in the drafting of Recommendations;

iv)   facilitate cooperative efforts with other standardization organizations.

7.2.2   At least one month before the WTSC, the Director of the TSB will inform the Member States and Sector Members of the list of proposed Questions, as agreed by TSAG.

7.3   Approval of proposed Questions between WTSCs (see Figure 7.1b)

7.3.1   Between WTSCs, and after development of proposed Questions (see 7.1 above) there are two possible methods of approving new or revised Questions, 7.3.2 or 7.3.3 below.

7.3.2   New or revised Questions may be approved by a Study Group if consensus among the Member States and Sector Members present at the Study Group meeting is achieved. In addition, some Member States and Sector Members (normally at least four) have to commit themselves to support the work, e.g. by contributions, provision of Rapporteurs or editors and/or hosting of meetings. The names of the supporting Sector Member organizations should be recorded in the meeting report.

a)   The proposed Question shall be adopted and have the same status as Questions approved at a WTSC.

b)   The Director shall notify the results by Circular.

7.3.3   Alternatively, if consensus of the Study Group to approve a new or revised Question is not achieved, the Study Group may request consultation of the Member States.

a)   The Director of the TSB shall request Member States to notify him/her within two months whether they approve or do not approve the proposed new or revised Question.

b)   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 States respondents are in agreement; and

        – at least ten replies are received.

c)   The Director of the TSB shall notify the results of the consultation by Circular.

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

7.3.5   In particular, the TSAG will consider any new and revised Questions to determine whether a proposed new or revised Question is in line with the mandate of the Study Group assigned by the WTSC.

7.4   Deletion of Questions

Study Groups may decide in each individual case which of the following alternatives is the most appropriate one.

7.4.1   Deletion of a Question by the WTSC

Upon the decision of the Study Group, the Chairman shall include in his report to the WTSC the request to delete a Question. The WTSC may approve this request.

7.4.2 Deletion of a Question between WTSCs

7.4.2.1 At a Study Group meeting, it may be agreed by reaching consensus among those present to delete a Question, e.g. either because work has been terminated or because no contributions have been received at that meeting and at the previous two Study Group meetings. Notification about this agreement, including an explanatory summary about the reasons for the deletion, shall be provided by a Circular. If a simple majority of the Member State respondents has no objection to the deletion within two months, the deletion will come into force. Otherwise the issue will be referred back to the Study Group.

7.4.2.2 Those Member States who indicate disapproval are requested to provide their reasons and to indicate the possible changes that would facilitate further study of the Questions.

7.4.2.3 Notification about the result will be given in a Circular, and TSAG will be informed by a report from the Director. In addition, the Director shall publish a list of deleted Questions whenever appropriate, but at least once by the middle of a Study Period.

Appendix I

(to Resolution 1, Section 7)

Information for submission of a Question

– Source

– Short title

– Type of Question or proposal[4]

– 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.

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[4] Background Question, task oriented Question designed to lead to a Recommendation, proposal for a new manual, revised manual, etc.
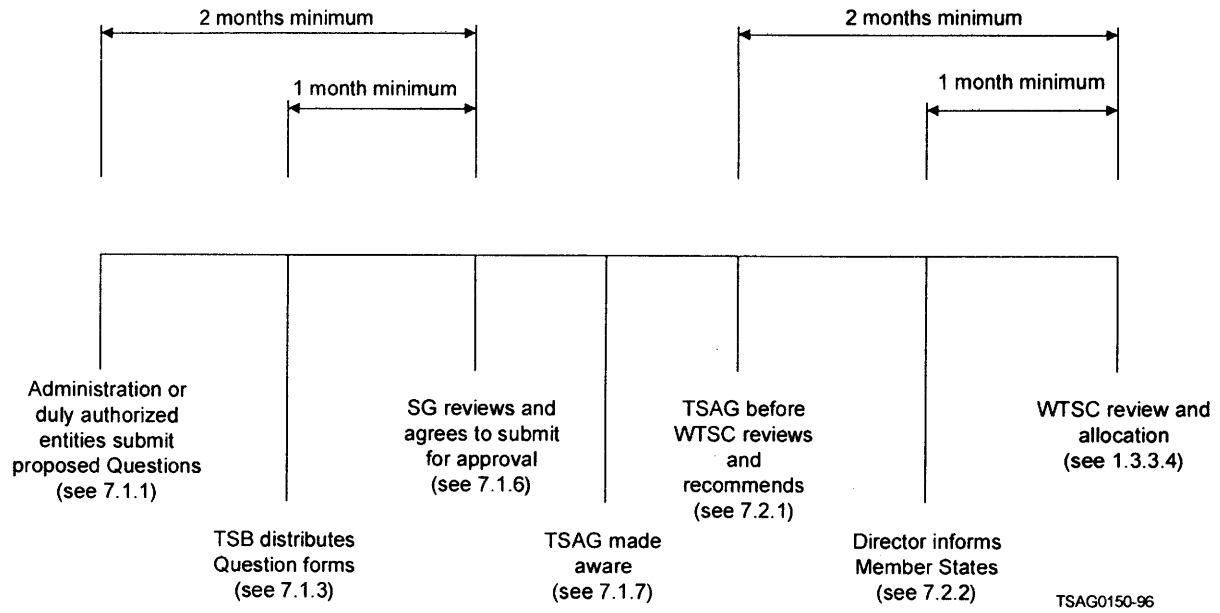
Figure 7.1a – Approval of Questions at WTSC

2 months minimum

1 month min.

Periodic TSAG meetings

SG approves
(see 7.3.2)

Director notifies
Member States and
Sector Members of
results (see 7.3.2b)

2 months

Administrations or
duly authorized
entities submit
proposed Questions
(see 7.1.1)

SG reviews and
agrees to submit
for approval
(see 7.1.6)

Periodic meeting
of TSAG reviews
and recommends
(see 7.3.4)

SG requests
consultation of
Member States
(see 7.3.3)

Member State
replies
submitted
(see 7.3.3b)

TSB distributes
Question forms
(see 7.1.3)

TSAG made
aware
(see 7.1.7)

Director requests
Member State approval
(see 7.3.3a)

Director notifies
Member States and
Sector Members of
results
(see 7.3.3c)

5AG0160-96

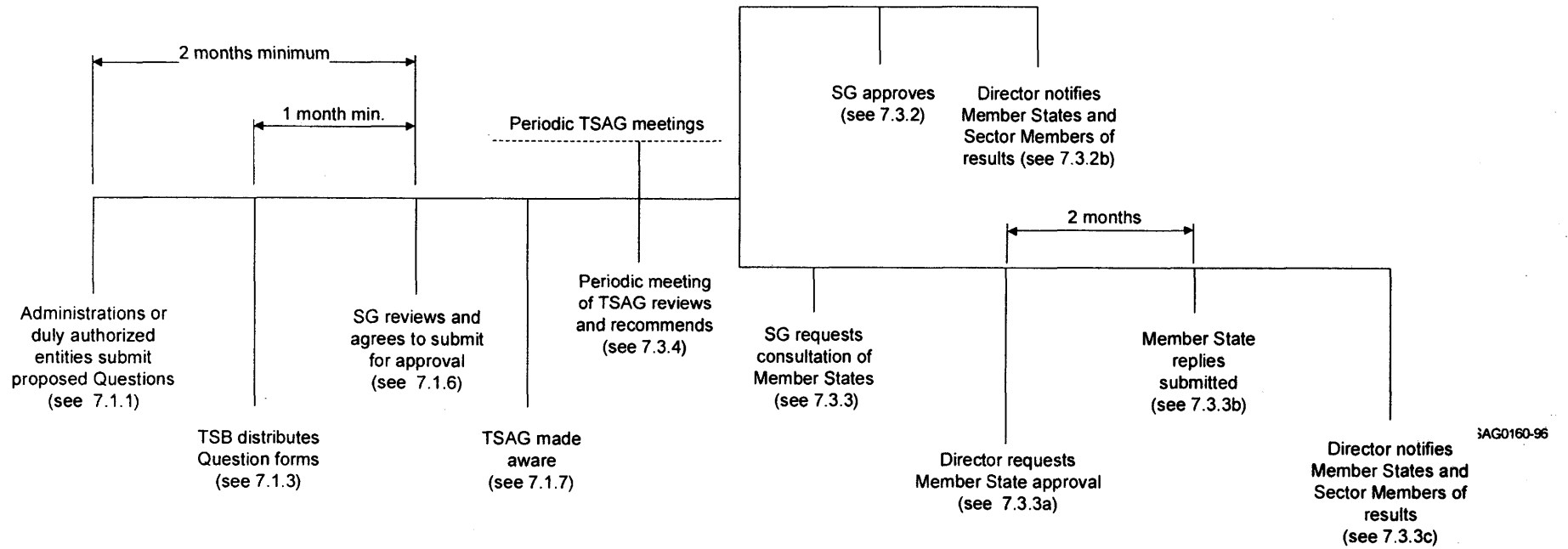**Figure 7.1b – Approval of Questions between WTSCs**

SECTION 8

APPROVAL OF NEW AND REVISED RECOMMENDATIONS

8.1 General

8.1.1 There are two methods of approving draft new or revised ITU-T Recommendations. In the interests of speed and efficiency, approval should normally be sought as soon as the relevant texts are mature, by a formal consultation in which the Director of the TSB asks Member States to delegate authority to the competent Study Group to proceed with the approval process and subsequent agreement at a formal meeting of the Study Group.

The competent Study Group may also seek approval at a WTSC.

8.1.2 In accordance with the Convention, the status of Recommendations approved is the same for both methods of approval.

8.2 Process

8.2.1 Study Groups should apply the process described below for seeking the approval of all draft new and revised Recommendations as soon as they have been developed to a mature state. See Figure 8.1 for the sequence of events.

NOTE – 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 States will be consulted by the Director of the TSB for the approval of the draft Recommendation concerned.

8.2.2 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;

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.

8.3 Prerequisites

8.3.1 Upon request of the Study Group Chairman, the Director of the TSB shall explicitly announce the intention to apply 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 Member States and Sector Members.

8.3.2 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.

8.3.3 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 8.3.4 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 Member States and Sector 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.

8.3.4 Such a summary shall be prepared in accordance with Recommendation A.3. 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.

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

8.3.6 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 (see Resolution 2, Geneva, 1996).

8.3.7 Where a draft new or revised Recommendation 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.

8.3.8 Any ITU Member State or Sector Member aware of a patent held by itself or others, which may fully or partly cover elements of the draft Recommendation(s) proposed for approval, is requested to disclose such information to the TSB, in no case later than the date scheduled for approval of the Recommendation(s) in accordance with TSB patent policy appended to this Resolution (Appendix I to Section 8). It is desirable for the patent statement to take the following format:

– date of statement submission;

– patent registration number, or equivalent information including name of country;

– name of patent holder;

– applicable section of TSB Patent Policy (i.e., I.2.1, I.2.2, or I.2.3).

8.3.9 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.

Amendments which correct defects may be approved in accordance with 8.7.2.

8.3.10 Any Member States 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.

8.3.11 The Director of the TSB shall inform the next competent conference of all cases notified in conformity with 8.3.10 above.

8.4 Consultation

8.4.1 Consultation of the Member States encompasses the time period and procedures beginning with the Director's announcement of the intention to apply the approval procedure (8.3.1) up to seven working days before the beginning of the Study Group meeting. The Director shall request Member States' opinions within this period on whether they assign authority to the Study Group that the draft new or revised Recommendations should be considered for approval at the Study Group meeting.

8.4.2 If the TSB has received a statement(s) indicating that the use of intellectual property, protected by one or more patent(s), issued or pending, may be required to implement a draft Recommendation, the Director of the TSB shall indicate this situation in the Circular announcing the intention to invoke the Resolution 1 approval process. (See Annex A of Section 8.)

8.4.3 The Director of the TSB shall advise the Directors of the other two Bureaux, as well as recognized operating agencies, scientific and industrial organizations and international organizations participating in the work of the Study Group in question, that Member States are being asked to respond to a consultation on a proposed new or revised Recommendation. Only Member States are entitled to respond (but see 8.5.2 below).

8.4.4 Should any Member States be of the opinion that consideration for approval shall not proceed, they should advise their reasons for disapproving and indicate the possible changes that would facilitate further consideration and approval of the draft new or revised Recommendation.

8.4.5 If 70% or more of the replies from Member States support consideration for approval at the Study Group meeting (or if there are no replies), the Director of the TSB should advise the Chairman that consideration of the approval may proceed. (With the authorization given by Member States that the Study Group may proceed with the approval process, they also recognize that the Study Group may make the necessary technical and editorial changes in accordance with 8.5.2 below.)

8.4.6 If less than 70% of the replies received by the due date support consideration for approval at the Study Group meeting, the Director of the TSB should advise the Chairman that consideration of the approval may not proceed at that meeting. (Nevertheless, the Study Group should consider the information provided under 8.4.4 above.)

8.4.7 Any comments received along with responses to the consultation shall be collected by the TSB and submitted as a temporary document to the next meeting of the Study Group.

8.5 Procedure at Study Group meetings

8.5.1 The Study Group should review the text of the draft new or revised Recommendation as referred to in 8.3.1 and 8.3.3 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 8.3.4 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.

8.5.2 Technical and editorial changes may only be made during the meeting as a consequence of written contributions, results from the consultation process (see 8.4 above) 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 this approval procedure should be deferred to another

meeting. However, in justified circumstances the approval procedure may still be applied if the Chairman of the Study Group, in consultation with the TSB, considers:

- that the proposed changes are reasonable (in the context of the advice issued under 8.4 above) for those Member States not represented at the meeting, or not represented adequately under the changed circumstances; and

- that the proposed text is stable.

8.5.3   After debate at the Study Group's meeting the decision of the delegations to approve the Recommendation under this approval procedure must be unopposed (but see 8.5.4 regarding reservations, 8.5.5 and 8.5.6). See Article 19, paragraph 239 of the Convention (Geneva, 1992).

8.5.4   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.

8.5.5   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 four weeks from the end of the meeting, the Director shall proceed in accordance with 8.6.1.

8.5.5.1 A Member State which requested more time to consider its position and which then indicates disapproval within the four week interval specified in 8.5.5 above is requested to advise its reasons and to indicate the possible changes that would facilitate further consideration and future approval of the draft new or revised Recommendation.

8.5.5.2 If the Director is advised of formal opposition, the Study Group Chairman, after consultation with the parties concerned, may proceed according to 8.3.1 above, without further determination at a subsequent Working Party or Study Group meeting.

8.5.6   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 8.5.3 above. Such an abstention may subsequently be revoked, but only during the course of the meeting.

8.6   Notification

8.6.1   Within four weeks of the closing date of the Study Group meeting or, exceptionally, four weeks after the period described in 8.5.5, the Director of the TSB shall notify whether the text is approved or not by Circular. The Director of the TSB shall arrange that this information is also included in the next available ITU Notification. Within this same time period the Director shall also ensure that any Recommendation agreed to during the Study Group decision meeting is available online in at least one working language, with an indication that the Recommendation may not be in its final publication form.

8.6.2   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.

8.6.3   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 Resolution 3 (Geneva, 1996) minor amendments may be covered by corrigenda rather than a complete reissue. Also, where appropriate, texts may be grouped to suit market needs.

8.6.4 Text shall be added to the cover sheets of all new and revised Recommendations urging users to consult the TSB patent database. Suggested wording is:

"The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU Member States and Sector Members or others outside of the Recommendation development process."

"As of the date of approval of this Recommendation, the ITU had/had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database."

8.6.5 See also Resolution 3 concerning the publication of lists of new and revised Recommendations.

8.7 Correction of defects

8.7.1 When a Study Group identifies the need for implementors to be made aware of defects (e.g. typographical errors, editorial errors, ambiguities, omissions or inconsistencies and technical errors) in a Recommendation, one mechanism that may be employed is an Implementors' Guide. This Guide is an historical document recording all identified defects and their status of correction, from their identification to final resolution, and would be issued in the Study Group's COM Series of documents.

8.7.2 Defects identified since the approval of the latest issue of the Implementors' Guide (8.7.1) and their proposed corrections are referenced in the Director's invitation to the next Study Group meeting so the Study Group can address them. The Chairman shall be accountable for a fair decision about the nature of the proposed corrections, in the spirit which is expressed in 8.5.2 above. After approval by the Study Group (see 8.5.3 to 8.5.6), the Director shall announce the corrections in a Circular and the Study Group will update the Implementors' Guide accordingly.

8.8 Deletion of Recommendations

Study Groups may decide in each individual case which of the following alternatives is the most appropriate one.

8.8.1 Deletion of Recommendations by the WTSC

Upon the decision of the Study Group, the Chairman shall include in his report to the WTSC the request to delete a Recommendation. The WTSC may approve this request.

8.8.2 Deletion of Recommendations between WTSCs

8.8.2.1 At a Study Group meeting it may be agreed to delete a Recommendation, i.e. because it has been superseded by another Recommendation or because it has become obsolete. This agreement must be unopposed. Information about this agreement, including an explanatory summary about the reasons for the deletion, shall be provided by a Circular. If no objection to the deletion is received within three months, the deletion will come into force. In the case of objection, the matter will be referred back to the Study Group.

8.8.2.2 Notification of the result will be given in another Circular, and TSAG will be informed by a report from the Director. In addition, the Director shall publish a list of deleted Recommendations whenever appropriate, but at least once by the middle of a Study Period.
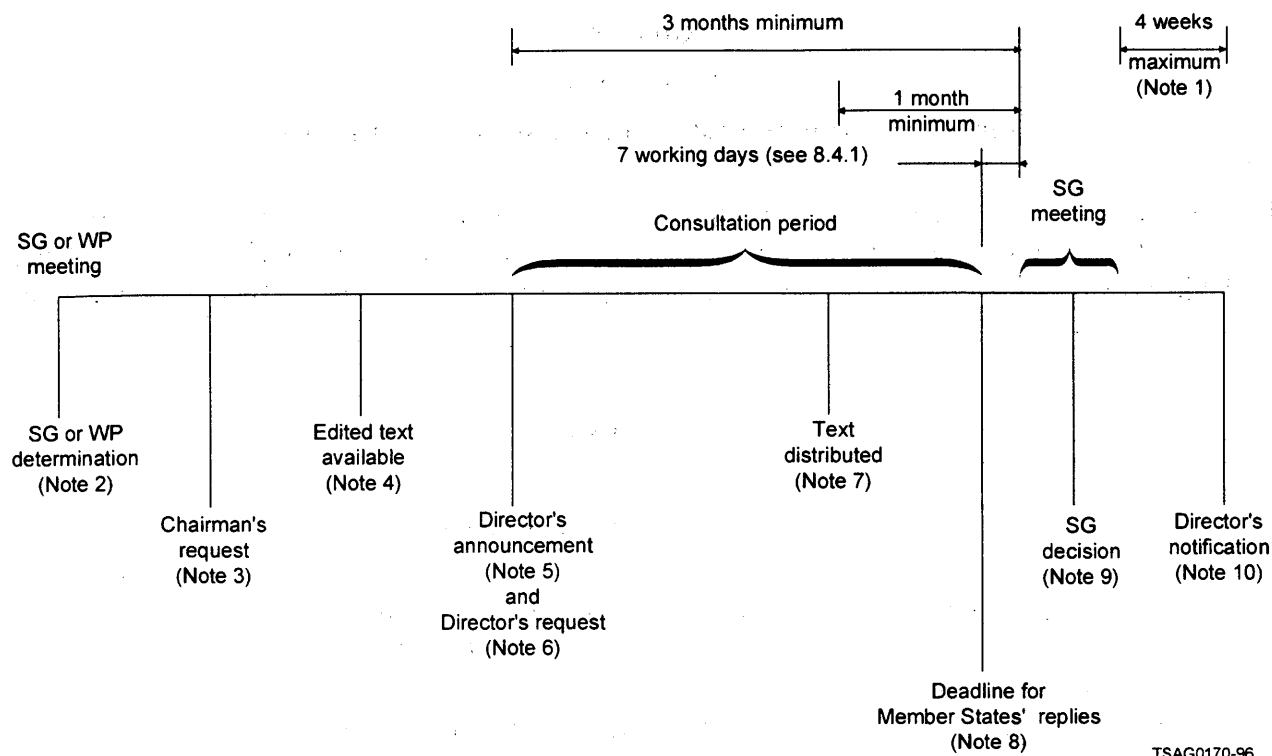
NOTES

1 – Exceptionally, an additional period of up to four weeks would be added if a delegation requested more time under 8.5.5.

2 – SG or WP DETERMINATION: The Study Group or Working Party determines that work on a draft Recommendation is sufficiently mature and requests the SG Chairman to make the request to the Director (8.3.1).

3 – CHAIRMAN'S REQUEST: The SG Chairman requests that the Director announce the intention to seek approval (8.3.1).

4 – EDITED TEXT AVAILABLE: Text of the draft Recommendation, including the required summary, is available to the TSB in final edited form in at least one working language (8.3.3).

5 – DIRECTOR'S ANNOUNCEMENT: The Director announces the intention to seek approval of the draft Recommendation at the next SG meeting. The invitation to the meeting with the announcement of the intention to apply the approval procedure should be sent to all Member States and Sector Members so as to be received at least three months before the meeting (8.3.1 and 8.3.3).

6 – DIRECTOR'S REQUEST: The Director requests Members to inform the Director whether they approve or do not approve the proposal (8.4.1 and 8.4.2). This request shall contain the summary and reference to the complete final text.

7 – TEXT DISTRIBUTED: Text of the draft Recommendation must have been distributed in the available working languages at least one month before the announced meeting (8.3.5).

8 – DEADLINE FOR MEMBERS' REPLIES: If 70% of replies received during the consultation period indicate approval, the proposal shall be accepted (8.4.1, 8.4.5 and 8.4.7).

9 – STUDY GROUP DECISION: After debate, the Study Group reaches unopposed agreement to apply the approval procedure (8.5.3 and 8.5.2). A delegation can register a degree of reservation (8.5.4), can request more time to consider its position (8.5.5) or can abstain from the decision (8.5.6).

10 – DIRECTOR'S NOTIFICATION: The Director notifies whether the draft Recommendation is approved or not (8.6.1).

Figure 8.1 – Approval of new and revised Recommendations – Sequence of events

Annex A

(to Section 8)

Suggested text of the note to be included in the Circular

The TSB has received a statement(s) indicating that the use of intellectual property, protected by one or more patent(s), issued or pending, may be required to implement this draft Recommendation. Available patent information can be accessed through TIES on the Internet (using either the World Wide Web or Gopher).

Appendix I

(to Section 8)

Statement on TSB patent policy

Over the years, the TSB has developed a "code of practice" regarding intellectual property rights (patents) covering, in varying degrees, the subject matters of ITU-T Recommendations[5]. The rules of the "code of practice" are simple and straightforward. Recommendations are drawn up by telecommunications and not patent experts; thus, they may not necessarily be very familiar with the complex international legal situation of intellectual property rights such as patents, etc.

ITU-T Recommendations are non-binding international standards. Their objective is to ensure compatibility of international telecommunications on a worldwide basis. To meet this objective, which is in the common interests of all those participating in international telecommunications (network and service providers, suppliers and users) it must be ensured that Recommendations, their applications, use, etc. are accessible to everybody. It follows, therefore, that a commercial (monopolistic) abuse by a holder of a patent embodied fully or partly in a Recommendation must be excluded. To meet this requirement in general is the sole objective of the TSB code of practice. The detailed arrangements arising from patents (licensing, royalties, etc.) are being left to the parties concerned, as these arrangements might differ from case to case.

This code of practice may be summarized as follows (it should be noted that ISO operates in a very similar way):

I.1   The TSB is not in a position to give authoritative or comprehensive information about evidence, validity or scope of patents or similar rights, but it is desirable that the fullest available information should be disclosed. Therefore, any ITU-T member organization putting forward a standardization proposal should, from the outset, draw the attention of the TSB to any known patent or to any known pending patent application, either their own or of other organizations, although the TSB is unable to verify the validity of any such information.

I.2   If an ITU-T Recommendation is developed and such information as referred to in paragraph I.1 has been disclosed, three different situations may arise:

I.2.1   The patent holder waives his rights; hence, the Recommendation is freely accessible to everybody, subject to no particular conditions, no royalties are due, etc.

I.2.2   The patent holder is not prepared to waive his rights but would be willing to negotiate licences with other parties on a non-discriminatory basis on reasonable terms and conditions. Such negotiations are left to the parties concerned and are performed outside the ITU-T.

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[5] Formerly CCITT Recommendations.

I.2.3 The patent holder is not willing to comply with the provisions of either paragraph I.2.1 or paragraph I.2.2; in such case, no Recommendation can be established.

I.3 Whatever case applies (I.2.1, I.2.2 or I.2.3), the patent holder has to provide a written statement to be filed at the TSB. This statement must not include additional provisions, conditions, or any other exclusion clauses in excess of what is provided for each case in paragraphs I.2.1, I.2.2 and I.2.3.

RESOLUTION No. 2

Study group responsibility and mandates

(Helsinki, 1993; Geneva, 1996)

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 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 2)

PART 1   –   GENERAL AREAS OF STUDY

Study Group 2 – Network and service operation

Responsible for studies relating to:

–   General aspects of service definition related to telecommunication services;

–   PSTN based, ISDN(s), mobile and UPT services, principles of their interworking and relevant user quality of service (QOS);

–   network operations including routing, numbering, network management and service quality of networks (traffic engineering, operational performance and service measurements);

–   human factors;

–   service and operational aspects of fraud prevention.

Study Group 3 – Tariff and accounting principles including related telecommunications economic and policy issues

Responsible for studies relating to tariff and accounting principles for international telecommunication services and study of related telecommunication economic and policy issues, as well as policy issues related to carriage and content.

Study Group 4 – TMN and network maintenance

Responsible for telecommunication management network (TMN) studies. Additionally 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 telecommunication systems including 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 others 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 system communications and to the application of open system communications including networking, message handling, directory, security and open distributed processing.

Study Group 8 – Characteristics of telematic systems

Responsible for studies of telematic terminal characteristics and related service aspects.

Study Group 9 – Television and sound transmission

Responsible for studies of the specifications to be satisfied by telecommunication systems used for contribution, primary distribution and secondary distribution of video, audio and the associated data signals, related to television, sound-programme and associated services, including interactive ones.

Study Group 10 – Languages and general software aspects for telecommunication systems

Responsible for technical languages, the methods for their usage and other issues related to the software aspects of telecommunication systems.

Study Group 11 – Signalling requirements and protocols

Responsible for studies relating to signalling requirements and protocols for telephone, N-ISDN, B-ISDN, UPT, mobile and multimedia communications.

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 and innovative technologies on telecommunication networks with far-reaching consequences, including broadband ISDN and global information infrastructure studies, taking into account the functional responsibilities of other Study Groups.

Study Group 15 – Transport networks, systems and equipment

Responsible for studies relating to transport networks, switching and transmission systems/equipment including the relevant signal processing aspects.

Study Group 16 – Multimedia services and systems

Responsible for studies relating to multimedia service definition and multimedia systems, including the associated terminals, modems, protocols and signal processing.

PART 2   –   LEAD STUDY GROUPS IN SPECIFIC AREAS OF STUDY

SG 2   Lead Study Group on Service definition, Numbering, Routing and Global Mobility.

SG 4   Lead Study Group on TMN.

SG 7   Lead Study Group on Open Distributed Processing (ODP), Frame Relay and for Communication System Security.

SG 8   Lead Study Group on Facsimile.

SG 11   Lead Study Group on Intelligent Network and FPLMTS.

SG 13   Lead Study Group on General network aspects, Global Information Infrastructures (GII) and Broadband ISDN.

SG 15   Lead Study Group on Access Network Transport.

SG 16   Lead Study Group on Multimedia Services and Systems.

Annex B

(to Resolution 2)

Points of guidance to Study Groups for the development of the post-1996 work programme

B.1   This Annex provides points of guidance to Study Groups for the development of the post-1996 study questions in accordance with the proposed structure and general areas of responsibility. The points of guidance are intended to clarify, where appropriate, 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 TSAG as necessary to facilitate interaction between Study Groups, to minimize duplication of effort and to harmonize the overall ITU-T work programme.

Study Group 2

– Study Group 2 is the Lead Study Group for service definition (including all types of services) for numbering and routing and for global mobility. Study Group 2 has a coordination role in studies on billing information (Phase one) and operational quality of service/network performance.

– Study Group 2 shall define and describe services including FPLMTS in its area of responsibility from a user's point of view to facilitate global interconnection and interoperation and also ensure compatibility with the International Telecommunication Regulation and related intergovernmental agreements. It should also recommend QOS for each service and interact with other Study Groups (e.g. SG 13) in this respect as required.

– Within its area of responsibility Study Group 2 should define services functionally on an end-to-end basis, deal with supplementary services, services facilitating access to basic services and with services that are supported by networks or by other services, such as telephone.

– Study Group 2 should continue to study service policy aspects including those that may arise in the operation and provision of transborder, global and/or regional services, including those that offer both carriage and content components, taking due account of national sovereignty.

– Bureau, document communication, directory and audiovisual/multimedia services are studied, except in the mobile environment, by other Study Groups (SG 7, SG 8, SG 16) being responsible for relevant technologies. However, harmonization of service interworking and service operation aspects is required.

– Study Group 2 is responsible for studying, developing and recommending general principles of numbering and routing for all types of network.

– The Chairman of Study Group 2 (or, if needed the Chairman's delegated representative) should provide technical advice to the Director of the TSB concerning general principles for numbering and routing and the effect on allocation of international codes.

– Study Group 2 should provide the Director of the TSB with advice on technical, functional and operational aspects in the assignment, reassignment and/or reclamation of international numbering and addressing resources in accordance with the relevant E- and F-Series Recommendations taking into account the results of any ongoing studies.

– Study Group 2 recommend traffic engineering planning and dimensioning guidance for the implementation and operation of all types of networks and network elements.

– Study Group 2 recommend measures to be taken to assure 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 development which may have an impact on tariff and accounting principles including the related telecommunication economic and policy issues.

Study Group 4

As Lead Study Group for TMN, Study Group 4 has the responsibility of ensuring consistent application of TMN principles by all Study Groups in their development of TMN-related specifications. This may require that Study Group 4 develop guidelines for developing TMN specifications and/or review the structure and content of new and existing TMN Recommendations.

Study Group 4 in accepting responsibility for study of OSI system management from Study Group 7 must acknowledge and continue to support applications of resultant X.700-Series Recommendations that extend beyond TMN. This work is to continue as a collaborative effort with ISO/IEC JTC 1/SC 21.

For studies on maintenance of networks, including their constituent parts, Study Group 4 will cover the maintenance of:

- switched international circuits;
- leased circuits and supporting transmission networks;
- digital transport networks;
- mobile telecommunication systems.

The study will also require to cover:

- designation in the international networks;
- fault, performance and configuration management of ISDNs and B-ISDNs; and
- test and measurement techniques and equipments.

Study Group 5

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

Study Group 6

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 cooperates with Study Group 15.

Study Group 7

Responsible for studies concerning data communications, data networks and open system communications.

Study Group 7 is to take the primary role for developing Recommendations in the following areas:

- open systems interconnection (X.200-, X.600-Series, etc.);
- message handling services and systems (F.400- and X.400-Series);
- directory services and systems (F.500- and X.500-Series);
- security, including frameworks, mechanisms and protocols (X.800-Series);
- open distributed processing (X.900-Series);
- packet and frame relay, including interworking cases for data communications;
- highly reliable (loss sensitive or assured) U-plane data communications protocols over ATM (e.g. X.25, X.45 or other OSI protocols over ATM), including interworking.

In addition, Study Group 7 is the Lead Study Group for:

— open distributed processing (ODP);

— frame relay;

— communication systems security.

With regard to GII and multimedia, Study Group 7 is responsible for detailed services and protocols in all of the above listed areas and from the viewpoint of data communications. Direction on what studies need to be undertaken in support of GII and multimedia will come from Study Group 13 and Study Group 16, respectively.

With regard to numbering, routing and network performance:

— Numbering, routing: Study Group 2 is responsible for general principles for numbering and routing applicable to all networks. Study Group 7 is responsible for detailed work on numbering and routing for public data networks, including Recommendations X.110, X.121, X.122 and X.353. Ongoing work is to take into account Recommendations on general principles established by Study Group 2.

— Network performance: Study Group 2 is responsible for general principles applicable to all networks. Study Group 7 is responsible for detailed work applicable to data networks, including Recommendations X.130-X.145.

Study Group 8

Question 1/8 includes all aspects which define facsimile communication in a facsimile service as well as operating without service support as a terminal connected to a network. Whenever Study Group 8 needs assistance from other Study Groups, in particular with regard to quality of service aspects (Study Group 2), transmission aspects (Study Group 15), multimedia and modem aspects (Study Group 16), these Study Groups shall be invited to give their advice. Study Group 8 is the Lead Study Group for all studies related to facsimile terminals and services.

Questions 5, 6, 7, 8 and 9/8 are background Questions and/or task-oriented Questions which may provide basic input for the development of various applications.

For coded character sets, coded control functions, and still image coding to be applied in telematic and other ITU-T services, Study Group 8 is responsible for liaison with ISO/IEC JTC 1.

Study Group 9

Within the context of telecommunication systems and networks, Study Group 9 will prepare and maintain Recommendations on:

a) procedures for operation of TV and sound-programme networks;

b) television and sound-programme systems for contribution and distribution networks;

c) transmission systems for television, sound-programme, interactive services including Internet applications on cable, SMATV (Satellite Master Antenna TeleVision) and other networks intended primarily for television.

Study Group 9 will be responsible for coordination with ITU-R on broadcasting matters.

Study Group 10

Studies on modelling, specification and description techniques and on other software aspects of telecommunication systems will be developed in line with the requirements of and in cooperation with the relevant Study Groups such as SG 2, SG 7, SG 11, SG 13 and SG 15.

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

The work will concentrate on aspects for which the industry deems it useful to apply ITU-T Recommendations in order to enhance the use of software technology with associated processes and in order to stimulate the market place for such technology.

Study Group 11

Study Group 11's work in the years 1997-2000 will be:

– Defining signalling requirements and protocols for:

1) telephone and N-ISDN basic and supplementary services;

2) B-ISDN and multimedia services;

3) user mobility and terminal mobility for UPT and mobile (FPLMTS) services;

4) access and network security;

5) control of transmission equipment (e.g. echo controllers);

– Using technologies such as:

1) intelligent network;

2) Signalling System No. 7, including MTP, ISUP, B-ISUP, SCCP and TC;

3) Digital Subscriber Signalling 1 (DSS 1) for N-ISDN;

4) Digital Subscriber Signalling 2 (DSS 2) for B-ISDN;

5) data link layer for DSS 1 and DSS 2;

6) ATM adaptation layer;

– Supported by framework and methodology studies on:

1) signalling and protocol framework for an evolving environment;

2) unified functional specification methodology.

Study Group 11 is the Lead Study Group for FPLMTS, recognizing that, *inter alia*, FPLMTS service aspects are studied by Study Group 2.

Study Group 11 should provide technical advice to the TSB concerning the allocation of signalling area/network codes (see Resolution 20).

Close coordination with Study Groups of ITU-T and ITU-R as well as outside forums and consortia would continue to be maintained.

Study Group 12

Close cooperation between Study Groups 12 and 13 is necessary to assist Study Group 12 in the definition of 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 Study Group 13, especially in cases of new system concepts under study by Study Group 13. Close cooperation between Study Groups 12 and 16 is also required on the assessment of the subjective quality of processing algorithms.

Study Group 13

Within its general area of responsibility, Study Group 13 will progress studies on network architectures, capabilities and interfaces, network performance and interworking, B-ISDN, GII and future telecommunications architectures. Study Group 13 is also the Lead Study Group for GII and B-ISDN studies.

Study Group 15

Study Group 15 shall develop and maintain Recommendations on:

–   transport related aspects of networks (including the signal processing aspects of network echo control), taking into account the general network concept and network performance objectives set by other Study Groups;

–   systems and equipment for transport networks (e.g. SDH/ATM multiplexing, cross-connect and switching equipment, muldexes and statistical muldexes for data applications);

–   line transmission systems and equipment for access network and core network applications on optical and metallic media;

–   application of TMN to facilitate the management of transport networks, systems and equipment in accordance with the general TMN concept set up by Study Group 4;

–   implementation of SDH and PDH digital hierarchies (e.g. bit rates, interfaces, multiplexing structure, etc.);

–   transmission techniques and associated implementation topologies for the local loop and access environments (e.g. PON, photonic network, etc.);

–   coordination and harmonization of the ITU-T work on access network transport (Lead Study Group).

Study Group 16

For further study.

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Annex C

(to Resolution 2)

List of Recommendations under the responsibility of the respective Study Groups in the post-1996 Study Period

</div>

Study Group 2

C-Series

E-Series, with the exception of those in conjunction with Study Group 7

F-Series, with the exception of those under the responsibility of Study Groups 7, 8 and 16

Recommendation of the I.220-, I.230-, I.240- and I.250-Series

Maintenance of the S- and U-Series

Study Group 3

C.1 (in conjunction with SG 2)

D-Series

Study Group 4

M-Series

O-Series

G.850-Series

Q.513, Q.810-, Q.820-, Q.940-Series

X.700-Series

Study Group 5

K-Series

Study Group 6

L-Series

Study Group 7

X-Series, with the exception of those under the responsibility of Study Groups 4, 15 and 16

E.104, E.115 (in conjunction with SG 2)

F.400-, F.500- and F.600-Series

Study Group 8

T-Series, with the exception of those under the responsibility of Study Group 16

F.162, F.163, F.180-Series, F.551

F.160, F.581

Study Group 9

J-Series

N-Series

Study Group 10

Z-Series

Study Group 11

Q-Series, with the exception of those under the responsibility of Study Groups 4 and 15

Maintenance of the U-Series

Study Group 12

P-Series

G.100-Series (except G.160-, G.180- and G.190-Series)

G.470-Series

Study Group 13

I-Series, with the exception of I.200-Series (see Study Group 2) and I.700-Series (see Study Group 15) and those having double numbering in other series

G.700, G.701, G.703, G.707 (jointly with SG 15), G.801, G.802, G.803, G.805, G.810-Series, G.820-Series, G.900-Series, G.910-Series, G.920-Series and G.960-Series

Study Group 15

G-Series, with the exception of those under the responsibility of Study Groups 4, 12, 13 and 16

I.700-Series

Q.500-Series

V.38 and other Recommendation to be drafted under Q.3/15 and 4/15

Maintenance of the R-Series

X.50 to X.58

Study Group 16

H-Series

G.190-Series, G.720-Series, G.ACB, G.WSC/A, G.WSC/B, G.4kbps

T.100-Series T.120-Series, T.170-Series, T.504, T.523, T.541 and T.564

F.300-Series, F.700-Series

V-Series of Recommendations with the exception of those under the responsibility of Study Group 15.

X.26 (V.10) and X.27 (V.11)

TSAG

A-Series Recommendations

RESOLUTION No. 3

Publication of ITU-T Recommendations and WTSC proceedings

(Helsinki, 1993; Geneva, 1996)

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 electronic publication;

d)   Resolution 4 dealing with the identification and layout of ITU-T Recommendations;

e)   that in accordance with Resolution 1 (8.1, 8.6.1), approval of new and revised Recommendations is normally sought by consultation of the Members of the ITU, with the text being progressively published in individual booklets;

f)   that the ITU published telecommunications Recommendations using the name CCITT for many years, which name was and is still well recognized within the telecommunication industry,

noting

g)   Recommendation A.3 concerning the production, maintenance and publication of terms and definitions essential to the work of the ITU-T;

h)   that references to CCITT and ITU-T Recommendations are contained in numerous legal documents throughout the world,

decides

1   that each new and revised Recommendation 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 (see Annex A);

2   that each new and revised Recommendation shall be added to a directly accessible database of ITU-T Recommendations;

3   that these Recommendations also be published in booklet form using A4 format[1];

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

5   that approved Recommendations shall also be published on CD-ROM;

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[1] Where appropriate, texts may be grouped together in these booklets to suit market needs, as noted in Resolution 1, in which case publications may be delayed in agreement with the Chairman of the Study Group concerned, to allow grouping of texts. A few Recommendations are not appropriate for paper publication (e.g. test suites, image files).

6   that adequate indexing be provided on all media;

7   that the current status of each Recommendation in the complete range of Recommendations, including those approved by the CCITT prior to 1993, be accessible online;

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

decides further

9   that, to provide a record of the results of this second WTSC, an ITU-T Green Book shall be printed in A4 format with the contents restricted to the following in principle:

–   Resolutions and Opinions adopted by this WTSC;

–   Recommendations on the organization of the work of ITU-T (Series A);

–   a 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 (continuing or newly approved for study) and their allocation;

–   minutes and summary records of the WTSC meetings;

–   Reports of the conference committees;

–   list of participants and list of documents at the WTSC;

10   that this Green Book may also be published in electronic form;

11   that the colour of the cover of the ITU-T Book recording the WTSC results will rotate successively through the colours of previous Books in their chronological order, i.e. white, green, orange, yellow, red and blue,

requests

1   the Director of the TSB to observe the annexed guidelines when managing the continuing process of publishing Recommendations during the 1997-2000 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 A

(to Resolution 3)

Guidelines on publication of ITU-T Recommendations

A.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 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.

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

a) the maximum feasible use of electronic publishing of Recommendations through direct on line access to databases which are updated as soon as possible after approval of the Recommendations and by periodic (e.g. quarterly) publication on CD-ROM;

b) unambiguous labelling of Recommendations to identify successive versions (see Resolution 4);

c) convenient (e.g. on line or printed copy) 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 specific subjects without necessarily knowing the titles or understanding the general structure and letter series used to designate ITU-T Recommendations.

A.3 Immediately after the conditions for approval have been met in accordance with Resolution 1, a new or revised Recommendation shall be made available to the public in accordance with the conditions established by the ITU.

The Recommendations should be made available in at least the following three formats:

- online access - as soon as practicable;
- CD-ROM - periodically (e.g. quarterly);
- paper copy.

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 4) for the affected Recommendations.

A.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.

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

A.6 For research and reference purposes, the ITU should maintain an official copy in an archive of all Recommendations that are or were valid in the preceding twelve years.

A.7 The generally accessible database shall contain only currently in force versions of Recommendations.

A.8 ITU Copyright shall be strictly enforced on all formats of ITU-T Recommendations.

RESOLUTION No. 4

Identification and layout of Recommendations

(Helsinki, 1993; Geneva, 1996)

The WTSC,

noting

a)   that the Telecommunications Standardization Advisory Group (TSAG) periodically reviews the methods of identifying and laying out Recommendations;

b)   that Recommendation A.3 (*Elaboration and Presentation of Texts and development of terminology and other means of expression for Recommendations of the ITU Telecommunication Standardization Sector*), prepared and updated by the Telecommunication Standardization Bureau (TSB) provides detailed guidelines on format and style, in its Appendix I,

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. The numbering shall be done in a manner which permits clear, unequivocal identification and facilitates electronic storage of information concerning the Recommendation. The date of formal approval (month/year) shall be displayed on the cover of the Recommendation associated with the number in order to identify the version;

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, telephone service, service operation and human factors
F	Non-telephone telecommunication services
G	Transmission systems and media, digital systems and networks
H	Audiovisual and multimedia systems
I	Integrated Services Digital Network
J	Transmission of television, sound programme and other multimedia signals
K	Protection against interference
L	Construction, installation and protection of cables 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	Terminals for telematic services
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 in the foreword;

6   the author of a new or revised Recommendation shall provide, in front of the main body of the Recommendation, a summary as outlined in the Guidelines attached to Recommendation A.3. The author may also provide an introduction, background information and keywords as provided for in the Guidelines attached to Recommendation A.3;

7   the Guidelines attached to Recommendation A.3 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; Geneva, 1996)

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   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 3), but with a lower priority, and taking into account market needs.

RESOLUTION No. 7

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

(Malaga-Torremolinos, 1984; amended at Helsinki, 1993 and Geneva 1996)

The WTSC,

considering

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

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

c)   the common interest of ISO and IEC on one hand and ITU-T on the other hand in the development of standards, on telecommunication and information technologies, on cables, wires, optical fibres and on protection measures, which take full account of the needs of manufacturers, users, and those responsible for communication systems,

noting

a)   that the working methods and timing constraints of the organizations concerned are not the same;

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

c)   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;

d)   the principles of collaboration established between ISO and IEC and particularly with ISO/IEC Joint Technical Committee 1 (JTC 1) on Information Technology as contained in Recommendation A.23 and in the ISO/IEC JTC 1 Directives;

e)   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 and -IEC;

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 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 indicate 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.

RESOLUTION No. 9

Continued development of Electronic Document Handling

(Helsinki, 1993; Geneva 1996)

The WTSC,

considering

a)   the rapid pace of technology change and the consequent need for improved and more timely standards development;

b)   that EDH is a strategic tool for open, rapid and easy information exchange between participants in the activities of ITU-T;

c)   that the implementation of EDH capabilities and associated arrangements 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 advantageous towards improving communication among members of the ITU-T and between other relevant standardization organizations and the ITU, towards globally harmonized standards;

e)   the decisions contained in Resolutions 65 and 66 of the ITU Plenipotentiary Conference (Kyoto, 1994),

decides

1   that there should be long-term convergence of electronic tools used in standards development;

2   that the ITU-T should explore, and where practical encourage, interworking using EDH with other telecommunication standardization organizations;

3   EDH methods should comprise a range of electronic facilities, methods and capabilities which facilitate:

—   easy and accurate exchange of documents;

—   convenient and low cost interaction between participants;

—   wider sharing of information on and opportunity for participation in standards development;

—   earlier interchange of ideas towards more rapid development and wider participation in ITU-T standards making;

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

5   that key participants in this process should have appropriate free access to online services of the ITU-T for their work;

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; Geneva, 1996)

The WTSC,

considering

a)   the decisions contained in Resolution 9 on Electronic Document Handling (EDH);

b)   the decisions contained in Resolutions 65 and 66 of the ITU Plenipotentiary Conference (Kyoto 1994),

decides

1   that the work of the EDH Group set up under the Telecommunication Standardization Advisory Group (TSAG) shall continue towards meeting the need for rapid development of and access to global standards for telecommunications;

2   that the objectives of this Group are to:

2.1   review and study evolving EDH user needs;

2.2   promote EDH as the preferred working method within the ITU-T towards:

–   openness of participation;

–   transparency of operation;

–   rapid interchange of information between participants inside the ITU-T and with relevant external bodies;

2.3   promote progress of the implementation of services and related documentation to support EDH, including computer and administrative support;

3   that membership in this Group shall be open to all participants in the work of the ITU-T and include EDH experts from ITU-T Study Groups and from appropriate ITU Bureaux and Departments;

4   that the tasks of this Group are to study user needs and plan the introduction of suitable measures through appropriate subgroups and pilot programmes;

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 Postal Operations Council (POC) of the Universal Postal Union (UPU) in the study of services concerning both the postal and the telecommunication sectors

(Malaga-Torremolinos, 1984; Helsinki, 1993; Geneva, 1996)

The WTSC,

recalling

a)   Resolution 42 of the ITU Plenipotentiary Conference (Nairobi, 1982) on the Electronic Mail/Message Service;

b)   Resolution 911 of the 39th session of the ITU Administrative Council on relations between the CCITT and the Consultative Council for Postal Studies (CCPS);

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

considering

d)   that postal and telecommunication Administrations and the relevant ROAs and service providers need to keep themselves informed of technical progress liable to improve or to 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;

e)   that the VIth CCITT Plenary Assembly resolved to create a "CCPS/CCITT Contact Committee" to consider questions of joint interest to both organs in order:

–   to identify complementary activities to assist both organs in coordinating time-scales of results;

–   to identify overlapping activities to minimize duplication of work;

f)   that this Committee has fulfilled its purpose well, providing a sound basis for ongoing fruitful collaboration at the working level between the POC (the successor to the CCPS in 1995) and ITU-T (the successor to the CCITT in 1993),

resolves

1   that the relevant ITU-T Study Groups should continue to collaborate with the POC committees as necessary, on a reciprocal basis and with a minimum of formality;

2   that, for the ITU-T, Study Group 2 continue to act as the main point of contact for POC/ITU-T collaborative studies;

3   that the Director of the TSB should encourage and assist this collaboration between the two organs.

RESOLUTION No. 17

Telecommunication standardization in relation to the interests of developing countries

(Geneva, 1996)

The WTSC,

considering

the broad range of studies performed by the Telecommunication Standardization Sector in developing technical, operational and tariff Recommendations,

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 development of the worldwide telecommunication network is of mutual advantage to the developed 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 provisions 190 and 196 of the Convention (Geneva, 1992) and provision 35 of the Annex to Resolution 1 (Kyoto, 1994),

instructs

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

– encouraging and increasing the participation of the developing countries in telecommunication standardization activities;

– assisting in the organization and holding of information meetings concerning the work of the Study Groups in the ITU-T,

further instructs the Study Groups

– to take appropriate steps to have studies carried out on questions connected with standardization which are identified by the World Telecommunication Development Conferences;

– to take 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.

RESOLUTION No. 18

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

(Helsinki, 1993; Geneva 1996)

The WTSC,

considering

a)   the ongoing refinement of the Radiocommunication Sector and the Telecommunication Standardization Sector (Resolution 16, PP-94) according to the principles laid down at the APP-92, i.e.:

−   that the Radiocommunication Sector Study Groups are charged to focus on the following in the study of Questions assigned to them:

    i)   use of the radio-frequency spectrum in terrestrial and space radiocommunication (and of the geostationary-satellite orbit);

    ii)   characteristics and performance of radio systems;

    iii)   operation of radio stations;

    iv)   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 joint meetings of the Radiocommunication and Standardization Sector Advisory Groups (RAG, TSAG) shall review the distribution of new and existing work between the Sectors, subject to confirmation by the applicable procedures of each Sector. 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),

resolves

1   that the TSAG and the RAG, 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 in accordance with the procedures laid down for the approval of new and/or revised Questions;

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

a)   the procedure as given in Annex A 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 B).

Annex A

(to Resolution 18)

Procedural method of cooperation

With respect to *resolves* 2a), 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 B

(to Resolution 18)

Coordination of the radiocommunication and standardization activities through Intersector Coordination Groups

With respect to *resolves* 2c), 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. 20

Procedures for allocation and management of international numbering resources

(Helsinki, 1993; Geneva 1996)

The WTSC,

noting

a)   that the procedures governing the allocation and management of international numbering and addressing resources and related codes (e.g. new telephone ISDN country codes, telex destination codes, signalling area/network codes, data country codes) are laid down in the relevant E-, F-, Q- and X-Series ITU-T Recommendations;

b)   that the principles concerning future numbering and addressing plans to deal with emerging services and relevant number allocation procedures to meet international telecommunication needs will be studied in accordance with the ongoing work programme approved by this Conference for ITU-T Study Groups;

c)   Articles 14 and 15 of the Convention concerning the activities of ITU-T Study Groups and the responsibilities of the Director of the TSB, respectively,

considering

that the assignment of international numbering and addressing resources is a responsibility of the Director of the TSB and the relevant Administrations,

instructs

1   the Director of the TSB before assigning, reassigning and/or reclaiming international numbering and addressing resources, to consult:

i)   the Chairman of the relevant Study Group or if needed the Chairman's delegated representative; and

ii)   the relevant Administration(s); and/or

iii)   the applicant/assignee when direct communication with the TSB is required in order to perform its responsibilities.

In the Director's deliberations and consultation the Director will consider the general principles for numbering and addressing resource allocation, and the provisions of the relevant E-, F-, Q- and X-Series of ITU-T Recommendations.

2   the relevant Study Groups to provide the Director of the TSB with advice on technical, functional and operational aspects in the assignment, reassignment and/or reclamation of international numbering and addressing resources in accordance with the relevant Recommendations, taking into account the results of any ongoing studies.

RESOLUTION No. 22

Authorization for TSAG to act between WTSCS

(Geneva, 1996)

The WTSC,

considering

a)   that provisions of Resolution 17 (Plenipotentiary Conference, Kyoto, 1994) resolve that TSAG provide guidelines for the work of Study Groups and recommend measures to foster coordination and cooperation with other standards bodies;

b)   that the rapid pace of change in the telecommunications environment and in industry groups dealing with telecommunications demands that the ITU-T make decisions in shorter periods of time to maintain its pre-eminence;

c)   that TSAG has made proposals for the enhancement of the operational efficiency of the ITU-T, for the improvement in quality of ITU-T Recommendations and for methods of coordination and cooperation;

d)   that TSAG can help improve coordination of the study process and provide improved decision-making processes for the important areas of ITU-T activities;

e)   that administrative processes are needed which can accommodate rapid changes;

f)   that it is desirable for TSAG to act in the four years between WTSCs to meet the needs of the marketplace in a timely manner,

resolves

1   that TSAG is the delegated authority between this WTSC and the next WTSC to act in the following areas:

a)   maintain up-to-date, efficient working guidelines;

b)   assume responsibility, including the development and submission for approval under Resolution 1 procedures, for the A-Series of Recommendations (Organization of the work of the ITU-T);

c)   consider appropriate proposals made by coordination groups and implement those that are agreed;

d)   create groups with short lifetimes to address items that require rapid reactions;

2   that TSAG provide liaison on its activities to organizations outside the ITU;

3   that a report on TSAG activities included above shall be submitted to the next WTSC.

RESOLUTION No. 23

The use of Focus Groups

The WTSC,

considering

a)   that the Council approved Recommendation 19 from Resolution 15 (Kyoto, 1994) which recommends that to provide a short-term (typically one year) tactical response to urgent strategic issues, the Sectors consider the adoption of project-team working methods whenever possible;

b)   that the rules and procedures and working methods of the ITU-T are defined in Resolution 1 (Geneva, 1996) and in Recommendation A.1 (Geneva, 1996);

c)   that additional working methods may be needed for certain topics which:

–   are identified by the membership to be of high market driven priority and require short-term resolution;

–   need to be handled on a project team basis;

–   need to involve expertise and participation from outside of the ITU-T membership;

d)   that TSAG may advise on further improvements to the working methods of ITU-T,

resolves

1   to allow for the creation of Focus Groups on a trial basis, based on the guiding principles in Appendix I;

2   to request TSAG with the relevant Study Groups to support the work of Focus Groups and to assess the results of the trial, e.g. as to whether a Focus Group mechanism is required or whether existing mechanisms (e.g. Rapporteur Groups) within the ITU-T are adequate to meet the needs expressed above, particularly in *considering* c);

3   to request TSAG to develop detailed work methods for Focus Groups and report to the WTSC-2000, and

requests

the Director to give regular progress reports to the Council.

Appendix I

(to Resolution 23)

Guiding principles

I.1   A Focus Group is established to help accelerate the work of ITU-T Study Groups.

I.2   The proposal, including terms of reference, to set up a Focus Group on a specific topic can come from, e.g. Study Groups (initiated by ITU-T membership) or from TSAG.

I.3   The specific topic for a particular Focus Group is to be well defined (prior to approval) and must include a plan of action with a clear indication of the expected deliverables and the time schedules for completion.

I.4   A Lead Study Group may be identified.

I.5 A Focus Group will complete its work in a short period of time typically nine to twelve months.

I.6 Any participant may submit a technical contribution directly to the Focus Group.

I.7 Electronic document handling methods should be used as much as possible to advance the work rapidly.

RESOLUTION No. 24

Stability of the Telecommunication Standardization
Advisory Group

The WTSC,

considering

a)   that the current legal basis for the existence of the Advisory Groups, and specifically of the Telecommunication Standardization Advisory Group (TSAG), consists in the adoption by each Plenipotentiary Conference of the relevant Resolution;

b)   that the work done by TSAG is increasingly important not only to the Standardization Sector but to ITU as a whole;

c)   that it is desirable to place the existence of TSAG on a more stable footing,

observing

that pursuant to No. 250 of the Convention (Geneva, 1992), any conference may submit to another conference of the Union recommendations within its field of competence,

resolves

to recommend to the next Plenipotentiary Conference that it include in the Convention appropriate provisions to make the Telecommunication Standardization Advisory Group a permanent body,

instructs the Director of the TSB

to bring this Resolution to the attention of the Director of the BR.

RESOLUTION No. 25

Action plan to encourage the use of electronic document handling

The WTSC,

considering

a)   the decisions contained in Resolution 9 on Electronic Document Handling (EDH);

b)   the decision of Resolution 10 to continue the work on EDH within the Telecommunication Standardization Advisory Group (TSAG);

c)   the key role of the Telecommunication Standardization Bureau (TSB) in facilitating access to documentation through EDH;

d)   the EDH leadership exhibited by the ITU-T;

e)   the decisions contained in Resolutions 65 and 66 of the ITU Plenipotentiary Conference (Kyoto, 1994),

noting

a)   the need to reduce the increasing amount of documentation generated in hard copy during meetings;

b   the increasing trend by the members to provide input documents in electronic format;

c)   the increasing use by the membership of personal computers during meetings;

d)   the advantage to the membership of timely availability of meeting reports in electronic format;

e)   the advantage to the membership of facilitating greater electronic participation in the development of Recommendations, in particular, by distant countries;

f)   the economic aspects of enhancing the ITU-T EDH capability;

g)   number 115 of Article 18 of the ITU Constitution (Geneva, 1992),

recognizing

the need to encourage more widespread use of EDH by the membership through enhancement of existing EDH capability,

requests

1)   the Director of the TSB to develop a TSB plan of action, in cooperation with the TSAG and the Study Groups, to address the following aspects of EDH enhancement:

* before the start of a meeting:

    i)   to encourage contributors of normal (white) and delayed contributions:

        −   to submit their documents electronically in addition to the three paper copies (See clause 2 of Recommendation A.2), so that they can be uploaded to a dedicated location by the TSB and made electronically available to registered TIES users;

        −   to submit their documents as early as possible so that they are properly handled by the TSB;

ii) to instruct TSB to create and manage a dedicated location for temporary documents of the meeting to be uploaded and made accessible not only to participants attending the meeting, but also remotely by registered TIES users who are not attending the meeting;

iii) to encourage TSB and/or authors of liaison statements to upload liaison statements electronically to the location created by ii) above with temporary document numbers assigned by the TSB;

- during a meeting:

iv) to encourage authors of temporary documents to upload, with TSB assistance, all the temporary documents that are electronically available to the location for the temporary documents created in accordance with ii) above;

- they should be given temporary document numbers by the TSB before uploading;

- it is highly desirable that temporary documents containing meeting reports and draft Recommendation texts be made available in this way during the meeting or within two weeks of the close of a meeting (ideally no later than the close of the meeting);

- they should clearly indicate the level of endorsement, e.g. by Sub-Working Party, Working Party or Study Group level;

- after the meeting:

v) to make electronically available at a dedicated location for this purpose the meeting reports and draft Recommendation texts by the TSB as soon as a version in one working language is completed.

2) the Director of TSB to provide any additional guidelines/information to complement the information presently available in other documents such as Recommendation A.2;

3) the Director of TSB to develop a TSB plan of action, as an urgent high priority item, to address practical/physical aspects of the EDH capability, i.e. increase the number of personal computers and provide data access ports and power outlets in meeting rooms;

4) the Director of TSB to study the financial aspects of the use of EDH capability considering, e.g.:

- cost-savings resulting from the use of EDH capability in terms of reducing the number of pages in printing, human resources and the number of meetings;

- promotion of the perception of ITU as the pre-eminent global telecommunication standardization body;

- the cost required to enhance the EDH capability;

5) the Director of TSB to report to TSAG on the plan of action including the financial aspects described in item 4) above.

NOTE – It is recommended that the TSB, the TSAG and Study Groups jointly implement the actions proposed in item 1) above as soon as feasible on a trial basis, and report to the TSAG on the results of such trials.

RESOLUTION No. 26

Assistance to the Regional Tariff Groups

The WTSC,

considering

a)   that the Regional Tariff Groups have been established within Study Group 3;

b)   that the activities of some of these Groups have been relatively limited, particularly in Africa;

c)   that the study of accounting rates and the study of most of the economic aspects of telecommunication services call for human and financial resources which are not always available to the least developed countries;

d)   that, for determining accounting rates, national network costs at both ends of the relation are the most important component;

e)   that ITU-D Study Group 1 has been instructed to study, *inter alia*, the question of balanced tariff structures in the developing countries;

f)   that studies on suitable accounting rates for the African continent should be pursued within Study Group 3,

calls upon

the Director of the Telecommunication Standardization Bureau to request the Director of the Telecommunication Development Bureau:

1   to provide specific assistance to the Regional Tariff Group for Africa (TAF Group) as well as, if necessary, to other regional tariff groups for study of the methods and criteria to be used in setting accounting rates and collection charges;

2   to take appropriate steps to facilitate meetings of the TAF Group and promote the necessary synergies between the two Sectors.

RESOLUTION No. 27

Authority for TSAG to establish new study groups

The WTSC,

considering

a)   that in response to the requirements of Resolution 16 of the Plenipotentiary Conference, Kyoto, 1994, the Advisory Groups of the Radiocommunication and Telecommunication Standardization Sectors have established a TSAG/RAG Joint Working Party on refinement of ITU-R and ITU-T Sectors;

b)   that this Joint Working Party may propose a re-allocation of the work of the two Sectors which may be adopted by the next Radiocommunication Assembly and/or the next Plenipotentiary Conference;

c)   that such re-allocation of work may result in the need for additional Study Group(s) in the ITU-T Sector;

d)   that it is important that any needed organizational changes in the ITU-T not wait for the next WTSC,

noting

a)   that Resolution 22 (WTSC, Geneva, 1996) delegates authority to TSAG to act in a number of areas;

b)   that these areas do not include the formation of new Study Group(s),

further noting

that in accord with Section 4.5 of Resolution 1 (WTSC, Geneva, 1996) WTSC may assign temporary authority to TSAG to consider and act on matters specified by the WTSC,

resolves

should studies be re-allocated to the ITU-T from the ITU-R which can best be studied in new Study Group(s), TSAG is given the authority to establish such Study Groups and to assign Chairmen and Vice-Chairmen, *pro tempore* to act until the next WTSC.

RESOLUTION No. 28

Process for carrying forward work associated with refinement

The WTSC,

considering

a) that Resolution 2 of the Additional Plenipotentiary Conference (Geneva, 1992) outlines general principles and guidelines pertaining to the allocation of work between ITU-R and ITU-T, and established procedures for ongoing review of new and existing work and its allocation to ITU-R and ITU-T;

b) that Resolution 16 of the Plenipotentiary Conference (Kyoto, 1994) instructed the Directors of the Radiocommunication Bureau and Telecommunication Standardization Bureau, with the assistance of the Radiocommunication Advisory Group (RAG) and the Telecommunication Standardization Advisory Group (TSAG) to consider further elements of refining the ITU's structure, and to prepare a final report to the 1998 Council;

c) that Resolution 17 of the Plenipotentiary Conference (Kyoto, 1994) highlighted the need for the RAG and TSAG to continue to recommend measures to foster cooperation and coordination between ITU-R and ITU-T,

recognizing

a) that, pursuant to Resolution 16 (Kyoto, 1994), a TSAG/RAG Joint Working Party and Rapporteur's Group were established for the purpose of considering elements for further refining the ITU's structure;

b) that progress in the Joint Working Party and Rapporteur's Group has been impeded through the dearth of contributions and of active participation of the ITU membership;

c) that a process should be initiated to ensure that the objectives and spirit of Resolution 16 can be fulfilled,

recognizing further

that initiatives have been undertaken to enable TSAG to assume the necessary authority to establish new study group(s), when justified, as outlined in Resolution 27.

aware

that the continuing integration of radio and non-radio systems increases the need to study interconnection, interoperability and mobility requirements together,

resolves

to invite the Directors of the BR and TSB, in consultation with the Chairman of the TSAG/RAG Joint Working Party/Rapporteur's Group, to initiate a process, as outlined in the Annex A, for the purpose of carrying forward the work associated with refinement.

Annex A

(to Resolution 28)

The following procedure would be undertaken to carry forward the work associated with refinement:

1) The Radiocommunication Bureau (BR) and Telecommunication Standardization Bureau (TSB) Directors should initiate a consultation procedure through a Circular to the membership to elicit views on which Questions or parts of Questions could be candidates for transfer from ITU-R to ITU-T.

2) The timetable for the completion of this consultation should be at least one month prior to the next respective meetings of TSAG and RAG in March, 1997, which would be followed immediately by the consideration of the results of the consultation jointly by RAG and TSAG. Such joint consideration could be undertaken within the context of the TSAG/RAG Joint Working Party/Rapporteur's Group on refinement.

3) Based on the evaluation of the results of the consultation jointly by RAG and TSAG, a report will be communicated to the 1997 session of the Radiocommunication Assembly (October 1997) for further consideration and study.

4) The Radiocommunication Assembly evaluation would then be forwarded to TSAG for action, given its authority under Resolutions 1, 22 and 27. Such action could include a determination of how the possible transferred Questions or parts thereof could be accommodated within the existing Study Group structure of ITU-T or whether a new Study Group or Study Groups should be established within the ITU-T Sector.

NOTE – In the event that amendments to the Constitution and/or Convention would be required in order to achieve any of the actions foreseen in the refinement process, it is possible that this could be undertaken by the 1998 Plenipotentiary Conference.

RESOLUTION No. 29

Alternative calling procedures on international telecommunication networks

The WTSC,

recalling

a)   Resolution 21 of the Plenipotentiary Conference (Kyoto, 1994) concerning alternative calling procedures on telecommunications networks, which

i)   urged Members to cooperate among themselves to resolve difficulties to ensure that national laws and regulations of ITU Members are respected;

ii)   instructed the ITU-T to accelerate its studies with a view to developing appropriate solutions and recommendations;

b)   Resolution 1099 of the Council (Geneva, 1996) concerning the alternative calling procedures on international telecommunication networks which urged the ITU-T to develop, as soon as possible, the appropriate recommendations concerning the alternative calling procedures;

c)   the purposes of the Union to foster collaboration among Members for the harmonious development of telecommunications and to enable offering of services at lowest cost,

recognizing

a)   that call back is permitted in some countries and not in others;

b)   that call-back offers alternative calling procedures which may be attractive for users;

c)   that call-back affects the revenue of ROAs which may seriously hamper, in particular, the efforts of the developing countries for the sound development of their telecommunication networks and services;

d)   that distortion in traffic patterns resulting from call-back may impact traffic management and network planning;

e)   that some forms of call-back seriously degrade the performance and quality of the Public Switched Telephone Network (PSTN),

reaffirming

that it is the sovereign right of each country to regulate its telecommunications and as such it may permit, prohibit or otherwise regulate call-back in its territory,

noting

that in order to minimize the effect of alternative calling procedures

a)   ROAs should, within their national law, make their best efforts to establish the level of collection charges on a cost orientated basis taking into account Article 6.1.1 of the International Telecommunication Regulations and ITU-T Recommendation D.5;

b)   Administrations and ROAs should vigorously pursue the implementation of Recommendation D.140 and the principle of cost orientated accounting rates and accounting rate shares;

resolves

1   that Administrations and ROAs should take all reasonable measures, within the constraints of their national law, to suspend the methods and practices of call-back which seriously degrade the quality and the performance of the PSTN, such as constant calling (or bombardment or polling) and answer suppression;

2   that Administrations and ROAs should take a cooperative and reasonable approach to respecting the national sovereignty of others and suggested guidelines for this collaboration are attached;

3   that further studies are necessary on the basis of approved Questions, respectively 1/3, 3/2 and 19/11:

3.1   to develop, as soon as possible, appropriate recommendations concerning alternative calling procedures and, in particular, the technical aspects of the methods and practices of call-back which seriously degrade the quality and the performance of the PSTN, such as constant calling (or bombardment or polling) and answer suppression;

3.2   to continue consideration of other aspects of alternative calling procedures.

Attachment

Suggested Guidelines for Administrations and ROAs for Consultation on Call-back

In the interest of global development of international telecommunication, it is desirable for Administrations and ROAs to cooperate with others and to take a collaborative and reasonable approach. Any cooperation and any subsequent actions would have to take account of the constraints of national laws. The following guidelines are recommended to be applied in country X (the location of the call-back user) and country Y (the location of the call-back provider) regarding call-back. When call-back traffic is destined to a country other than countries X or Y, the sovereignty and the regulatory status of the destination country should be respected.

Country X (location of call-back user)	Country Y (location of call-back provider)
A generally collaborative and reasonable approach is desirable	A generally collaborative and reasonable approach is desirable
Administration X, wishing to restrict or prohibit call-back, should establish a clear policy position	
Administration X should make known its national position	Administration Y should bring this information to the attention of ROAs and call-back providers in its territory using whatever official means are available
Administration X should instruct ROAs operating in its territory as to the policy position, and those ROAs should take steps to ensure that their international operating agreements comply with that position	ROAs in Y should cooperate in considering any necessary modifications to international operating agreements
	Administration Y and/or ROAs in Y should seek to ensure that call-back providers establishing an operation in their territory are aware that: a) call-back should not be provided in a country where it is expressly prohibited, and b) the call-back configuration must be of a type which will not degrade the quality and performance of the international PSTN
Administration X should take all reasonable steps within its jurisdiction and responsibility to stop the offering and/or usage of call-back in its territory which is: a) prohibited; and/or b) harmful to the network. ROAs in country X will cooperate in the implementation of such steps.	Administration Y and ROAs in Y should take all reasonable measures to stop call-back providers in its territory offering call-back: a) in other countries where it is prohibited; and/or b) which is harmful to the networks involved.

NOTE – For relations between countries who regard call-back as an "international telecommunication service" as defined in the International Telecommunication Regulations, bilateral operating agreements should be required between the ROAs concerned as to the conditions under which call-back will be operated.

PART 2

ITU-T series A Recommendations: organization of the work of the ITU Telecommunication Standardization Sector

CONTENTS

Recommendation A.1

WORK METHODS FOR STUDY GROUPS OF THE ITU TELECOMMUNICATION STANDARDIZATION SECTOR (ITU-T)

(Geneva, 1956 and 1958; New Delhi, 1960; Geneva, 1964; Mar del Plata, 1968; Geneva, 1972, 1976 and 1980; Malaga-Torremolinos, 1984; Melbourne, 1988; Helsinki, 1993; Geneva, 1996)

1 Study Groups and other groups

1.1 Frequency of meetings

1.1.1 Study Groups are required to meet to facilitate the approval of Recommendations under the terms of Section 8 of Resolution 1. 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)].

1.1.2 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 six to eight months may incur the possibility of full documentation from the previous meeting not being available.

1.1.3 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.

1.1.4 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. A Study Group Chairman, in conjunction with the Director, may schedule short additional Study Group or Working Party meetings for the purpose of making the determination or decision, as appropriate, on a draft new or revised Recommendation.

1.1.5 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 (2.1.1 of Resolution 1) 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.

1.2 Coordination of work

1.2.1 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, time-frames for meetings and publication goals (see clause 2).

1.3 Preparation of studies and meetings

1.3.1 At the beginning of each study period, an organization proposal and an action plan for the study period shall be prepared by each Study Group 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 views expressed by participants in the meetings.

1.3.2 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.

1.3.3 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.

1.4 Conduct of meetings

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

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

1.4.3 Questions which have not elicited any contributions should not be placed on the final agenda of the meeting, and according to provisions of 7.4.2 of Resolution 1 may be deleted if no contributions have been received for the previous two Study Group meetings.

1.4.4 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.

1.4.5 The following information shall be included in liaison statements prepared at Study Group, Working Party, or Rapporteur Group meetings:

- List the appropriate Question numbers of the originating and destination Study Groups.

- Identify the Study Group or Working Party or Rapporteur Group meeting at which prepared.

- Include a concise title appropriate to the subject matter. If this is in reply to a liaison statement, make this clear, e.g., "Reply to liaison statement from *(source and date)* concerning ...".

- Identify the Study Group(s) and Working Party(s) *(if known)* or other standards organizations to which it has been sent. *(Liaison statement can be sent to more than one organization)*.

- Indicate the level of approval, e.g., Study Group or Working Party, or state that the liaison statement has been agreed at a Rapporteur Group meeting.

- Indicate if the liaison statement is sent for action *or* comment *or* information. *(If sent to more than one organization, indicate this for each one.)*

- If action is requested, indicate the date by which a reply is required.

- Include the name and address of the contact person.

The text of the liaison statement should be concise and clear using a minimum of jargon.

An example of the information required in a liaison statement is shown in Figure 1.1.

QUESTIONS:	45/15, 3/4, 8/ITU-R SG 11	
SOURCE:	ITU-T SG 15, Rapporteur Group for Q.45/15 (London, 2-6 October 1997)	
TITLE:	Object Identifier Registration - Reply to liaison statement from WP 5/4 (Geneva, 5-9 February 1997)	
	LIAISON STATEMENT	
TO:	ITU-T SG 4 - WP 5/4, ITU-R SG 11, ISO/IEC JTC 1/SC 6	
APPROVAL:	Agreed to at the Rapporteur Group meeting	
FOR:	WP 5/4 for action; others for information	
DEADLINE:	Deadline for reply - 22 January 1998	
CONTACT:	John Jones, Rapporteur for Q.45/15 ABC Company Anytown, CA USA	Tel: +1 576 980 9987 Fax: +1 576 980 9956 email: jj@abcco.com

Figure 1.1 – Example of the information required in a liaison statement

1.4.6 Liaison statements should be forwarded to the appropriate destinations as soon after the meeting as possible. Copies of all liaison statements should also be sent to the Chairmen of the involved Study Groups and Working Parties and to the TSB, for information.

1.4.7 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.

1.4.8 Chairmen will ask, at the beginning of each meeting, whether anyone has knowledge of patents, the use of which may be required to implement the Recommendation being considered. The fact that the question was asked will be recorded in the Working Party or Study Group meeting report, along with any affirmative responses.

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

1.5.1 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 the results of the meeting and the agreements reached in a condensed form 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.

1.5.2 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.

1.5.3 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.

1.5.4 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 reference number should not be deleted even if the figure has been modified.

1.5.5 Individual reports of meetings should be accessible online to appropriate users as soon as electronic versions of these documents are available to the TSB.

1.5.6 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.

1.5.7 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.

2 Study Group management

2.1 Study Group Structure and Distribution of Work

2.1.1 Study Group Chairmen shall be responsible for the establishment of an appropriate structure for the distribution of 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.

2.1.2 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.

2.1.3 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.

2.1.4 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 subgroups should be avoided.

2.1.5 A 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. This Study Group shall act as the Lead Study Group for the Joint Working Party and 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.

2.2 Joint Coordination Groups

2.2.1 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, time-frames 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. Joint Coordination Groups should be considered only if other, less formal, mechanisms, e.g. a joint meeting of Rapporteurs and/or Working Party Chairmen, have been considered and were not deemed to be effective. The work itself will be conducted in the relevant Study Groups and the results subject to the normal approval processes within each Study Group. The Joint Coordination Group may identify technical problems but will not perform technical studies nor write Recommendations.

2.2.2 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.

2.2.3 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.

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

2.2.5 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 Resolution 1 (Geneva, 1996) and Resolution 7 (Geneva, 1996) 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.

2.2.6 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.

2.2.7 Joint Coordination Groups are open, but (to restrict their size) should, in principle, be limited to designated representatives from the various Study Groups which are responsible for following up actions from the Joint Coordination Group activities within their Study Groups. Others may also attend. All participants should confine contributions to the purpose of the Joint Coordination Group and not discuss technical issues, which are outside the scope of the coordination activity of the Group.

2.2.8 The initial meeting of a Joint Coordination Group in a study period should be announced in a Collective Letter of the Lead Study Group. Joint Coordination Groups should work primarily by correspondence.

2.2.9 Meetings should be convened by the Chairman of the Joint Coordination Group.

2.2.10 Inputs to the work of a Joint Coordination Group should be sent to the Joint Coordination Group Chairman, the Director of the TSB and the relevant, affected Study Group representatives. Procedures for the distribution of materials for work conducted via a correspondence group shall be determined by the Joint Coordination Group.

2.2.11 Joint Coordination Groups should submit proposals to Study Groups to achieve alignment in the development of related Recommendations by the respective Study Groups.

2.2.12 Joint Coordination Group reports are issued after each meeting and will be included in the Report series of the Lead Study Group. The TSAG may monitor Joint Coordination Group activities through these reports.

2.2.13 The TSB will provide support for a Joint Coordination Group, within available resource limits, at the request of the Lead Study Group Chairman.

2.2.14 A Joint Coordination Group may be terminated at any time. A proposal to do so, including adequate reasons, may be submitted by any Study Group involved or by the TSAG. The Chairman of the Lead Study Group should first informally discuss this proposal among the relevant Chairmen to inform them of the proposal and to seek their views. The decision shall be made by the Lead Study Group, taking into consideration a report of the Joint Coordination Group itself. Termination must be agreed by consensus at a meeting of the Lead Study Group. The TSAG should be advised of any decision resulting from the discussion in that meeting.

2.3 The roles of Rapporteurs

2.3.1 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.

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

2.3.3 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.

2.3.3.1 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.

2.3.3.2 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. If the related Question is modified by the WTSC, for continuity purposes the Rapporteur may, at the discretion of the new Study Group Chairman, continue to progress the relevant work until the next meeting of the Study Group.

2.3.3.3 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.

2.3.3.4 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.

2.3.3.5 As a general principle, work by correspondence (including electronic messaging and telephone communications) is preferred and the number of meetings should be kept to a strict minimum, consistent with the scale and milestones agreed by the parent group. Where possible, 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.

2.3.3.6 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 2.3.3.10 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.

2.3.3.7 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.

2.3.3.8 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 3 on Publication of ITU-T Recommendations.)

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

2.3.3.10 In conjunction with their work planning, Rapporteurs must give advance notice of any meetings they arrange, not only to the collaborators on their Question or project, but also to the Study Group (see 2.3.3.11). The TSB is not required to circulate convening letters for meetings below Working Party level.

2.3.3.11 The intention to hold 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 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.

2.3.3.12 Rapporteurs should prepare a meeting report for each Rapporteur meeting held and submit it as a white Contribution, or if the relative timing requires it as a Temporary Document, to the next Study Group or Working Party meeting. This report should include the date, venue and Chairman, an attendance list with affiliations, the agenda of the meeting, a summary of technical inputs, a summary of results and the liaison statements sent to other organizations.

2.3.3.13 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.

2.3.3.14 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 Section 2, Recommendation A.1)

Rapporteur proposed work programme format

The following format is recommended for a work programme proposed by a Rapporteur in accordance with 2.3.3.6:

a)   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 Section 2, Recommendation A.1)

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 and summary of contributions considered at Rapporteur group meetings (see Note);

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 meetings held since last progress report.

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.

NOTE – The Progress Report may make reference to the meeting reports (see 2.3.3.12) in order to avoid duplication of information.

3   Submission and processing of contributions

3.1   Submission of contributions

3.1.1   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 in accordance with guidance from the Director of the TSB (see Recommendation A.2, clause 2).

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

3.1.3   Contributors are reminded, when submitting contributions, that the requirements for early disclosure of patent information, as contained in the statement on TSB patent policy (see Appendix I of Resolution 1), apply.

3.1.4   Material such as text, diagrams, etc., submitted as a contribution to the work of the ITU-T is presumed by ITU to have no restrictions in order to permit the normal distribution of this material for discussions within the appropriate groups and possible use, in whole or in part, in any resulting ITU-T Recommendations which are published. By submitting a contribution to the ITU-T, authors acknowledge this condition of submission. In addition, authors may state any specific conditions on other uses of their contribution.

3.2   Processing of contributions

3.2.1   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.

3.2.2   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 3.2.1 above, without having them translated.

3.2.3 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 3.2.1 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.

3.2.4 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.

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

3.2.6 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.

3.2.7 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.2. A reminder circular should be sent out by the Director whenever appropriate.

3.2.8 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.2, so that it may be brought into line with those directives.

3.2.9 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.

3.2.10 Some contributions of general (and not merely incidental) interest which may, for example, be of some scientific importance (e.g. 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.

3.2.11 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 the Study Group primarily concerned; 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.

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

3.3 Temporary documents

3.3.1 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.

3.3.2 Temporary documents noted in 3.3.1 above should be available, to the extent possible, one full working day before the start of the meeting.

3.3.3 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.

3.3.4 Temporary documents may be produced during the meeting.

3.4 Electronic access

3.4.1 Input documents (e.g., contributions, temporary documents and liaison statements) should be accessible online to appropriate users as soon as electronic versions of these documents are available to the TSB.

Recommendation A.2

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

(Malaga-Torremolinos, 1984; Melbourne, 1988; Helsinki, 1993; Geneva, 1996)

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) Time and effort can be saved by submitting contributions, prepared using a text processor, electronically by e-mail or File Transfer Protocol (FTP).

d) Documents of purely theoretical interest which are not directly related to the Questions under study should not be submitted.

e) 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.

f) 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 Appendix I. Details on the presentation of the ITU-T texts can be found in Recommendation A.3.

2   Three paper copies of contributions accompanied preferably by one electronic copy 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 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.

Appendix I

Detailed guidelines for the preparation of contributions
relative to the study of ITU-T Questions
(These guidelines will be updated by the TSB as necessary. Any updated version
will be issued in a TSB Circular.)

The guidelines in this appendix supplement the general directives set out in Recommendation A.2. 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.

I.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.

I.1.1   *Heading* – The heading of a contribution should provide:

–   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 as a footnote, author or contact person with address, telephone, fax and e-mail numbers;

–   title of the contribution.

An example of the recommended format is given in Figure I-1/A.2.

INTERNATIONAL TELECOMMUNICATION UNION	COM 12-97-E
TELECOMMUNICATION	April 1997
STANDARDIZATION SECTOR	Original: English
STUDY PERIOD 1997 - 2000	

Question: 2/12

STUDY GROUP 12 – CONTRIBUTION 97

SOURCE*:   WABATA TELECOM

TITLE: CONSIDERATIONS OF ECHO CAUSED BY THE ACOUSTIC LOSS PATH OF TELEPHONE SETS

_____

* **Contact:**	Jonathan Smith	Tel: +1 403 123 4567
	1 Dogwood Circle	Fax: +1 403 123 4444
	Redfoot, Alberta	email: jsmith@wabacom.ca
	Canada T6R 5W2	

Figure I.1/A.2

I.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.

I.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.

I.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.

I.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.3, describes the distinction between the uses of Annex and Appendix.

I.2   Mechanics and presentation

I.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.3); 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.

I.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.

I.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.

I.2.4 *Formulae* – Mathematical formulae should only be presented for explaining texts. Details of how they are derived should be avoided.

I.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.

I.2.6 *References* – Reference to other ITU-T contributions or Recommendations 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 ITU or ISO/IEC publications or standards. Other publications could be referenced in a Bibliography. In exceptional cases, a copy of the article should be provided with the contribution.

(See 2.9, Appendix I of Recommendation A.3 for more information on references and bibliographies.)

I.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 shall also be given to identify any changes proposed with regard to the previous version of the same text.

Such change indications could be made for example by strikethrough, double underlining or by vertical revision bars (|) appearing at the margin of the page.

I.2.8 *Electronic contributions* – The ITU encourages the submission of material in electronic form. Guidance in this regard is available in TSB Circular 158 update and the Annex to that Circular is attached as Appendix II to this Recommendation.

Appendix II

Guide on electronic submission of documents

Clause II.1 of this appendix describes the new electronic submission method, using FTP "drop box areas". Clause II.2 contains information on the electronic submission of documents by e-mail and on diskette. The information which should accompany documents submitted electronically, the standard file formats and conversion possibilities and other information may be found in Clause II.3.

II.1   Submission by FTP

II.1.1   Introduction

Participants in ITU-T activities can now submit documents electronically using FTP (File Transfer Protocol). FTP is recommended as the most efficient transmission method for electronic submission of documents as it is faster and more reliable for transmission of large files. In addition, no file encoding is required, which simplifies the process for both the submitter and the TSB.

II.1.2   Submission by FTP

Special FTP "drop box areas" have been set up on the ITU FTP server to receive documents for ITU-T Study Groups and other groups (TSAG, ICGs, JCGs). Documents should be put in the relevant "drop box area". The FTP "drop box areas" which were set up are the following:

Study Group/TSAG	FTP "drop box area"
2	/u/itu-t/edh/sg2
3	/u/itu-t/edh/sg3
4	/u/itu-t/edh/sg4
5	/u/itu-t/edh/sg5
6	/u/itu-t/edh/sg6
7	/u/itu-t/edh/sg7
8	/u/itu-t/edh/sg8
9	/u/itu-t/edh/sg9
10	/u/itu-t/edh/sg10
11	/u/itu-t/edh/sg11
12	/u/itu-t/edh/sg12
13	/u/itu-t/edh/sg13
15	/u/itu-t/edh/sg15
16	/u/itu-t/edh/sg16
TSAG	/u/itu-t/edh/tsag

NOTE – The documents addressed to the groups associated with one or more Study Groups should be put into the FTP "drop box area" of the Lead Study Group.

When a document is sent to the FTP "drop box", the additional information required (see II.3.1) should be sent to the TSB EDH section by e-mail (e-mail address: Internet: tsbedh@itu.int; X.400: S=tsbedh; A=400net; P=itu; C=ch; TIES e-mail: tsbedh).

For reasons of security, once a document has been sent to the FTP "drop box" only authorized TSB staff have access to it.

II.1.3   Instructions on how to submit documents using the ITU FTP client via TIES

NOTE – If you use your own FTP client, follow the instructions from point (4) of paragraph II.1.3.1 below.

II.1.3.1   How to connect to the ITU FTP server and upload the file to be submitted to the private directory

(1) Login to TIES with your name and password:

"Welcome to ITU TIES"
Login :
Password :

then upload the file you wish to submit from your PC to your TIES private directory:

(2) From TIES main menu, select menu option:

15 - Email, private directory, Telnet, FTP, ALL-IN-1, ...

then

4 - Upload file to private directory
--> choose file transfer protocol   (e.g. 5 - Kermit)
--> choose ASCII or Binary transmission mode
*   (all word-processed documents use binary transmission)*
--> Enter filename to upload: e.g. myfile.doc <return>

The file is now uploaded.

(3) From TIES menu, select menu option :

8 - FTP - File Transfer Protocol

(4) The ftp> prompt will be displayed :

At the ftp> prompt, type (case sensitive) "open ftp.itu.int"

i.e. **ftp> open ftp.itu.int   <return key>**

(5) The following will be displayed :

"Welcome to ITU TIES FTP Server"

(6) You will be required to re-enter your TIES username and password
(case sensitive) to logon to the ITU FTP server :
Name :
Password :

You are now logged onto the ITU FTP server, and the ftp> prompt will once
again be displayed. You can now access the FTP "drop box areas".

II.1.3.2 How to access the FTP "drop box areas" after connecting to the ITU FTP server

(7) From the ftp> prompt, type (case sensitive) the following :

---

ftp> cd /u/itu-t/edh/sg 2   *<return key>*   *(for the Study Group drop box)*

You can now send (put) documents to an FTP "drop box" as illustrated in the examples below:

II.1.3.3 How to send (put) a document to an FTP "drop box"

*Example 1: How to **put** a document named **myfile.doc** in FTP drop box /u/itu-t/edh/sg 2*

    *ftp> **put** myfile.doc*   *<return key>*   *(the file myfile.doc will be copied to FTP drop box /u/itu-t/edh/sg 2)*

*Example 2: How to **put** a document named **myfile.doc** in FTP drop box /u/itu-t/edh/sg 2 and **rename** it newfile.doc :*

    *ftp> **put** myfile.doc newfile.doc*   *<return key>*   *(the file myfile.doc will be copied as newfile.doc to FTP drop box /u/itu-t/edh/sg 2)*

NOTE – Please note that the TIES menu option **numbers** indicated above may be modified over time, but the options themselves will remain.

II.1.3.4 Some useful FTP commands are indicated below. For further information on FTP, please refer to the TIES Registered Users' Guide.

From the ftp> prompt, type:

*ftp> **dir***	*(to view directories)*
*ftp> **cd (directory name)***	*(to change directories)*
*ftp> **cd ..***	*(to return up one level)*
*ftp> **cd ~***	*(to return to user's private directory)*
*ftp> **pwd***	*(to show which directory you are in)*
*ftp> **put** myfile.doc*	*(to send a file with name myfile.doc)*
*ftp> **bye***	*(to exit the ftp server)*

II.2 Electronic submission of documents by e-mail or on diskette

II.2.1 The following address should be used for documents submitted by e-mail or on diskette:

Telecommunication	Internet address: tsbedh@itu.int
Standardization Bureau	X.400: S=tsbedh; A=400net; P=itu; C=ch
TSB EDH Section	TIES e-mail: tsbedh
ITU	Tel.: +41 22 730 5857/5859
Place des Nations	Fax: +41 22 730 5853
1211 Geneva 20	
Switzerland	

II.2.2 Submission by e-mail

Documents submitted via X.400 should be attached as "binary". Documents submitted via Internet should be uuencoded or converted to RTF since binary files cannot be sent via Internet.

II.2.3 Submission on diskette

Accepted diskette formats:

IBM and compatible:

– 3 1/2" (720 K or 1.4 MB) diskettes.

Apple Macintosh formatted diskettes.

II.3 Information required, standard file formats, conversion possibilities and other information

II.3.1 Information required

Whichever electronic submission method is used (over the network or on diskette), the submitted document must be accompanied by the following additional information to allow it to be processed effectively by the TSB.

II.3.1.1 General information

Sender:	Full name, administration/organization, position, phone and fax numbers, e-mail address of the sender
Author[1]:	Full name, position, phone and fax numbers, e-mail address of the author (if different from the sender)
Approval:	Statement indicating that the document has been cleared by the relevant national telecommunication administration (if applicable)
SG/WP/...:	Indicate which Study Group/Working Party or other Group is to receive the document
Meeting date:	If the document is submitted for a particular meeting, the meeting date should be indicated

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[1] When the submission includes documents prepared by different authors, this information is not required.

II.3.1.2   Document and file attributes

Document title:	Indicate the title of the document
Draft Recommendation and version:	If the document contains a draft Recommendation, indicate the Recommendation number and version/version date
Number of figures:	If the figures are integrated or "embedded" in the document, it is useful to know the number of figures in the document to determine if the document is complete
Filename(s) and size (in bytes):	Indicate the name(s) of the file(s) included in the submission and the size in bytes
System environment:	Indicate the platform or environment in which the document was created, e.g. DOS, Macintosh
Word processor and version:	Indicate the word processor and version used in preparing the document, e.g. WinWord 2.0, MacWord 5.1a, etc.
Graphics software and version:	Indicate the graphic package used to create the figures, e.g. Designer 3.1, MacDraw Pro 1.5, etc.
	It is not necessary to include this data if the figures are integrated or "embedded" in the document and not sent separately.
Encoding format (if applicable):	e.g. RTF, uuencode, binary attachment, BinHex 4.0
Compression method used (if applicable):	e.g. PKZIP, LHA, s.e.a. (self extracting archive)
Other:	Provide any relevant information/special instructions to help processing the file

NOTE 1 –   Please mark the end of document with *******.

NOTE 2 –   Attributes which are common in several documents of a batch submission (e.g. prepared using the same word processor and version), need only to be indicated once.

II.3.1.3   A **form** (in WinWord 7 and ASCII formats) with the information required which can be used by ITU-T members when submitting documents has been prepared and posted on ITUDOC. It can be found in the Group "Templates" under the ITU-T root group (path: itu-t/template) and is entitled "Document submission form". Two sample forms may be found at the end of this Appendix in II.3.8.

II.3.1.4   As mentioned in Clause II.1.2, when documents are submitted using *FTP "drop boxes"*, the information should be sent by e-mail to the TSB EDH Section (Internet: tsbedh@itu.int; X.400: S=tsbedh; A=400net; P=itu; C=ch; TIES e-mail: tsbedh).

In the case where documents are submitted *by e-mail*, the information should appear on the cover memo to which the document(s) is (are) attached.

When a document is submitted *on diskette*, if the diskette is not accompanied by a printed message giving the information required, the information should be included in a text file with the unique name "tsb-info.txt" on the same diskette (or on the first one of a set of diskettes).

II.3.2 Notification of receipt

The TSB EDH Section sends a receipt notification to the sender as soon as the document has been processed and successfully converted (if necessary).

II.3.3 Templates

Word for Windows 7 templates (.DOT files) of ITU-T Recommendations, contributions/reports and delayed contributions are available on ITUDOC in the group "Templates", under the ITU-T root group (path: itu-t/template). To facilitate electronic document processing in the ITU, it is recommended that documents be prepared in accordance with the built-in instructions and styles in the templates.

II.3.4 Standard formats and conversion possibilities

Files submitted electronically should be submitted in certain formats (either ITU standard formats or formats whose conversion is possible). The formats are described below.

II.3.4.1 Word processing standards

ITU uses Word for Windows (version 7) as its standard word processing package. Conversion filters exist in the TSB for the following word processors listed in order of preference.

IBM PC compatible:	
Word for Windows	versions 1.1 – 6.0a
Rich Text Format	
Word for DOS	through version 5.0
WordPerfect	versions 5.0, 5.1
Windows Write	through version 3.1
Text (PC-8)	IBM PC character set
Text (ASCII)	
RFT-DCA	
Apple Macintosh:	
MacWord	versions 4.0, 5.0, 5.1a
MacWrite, MacWrite II	version 1.x
RTF	

The following conversion filters exist in ITU:

IBM PC compatible:	
WordStar	(Versions 3.3, 3.45, 4.0, 5.0)
Apple Macintosh	
WordPerfect	(versions 4.2, 5.0, 5.1, Mac1, Mac2)

Important Note

While it is possible to process and print documents in ASCII (.TXT files) and Postscript, it is recommended that the documents be sent in the original word processor they were created in. ASCII type documents take longer to process as the special attributes (such as bold, italics, tabs, etc.) of the document are lost during the conversion. In addition, in cases where ASCII files contain tables or indentions, it is difficult to ascertain the exact format of the table or paragraph. As for Postscript

files, they can be printed but cannot be edited. It is more convenient to obtain the processable electronic file with the purpose of being able to edit the document in the future, if needed.

II.3.4.2   Graphic standards

ITU uses Designer 6.0 (.drw) as the standard graphic software. However, the following graphics software (listed in order of preference) may be used, as graphs prepared with them can be imported in the Word for Windows 7 texts and edited with Designer 6.0.

–   IBM PC Compatible:

Windows Metafile	(.wmf)
Tagged Image Format	(.tif)
PC Paintbrush	(.pcx)
Windows Bitmaps	(.bmp)
Computer Graphics Metafile	(.cgm)

–   Macintosh:

Macintosh PICT	(.pct)
MacDraw Pro 1.1	

II.3.5   Accepted binary encoding methods

–   IBM PC Compatible:

- uuencode[2]

- MIME

- xxencode

–   Macintosh:

- Apple Single

- BinHex 4.0

- btoa/atob

- Mac Binary encoder

- UuCode Translator ver. 3.0

II.3.6   Accepted compression methods

Please note that compression is recommended for large files, e.g. files larger than 2 Mb.

–   IBM PC Compatible

- PKZIP/PKUNZIP

- LHA

- LZH

- ARJ

- PKARC/PKXARC

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[2] The MS-DOS uuencode utility program is available in ITUDOC and may be found in the group "Tools" under the ITU-T root group (path: itu-t/tools).

- Macintosh:
  - Stuff/unstuff
  - Compress/Expand
  - Self extracting archive
  - deArc Translator 3.0
  - CPT (Compact Pro Translator) extract ver. 3.0.6
  - UnPack

II.3.7 Helpful hints

II.3.7.1 Standard fonts, such as Arial and Times New Roman, should preferably be used.

II.3.7.2 If the figures in a document contain text in landscape orientation, the "link" should not be broken, since certain graphic editors (e.g., MS-Draw) cannot edit text in landscape.

II.3.7.3 If the version of the word processor used is neither English nor American, this should be indicated. Some fields may not print correctly as a result of differences in national versions.

If the version of the word processor used is non-Latin (e.g., Japanese), conversion of the document to RTF (Rich Text Format) before sending is mandatory.

II.3.8 Document submission form – Samples

II.3.8.1 Sample 1: Submission by e-mail

To:	tsbedh@itu.int		
Sender:	Peter Anders Telstra OTC Australia	Tel: +61 2 723 1498 Fax: +61 2 938 2172 e-mail: p_anders@ccdn.otc.com.au	
Author:	Jeff Corris	Tel: +61 2 883 2122 Fax: +61 2 876 0323 e-mail: jcorris@ccdn.otc.com.au	

The attached three contributions are submitted for consideration at the next SG 1 meeting (5-10 September 1995). These contributions have been cleared by the relevant Australian authorities.

The three contributions were prepared using WinWord 2.0 (DOS) and UUENCODED.

1) Guidance on Bureau Service Harmonization

GUIDANCE.DOC   32 678 bytes
*contains three embedded figures

2) General Principles and Comments on the "E.N" proposal

GENPRIN.DOC   56 908 bytes
FIG_A1.DRW   24 733 bytes (Designer 3.1)

3) Proposed addition to draft new Recommendation F.82

ADD_F82.DOC   72 188 bytes

Other: Contribution # 2: please insert the Designer 3.1 drawing as Figure A.1 in the file GENPRIN.DOC (page 13).

II.3.8.2 Sample 2: Submission by FTP

To:	tsbedh@itu.int

Sender: Martin Hilton   Tel: +61 2 723 1234
            Rapporteur, Q.10/1   Fax: +61 2 723 1235
                                             e-mail: m_hilton@mcs.com

The text of draft Recommendation F.xxx includes the amendments adopted at the last SG 1 meeting (May 1995). The file was put into the FTP drop box of SG 1.

The document was prepared using WinWord 2.0 (DOS) and has been compressed using PKZIP version 2.04c.

      Draft Recommendation F.XXX (Version: 2 – May 1995)
      FXXX.ZIP   89 102 bytes (compressed)
      FXXX.DOC   569 788 bytes (uncompressed)
      *contains 12 embedded figures

Recommendation A.3

ELABORATION AND PRESENTATION OF TEXTS AND DEVELOPMENT OF TERMINOLOGY AND OTHER MEANS OF EXPRESSION FOR RECOMMENDATIONS OF THE ITU TELECOMMUNICATION STANDARDIZATION SECTOR

(Geneva 1980; Helsinki, 1993, Geneva 1996)

Recommendation A.3 (formerly 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 1996 the volume of text treated per study period has increased by a factor of five, 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).

Accurate, up-to-date terminology has always been considered by ITU-T and its predecessors as a prerequisite for producing comprehensible standards. Over the years, working methods in terminology have been refined and the necessary procedures within Study Groups are now well established. The product of these efforts is collected and stored electronically by the TSB, provides the major vocabulary input to the ITU language services and constitutes the database for distribution or publication of this information by paper or electronic means. Consolidated procedures for dealing with terminology and other means of expression previously covered by ITU-T Recommendations A.10, A.12, A.13 and A.14 are described in Appendix II.

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;

5) that appropriate terminology and other means of expression be developed by ITU-T Study Groups and stored, maintained and distributed as required by the TSB.

NOTE – A similar Guide which deals exclusively with ITU-T | ISO/IEC common text has been elaborated jointly with ISO/IEC and can be found in Recommendation A.23.

APPENDIX I

GUIDE

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

Summary

This author's Guide for preparing ITU-T texts (e.g. draft Recommendations) permits uniform, efficient preparation of texts by the TSB 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 are the basis for a template and will remain stable until changes to current text treatment procedures necessitate their modification.

Recommendation A.1500 (Example of an ITU-T Recommendation)

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

(Helsinki 1993, Geneva 1996)

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 the kind of 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 drafting 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 clause 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] and Background (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
Appendices (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 (TSB). It shall provide the title of the Recommendation as decided by the Study Group and, in addition, will provide the name of the hierarchically superior division of the Series into which the Recommendation falls.

2.2 Foreword

The TSB is responsible for this element, placed on the back of the title page which provides administrative, copyright and other information.

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 ahead 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. It is also used as a guide to inform online clients about the Recommendation.

2.5 Introduction and Background (optional)

This element, placed ahead 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. It may also 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.

2.6 Keywords (optional)

This element, placed ahead of the main body of the Recommendation, lists a limited number of words or word combinations which identify the main topics in the Recommendation. A manual of accepted keywords may be used in the selection of appropriate words. Work on the use of keywords as a simple search tool for electronic texts is under investigation in the ITU.

2.7 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. (Places and dates of approval are provided by the TSB and shown between brackets below the title.)

2.8 Scope

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

2.9 References

This element permits the author to list the ITU-T or former CCITT Recommendations, ISO, IEC and other accepted standards referred to in the body of the Recommendation and which are considered to be incorporated by reference into 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 (see 2.20 below).

2.10 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: "This Recommendation defines the following terms".

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

This Recommendation defines the following terms:

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.

text: The "text" of Recommendations is understood in a broad sense. It may contain printed or coded text and/or data (such as test images, graphics, software, etc.).

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 (in joint ITU-T | ISO/IEC texts the term integral annex is used).

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 (in joint ITU-T | ISO/IEC texts the term non-integral annex is used) and thus does not imply any agreement on the part of ITU-T.

In order to associate defined terms in the different languages, it would be useful to give a subclause number to each term defined. 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 Rec...., followed by a list of the terms used.

2.11 Abbreviations and acronyms

This element lists all the abbreviations and acronyms 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:

This Recommendation uses the following abbreviations:

CCITT	International Telegraph and Telephone Consultative Committee
IEC	International Electrotechnical Commission
ISO	International Organization for Standardization
ITU-T	International Telecommunication Union – Telecommunication Standardization Sector

2.12 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.

2.13 Text of the Recommendation

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

2.13.1 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.

2.13.2 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.

2.13.3 Lists

Lists allow associated short subclauses to be presented outside of the main paragraph numbering scheme thus avoiding excessively long subclause numbers (e.g. 2.13.3.3.2 is equivalent to point two of the third indent of subclause 2.13.3). 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.

2.14   Mathematical expressions and symbols (formulae, equations, etc.)

2.14.1   Presentation

Equations, formulae 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 subscribed or superscribed 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 size of all elements), it is preferable to produce them accurately by hand.

2.14.2   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 sign shall be aligned vertically.

2.14.3   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.

2.15   Figures and tables

2.15.1   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 the same line and centred, below the figure. References in the text to specific figures (see 2.17) 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)*. SDL diagrams are an exception to this rule and use sheet numbers when two or more pages of the same figure occur.
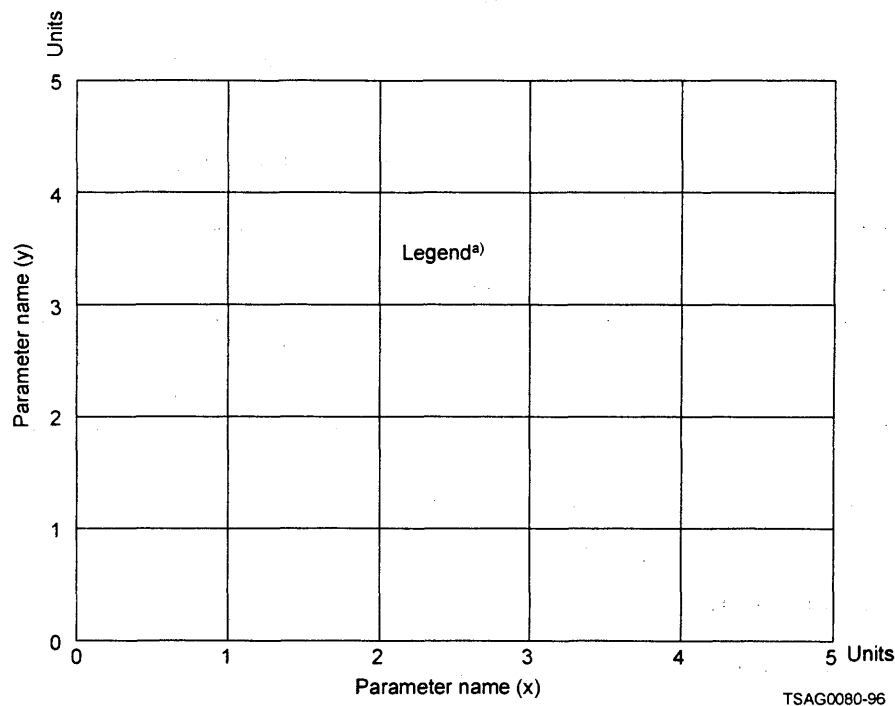
a)   Explanatory comments are placed immediately below the figure.

NOTE 1 – General notes to the figures are placed above the number and title of the figure.
NOTE 2 – Successive notes are numbered consecutively.

Figure 1/A.1500 – Example of presentation of figures

2.15.2   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 the same line and centred, above the table. References in the text to specific tables (see 2.17) 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.

2.15.3   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
NOTE 1 – The notes of the tables are placed within its frame. NOTE 2 – Successive notes are numbered consecutively.	

2.16   Notes and footnotes

2.16.1   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.

In a numbered subclause containing only one note, the note shall start with the word NOTE, placed at the beginning of the first line of the note and followed by a space and a dash (i.e. NOTE – this note is an example).

In a numbered subclause containing two or more notes, each note shall be preceded by the word NOTE, a space then an arabic numeral, a space and a dash at the beginning of its first line. Regardless of whether they occur singly or in one or more groups all notes within the same numbered subparagraph shall be numbered consecutively (i.e. NOTE 1 –, NOTE 2 –, NOTE 3 –, etc.).

Footnotes may be used to provide information regarding a particular item, word or concept. They shall be indicated by a superior positioned arabic numeral 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.

2.16.2 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.

2.17 Citing of references

When reference is made to other text passages, tables, figures, equations, 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, see clause 4/P.88 or see 3.8.2/Q.560.

2.18 Annexes

Annexes form an integral part of the Recommendation and 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.

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.

2.19 Appendices

Appendices 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 appendices shall be designated with roman numerals (i.e. I, II, III...). A single appendix shall be designated Appendix I.

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.

2.20 Bibliography (normally in an appendix)

This element may be present in order to cite references or sources not covered by the reference element and which are intended for background information (i.e. they are informative not normative).

2.21 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[1]

Treatment of machine readable text

A.1   Electronic Document Handling (EDH)

The Resolution 18 ad hoc Group (Melbourne, 1988) and the WTSC Helsinki (1993) in Resolution 9 recommended the use of EDH in the operations of ITU-T and its Secretariat (TSB). These recommendations were based on the fact that EDH is a strategic tool for information exchange between participants in the activities of ITU-T and that the implementation of EDH capabilities provides significant benefits for resource limited individuals, organizations and countries. Due to these and other advantages described in Resolution 9. TSB has put in place the necessary infrastructure to receive documents electronically. Authors, Rapporteurs and others wishing to submit electronic documents should follow the guide given in Appendix I of Recommendation A.2.

A.2   Modifications to Recommendations and version identification

To avoid waste of time and resources, authors/Rapporteurs should ensure that when an existing Recommendation is modified, all changes to the existing version be clearly indicated. As a minimum, vertical margin bars should be used.

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.

A.3   Data

Machine readable data (such as programmes, test sequences) can be a normative or informative part of ITU-T Recommendations. They always represent a constituent part of the Recommendation thus they shall be treated with all other parts of the Recommendation as a single entity (e.g. approval of such Recommendations shall include both text and data at the same time). In the text part of the Recommendation a Normative Reference shall be made to the data part of the Recommendation, identifying at least the title, version number and creation date of the data. Any other useful information such as size might be added as appropriate.

There is no difference from the procedural point of view between text and machine readable data when approving Recommendations or handling of defects.

Appendix I[2]

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

Collaboration between ITU-T and ISO/IEC takes place in the domain of information technology (covered by 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 included as Appendix II to Recommendation A.23 under the title Information technology - rules for presentation of ITU-T | ISO/IEC common text.

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[1]   This annex belongs to fictive Recommendation A.1500.

[2]   This appendix belongs to fictive Recommendation A.1500.

Appendix II[3]

Terminology and other means of expression

II.1 Terminology

II.1.1 ITU-T, in the interest of comprehensibility of ITU-T Recommendations, elaborates, approves, stores, maintains and diffuses the technical and operational terms and their definitions.

II.1.2 In the preparation of new or revised Recommendations, Study Groups shall develop and use the appropriate definitions for any new terms used. Each Study Group should designate a person responsible for coordinating its terminology activities and to act as a contact/liaison. This Rapporteur shall conduct liaison activities with other Study Groups and IEC or ISO as necessary.

II.1.3 All new terms and their definitions associated with a new or revised Recommendation shall be listed in a specifically labelled section of the Recommendation as outlined in 2.10 of Appendix I to Recommendation A.3 (the Guide for the elaboration and presentation of texts for Recommendations of the ITU Telecommunication Standardization Sector); the final decision on the definition of a "new term" rests with the Study Group.

II.1.4 To avoid unnecessary duplication, before finalizing the definition of a new term, the Rapporteur responsible for terminology shall examine the possible use of relevant definitions used or being developed by other Study Groups of ITU.

II.1.5 The TSB shall collect all new terms and their definitions from new or revised Recommendations and add them to the TSB terminology database. At the time of entry, any duplications or other anomalies or inconsistencies found shall be reported to the responsible Study Group(s).

II.1.6 The ITU-T terms and definitions contained in the terminology database shall be kept up to date by the TSB. All, or selected parts of the terminology database shall be made available to Rapporteurs, members of Study Groups and the general public by the TSB via the appropriate publication media.

II.2 Graphical Symbols and Diagrams

II.2.1 ITU-T Study Groups, in the elaboration of Recommendations, make use of graphical symbols, diagrams and other non-text means of expression. Most of these working tools are well established and need no special treatment but exceptionally, new symbols, diagrams, etc., may be required (e.g. to describe new devices, procedures, etc.) and a minimum of coordination is necessary.

II.2.2 It may prove necessary to introduce new symbols, diagrams or other means of expression in a new or revised Recommendation. In this case, and in an effort to normalize such tools, the Study Group Terminology Rapporteur should check whether similar means, used by another Study Group, exist and could be adapted to the situation. As a further measure to avoid duplication, a similar check should be made of symbols, diagrams etc., already normalized and published by IEC through its Technical Committee 3 (and subcommittees).

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[3] This appendix belongs to Recommendation A.3.

Recommendation A.4

COMMUNICATION PROCESS BETWEEN ITU-T AND FORUMS AND CONSORTIA

(Geneva, 1996)

1   Introduction

The purposes of the International Telecommunication Union are contained in Article 1 of the Constitution (Geneva, 1992). These include the aim "to promote, at the international level, the adoption of a broader approach to the issues of telecommunications in the global information economy and society, by cooperating with other world and regional intergovernmental organizations, and those non-governmental organizations concerned with telecommunications".

Also noted are the challenges faced by the Union in achieving its purposes in the changing telecommunication environment, both in the period covered by the Strategic Plan for the Union for 1995-1999 and in the following period, as stated in Resolution 1 (Plenipotentiary Conference, Kyoto, 1994). The Annex to Resolution 1 elaborates the Strategic Plan. For the Standardization Sector, its strategy includes recognition of the growing influence of industry forums, and a specific goal to develop appropriate agreements and cooperative relationships with other organizations including forums. Among the priorities identified for the Sector is the objective "to continue to cooperate with other global and regional standardization organizations and industry forums to harmonize the development and implementation of global telecommunication standards".

In order to facilitate the development of cooperative relationships with forums, and to encourage information exchange, it is deemed necessary to provide guidance on the means of communication. In particular, it is of benefit to establish procedures for use when structuring the communications process between ITU-T and forums and consortia.

The WTSC decides that the following procedures be applied.

2   Procedures

Study Group Chairmen are encouraged to engage in two-way communications, where appropriate, with representatives of forums/consortia, and to invite presentation to their Study Groups of work of the forums/consortia, as identified by the Study Group.

In addition, procedures have been introduced for a formal communication process between the ITU-T (or one or more of the Study Groups) and forums/consortia that qualify according to the criteria in Annex A. The communication process permits document exchange between the ITU-T and qualified forums/consortia.

2.1   Establishment of the communication process

Establishment of a communication process with a forum/consortium should be considered on a case-by-case basis, and should be evaluated with due care and diligence using the set of criteria in Annex A. Normally, the process is established at the Study Group level. In the case of groups associated with one or more Study Groups, the evaluation and decision to proceed should be carried out by the Lead Study Group. To avoid multiple requests to a forum/consortium for information pertaining to the criteria in Annex A, and to facilitate evaluation by Study Groups, the Director of the TSB should make the request to the forum/consortium and subsequently make a preliminary analysis of the response.

2.1.1　Communication process initiated by an ITU-T Study Group

If a Study Group considers that it is beneficial to establish a communication process with a forum/consortium, the Study Group should first check the Director's action list (see 2.3) and obtain the Director's analysis. The Study Group shall review the analysis and make a decision whether or not to communicate with the forum/consortium. Any areas of concern should be immediately shared with other interested Study Group Chairmen and the Director. If the Study Group approves, the Study Group Chairman shall initiate the communication process. The Study Group Chairman should facilitate the process as described in 2.2.

2.1.2　Communication process initiated by a forum/consortium

If a forum/consortium wishes to establish a communication process with a Study Group, that Study Group should first check the Director's action list (see 2.3) and obtain the Director's analysis. The Study Group shall review the analysis and make a decision whether or not to communicate with the forum/consortium. Any areas of concern should be immediately shared with other interested Study Group Chairmen and the Director. If the Study Group approves, the communication process can be established. The Study Group Chairman should facilitate the process as described in 2.2.

If a forum/consortium contacts the Director of the TSB to establish a communication process with the ITU-T, the Director should first determine whether it is appropriate for

a)　　the ITU-T (for administrative aspects), or

b)　　one or more Study Groups (for topics relating to their work).

In case a), the Director evaluates the forum/consortium according to the criteria in Annex A. If the Director approves, he shall initiate the communication process and inform the TSAG and all Study Groups.

In case b), the Director performs a preliminary analysis and transmits it to the affected Study Group(s) which shall proceed as outlined in the first paragraph of 2.1.2. If multiple Study Groups are involved, the decision of each Study Group should be communicated to the others, to the TSAG and to the Director of the TSB.

2.2　Implementation of the communication process

2.2.1　Documents sent to qualified forums/consortia

The decision to send documentation (including requests for documentation) to a qualified forum/consortium should be initiated by a Study Group Chairman with the agreement of the Study Group. The documentation is sent to the forum/consortium by the TSB.

2.2.2　Documents received from qualified forums/consortia

Documents submitted to the ITU-T by qualified forums/consortia should conform to criterion 8 in Annex A. These documents are not issued as Contributions. They are issued by the Study Group concerned as Temporary Documents with a reference to the originating forum/consortium.

2.3　Director's action list

The Director of the TSB is requested to establish and maintain an up-to-date action list of the forums/consortia which are being evaluated and/or have been accepted for the communication process, including identification of the Study Groups concerned. To assist the other Study Groups in making similar decisions, this action list should be made widely available, e.g., online in ITUDOC.

Annex A

Qualifying criteria for forums/consortia communication process

NOTE – An Administration may require that "communications" to the ITU-T or its Study Groups, from a forum/consortium within that Administration's jurisdiction follow its established national procedures.

Forum/consortium attributes	Desired characteristics
1 Objectives/relationship of work to ITU-T work	Objectives should refer to use of International Standards/Recommendations, or to the provision of input into international standards organizations, especially ITU-T
2 Organization; – legal status – geographic scope – secretariat – nominated representative	 – should indicate in which country/countries it has legal status – should be global (i.e., should involve more than one region of the world) – permanent secretariat should exist – should be willing to nominate a representative
3 Membership (openness)	– forums/consortia membership criteria should not preclude any party with material interest, especially ITU Member States and Sector Members – membership should comprise a significant representation of telecommunications interests
4 Technical subject areas	Should be relevant to a particular Study Group(s) or the ITU-T as a whole
5 IPR Policy: – patents and trademarks – copyright	 – should be consistent with ITU Policy statement – ITU and ITU Member States and Sector Members should have right to copy for standardization-related purposes
6 Working methods/processes	– should be well-documented – should be open and fair – should support competition – should explicitly consider anti-trust issues
7 Outputs	– outputs available to the ITU-T should be identified – process for ITU-T to obtain outputs should be identified
8 Documents submitted to the ITU-T	– should contain no proprietary information (no distribution restriction) – should indicate source within the forum/consortium (e.g., committee, subcommittee, etc.) – should indicate degree of stability of the document (e.g., preliminary, mature, stable, proposed date of adoption, etc.) – should indicate degree of approval of document (i.e., per cent of total forum membership involved and per cent of total forum membership that approved the document)

Recommendation A.23

COLLABORATION WITH THE INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO) AND THE INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) ON INFORMATION TECHNOLOGY

(Helsinki, 1993 amended at Geneva 1996)

The WTSC,

considering

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

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

c) Resolution 7 (Geneva, 1996) recognizes common interests with ISO and IEC concerning telecommunication and information technologies as well as some other topics and cooperation with them by appropriate means,

decides

1   that in accordance with Resolution 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 for those subjects in the fields of information technology including data transmission, multimedia, open system communications and telematic services, etc., where there is a common interest and where it is agreed that coordination is desirable, then text should be drawn up mutually and kept aligned;

3   that in carrying on the respective 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 Guide for ITU-T and ISO/IEC JTC 1 Cooperation is given in Annex A, which contains a set of procedures for cooperation between the two sides. These procedures, which have also been adopted by ISO/IEC JTC 1, should be used, with flexibility, according to need. The "Rules for presentation of ITU-T | ISO/IEC common text"[1] in Annex A should be respected in the drafting of common texts.

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[1] The Guide is published as a separate booklet and is available from TSB for persons preparing ITU-T | ISO/IEC texts.

Recommendation A.30[1]

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

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[1] This Recommendation is also included but not published in F-Series under alias number F.12.

PART 3

Study Groups, TSAG and Tariff Groups and appointed Chairmen and Vice-Chairmen of the ITU Telecommunication Standardization Sector

Study Group 2 – Network and service operation

Chairman:	G. GOSZTONY	(HNG)
Vice-Chairmen:	A. LEWIS	(CAN)
	J. MARTORY	(F)
	R. BLANE	(G)

Study Group 3 – Tariff and accounting principles including related telecommunications, economic and policy issues

Chairman:	T. MATSUDAIRA	(J)
Vice-Chairmen:	W. LUCAS	(G)
	S.M. AL TIWANIY	(OMA)

Study Group 4 – TMN and network maintenance

Chairman:	D. SIDOR	(USA)
Vice-Chairmen:	N. FUJII	(J)
	A. ROJDESTVENSKY	(RUS)

Study Group 5 – Protection against electromagnetic environment effects

Chairman:	G. MEINERI	(I)
Vice-Chairman:	G. VARJU	(HNG)

Study Group 6 – Outside plant[1]

Chairman:	L. MOLLEDA	(E)
Vice-Chairman:		

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[1] Vice-Chairman to be appointed at the first meeting of Study Group 6, in agreement with the TSB Director.

Study Group 7 – Data networks and open system communications

Chairman:	H. BERTINE	(USA)
Vice-Chairmen:	Y. HIRAMATSU	(J)
	Y.H. LEE	(KOR)
	V. OSSIPOV	(RUS)

Study Group 8 – Characteristics of telematic systems

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

Study Group 9 – Television and sound transmission

Chairman:	J.L. TEJERINA	(E)
Vice-Chairmen:	R. GREEN	(USA)
	H. MURAKAMI	(J)

Study Group 10 – Languages and general software aspects for telecommunication systems

Chairman:	A. SARMA	(D)
Vice-Chairman:	A. MEISINGSET	(NOR)

Study Group 11 – Signalling requirements and protocols

Chairman:	S. KANO	(J)
Vice-Chairmen:	E.A. MATARAZZO	(B)
	W. VANDEN BROECK	(BEL)
	Ph. DISTLER	(F)

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

Chairman:	M. CAO	(CHN)
Vice-Chairmen:	C. DVORAK	(USA)
	J.Y. MONFORT	(F)

Study Group 13 – General network aspects

Chairman:	B.W. MOORE	(G)
Vice-Chairmen:	J. LUETCHFORD	(CAN)
	K. ASATANI	(J)
	F. LUCAS	(F)

Study Group 15 – Transport networks, systems and equipment

Chairman:	P. WERY	(CAN)
Vice-Chairmen:	M. YAMASHITA	(J)
	G. BONAVENTURA	(I)

Study Group 16 – Multimedia services and systems

Chairman:	P.A. PROBST	(SUI)
Vice-Chairmen:	J. MAGILL	(G)
	F. TOSCO	(I)
	G. HELDER	(USA)

TSAG – Telecommunication Standardization Advisory Group

Chairman:	G. FISHMAN	(USA)
Vice-Chairmen:	J. FANJUL	(E)
	I. KREINGUEL (Ms)	(RUS)
	K.S. PARK	(KOR)
	R.F. BRETT	(CAN)
	N. KISRAWI	(SYR)

TAF – Tariff Group for Africa[2]

Chairman:	P.G. TOURÉ	(SEN)
Vice-Chairman:	E. MIGWALLA (Ms)	(KEN)

TAL – Tariff Group for Latin America[3]

Chairman:

Vice-Chairmen:

TAS – Tariff Group for Asia and Oceania[4]

Chairman:	P. WATT	(NZL)

Vice-Chairmen:

TEUREM – Tariff Group for Europe and the Mediterranean Basin[3]

Chairman:

Vice-Chairmen:

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[2] TAF Group may appoint more Vice-Chairmen as they feel necessary, in agreement with the Director of TSB.

[3] WTSC-96 authorizes ITU-T Study Group 3 to appoint, if need should arise, Chairmen and Vice-Chairmen of these groups in agreement with the Director of TSB.

[4] TAS Group will appoint the Vice-Chairmen at their first meeting, in agreement with the Director of TSB.

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PART 4

Questions approved for study by the
ITU Telecommunication Standardization Sector

STUDY GROUP 2

Question	Title
1/2	Applications of numbering and addressing plans for fixed and mobile services
2/2	Routing and interworking plans for fixed and mobile networks
3/2	Service quality of networks
4/2	Network management
5/2	Network related quality of service aspects of facsimile communication
6/2	Traffic engineering: performance objectives
7/2	Traffic engineering: measurement and modelling
8/2	Traffic engineering: dimensioning and control
9/2	Bureau services
10/2	Management and development of PSTN-based telecommunication services
11/2	New services and service enhancements brought about due to ISDN capabilities
12/2	New services for broadband ISDN (B-ISDN)
13/2	Mobile/personal telephone, telegraph, telematic, data, audiovisual and multimedia services
14/2	Service aspects of international multipoint communication via satellite
15/2	Universal Personal Telecommunication (UPT) service
16/2	Human factors issues in telecommunications affecting multiple services or not related to specific services
17/2	Human factors aspects of voice and non-voice services using public terminals

STUDY GROUP 3

Question	Title
1/3	Study of economic issues and of the impact of national policies as they relate to development of telecommunication services and networks
2/3	Reform and development of charging, accounting and settlement principles for international telephone services
3/3	Development of charging and accounting and settlement principles for international mobile services
4/3	Development of charging and accounting principles in the non-mobile international telecommunication satellite services
5/3	Development of charging and accounting principles in the data and message communication services
6/3	Development of charging and accounting principles for B-ISDN services, telecommunication services of a multimedia nature, including those supported by the ATM or offered in conjunction with global information infrastructures
7/3	Development of charging and accounting principles in the services not covered by other Questions
8/3	Regional costing studies for the development of cost models together with related economic and policy issues
9/3	Terms and definitions for Recommendations dealing with charging and accounting principles

STUDY GROUP 4

Question	Title
1/4	Terms and definitions
2/4	Designations in the international networks (circuits, group and line links, digital blocks, digital paths, data transmission systems, digital blocks created between DCMEs, virtual containers, multiplex sections etc., and related information)
3/4	Maintenance of switched international circuits including telephone, ISDN and B-ISDN type circuits
4/4	Maintenance of mobile telecommunications systems
5/4	Common channel signalling maintenance
6/4	Assessment of network performance and exchange of information for maintenance purposes
7/4	Fault, performance and configuration management of ISDNs and B-ISDNs
8/4	Maintenance of leased circuits and supporting transmission networks
9/4	Maintenance of digital transport networks
10/4	Test and measurement techniques and equipment for use on transmission equipment
11/4	General aspects of test and measurement techniques and equipment
12/4	Quality assurance for TMN specifications
13/4	TMN Principles, Architecture, and Methodology
14/4	OSI system management
15/4	Requirements Integration and Management Information/Models for TMN Interfaces
16/4	Requirements for the TMN F interface
17/4	Requirements for the TMN X interface
18/4	Network level management of transmission systems
19/4	Protocols to support operation, administration and maintenance at F, Q.3 and X interfaces
20/4	Protocols for the remote operation of management applications
21/4	Managed object definitions for management of telecommunication services, for network management and for network elements, based on TMN interfaces

STUDY GROUP 5

Question	Title
1/5	Electromagnetic resistibility of telecommunication equipment
2/5	Protective components and assemblies
3/5	Protection of telecommunications lines and installations against lightning
4/5	Bonding configurations and earthing of telecommunication systems
5/5	Human safety related to operating voltages and currents in telecommunication systems
6/5	Basic principle of emission and immunity requirements for telecommunications
7/5	Generic emission and immunity requirements
8/5	Product family emission and immunity requirements
9/5	Radio frequency effects on telecommunication voice terminals
10/5	Human safety from electromagnetic field exposure
11/5	Telecommunications system unbalance
12/5	Interference produced by power lines and electrified railway lines into telecommunications lines
13/5	Mitigation techniques for telecommunications installations

STUDY GROUP 6

Question	Title
1/6	Environmental issues for the outside plant
2/6	Fire safety of telecommunication installation
3/6	Amendments and additions to the Manuals
4/6	Copper networks for new services (ISDN, ADSL/HDSL, etc.)
5/6	Optical fibre cable installation
6/6	Optical fibre cable network maintenance
7/6	Optical fibre cable construction
8/6	Performance tests and acceptance criteria for optical fibre cables and associated hardware
9/6	Marinized terrestrial cables
10/6	Passive optical components
11/6	Electrical power supply for equipment installed in outside plant including customer premises
12/6	Trenchless techniques for the construction of underground infrastructures for telecommunication cables installation
13/6	Access facilities using hybrid fibre/copper networks

STUDY GROUP 7

Question	Title
1/7	Technical characteristics, classes of service, facilities and categories of access for networks providing data communication
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	Principles of management for data networks and for the customer network management service
6/7	Interworking for networks providing data communication
7/7	DTE/DCE interface for packet and frame mode DTEs
8/7	Non-native mode terminal access DTE/DCE interface procedures
9/7	Packet and frame mode signalling between public networks providing data communication
10/7	Lower layer protocol and service mechanisms and features
11/7	Data compression
12/7	Network multicast
13/7	End-to-end multicast
14/7	Message handling systems
15/7	Directory systems
16/7	Message handling services
17/7	Directory services
18/7	X.400 and X.500 conformance testing
19/7	Open systems architecture
20/7	Security services, mechanisms and protocols
21/7	Naming, addressing and registration
22/7	OSI application, presentation and session layers
23/7	Testing of data communication protocols
24/7	Open distributed processing
25/7	Revision of Recommendations

STUDY GROUP 8

Question	Title
1/8	Facsimile terminals
2/8	Facsimile test charts and test images
3/8	Cooperative document handling
4/8	Document communication services
5/8	Colour for telematic applications
6/8	Common components for image communication
7/8	Coded character sets and control functions for telematic and other ITU-T services
8/8	Communication protocol PCIs for terminal equipment
9/8	User interfaces for terminal equipment and protocols

STUDY GROUP 9

Question	Title
1/9	Definition of hypothetical reference connection for combined analogue-and-digital and all digital sound-programme transmission
2/9	Digital transmission of sound-programme signals
3/9	Performance of sound-programme transmission using all-digital circuits
4/9	Digital networks carrying sound-programme signals for broadcasting
5/9	Maintenance and alignment of digital sound-programme circuits
6/9	Subjective and objective assessment of sound quality in broadcast transmission circuits
7/9	Methods of measurement, test signals and operational requirements for sound-programme transmission
8/9	Transmission time differences between the sound and vision components of a television signal
9/9	Maintenance and alignment of digital television circuits
10/9	Digital transmission of conventional television and high-definition television signals for contribution
11/9	Digital transmission of conventional and high-definition television signals for primary distribution
12/9	Digital networks carrying television signals for broadcasting
13/9	Transmission of MPEG-compressed television signals on 34-45 Mbit/s circuits
14/9	Transmission of enhanced television signals over digital links
15/9	Use of non-homogeneous networks comprising digital and analogue links for the secondary distribution of television
16/9	Digital secondary distribution of conventional and high-definition television
17/9	Multimedia data transmission on non-homogeneous cable transmission systems
18/9	Physical layer of Multichannel Multipoint Distribution Sytems (MMDS)
19/9	Use of hybrid links for the secondary distribution of television into the users' premises
20/9	Asymmetric networks for television distribution services such as video on demand
21/9	Laws of addition for impairments associated with all-digital and mixed analogue-and-digital transmission of television signals
22/9	Measurement and control of the Quality of Service of digital television transmission on contribution and/or distribution networks
23/9	Development of an assessment aid for MPEG2 codecs
24/9	Requirements and possibilities for interactivity in the secondary distribution of television
25/9	Additional services carried on networks predominantly intended for the secondary distribution of television
26/9	Access systems for interactive services in SMATV networks
27/9	Electronic programme guides
28/9	Conditional access methods and practices for digital cable distribution to the home
29/9	Statistical multiplexing of several programmes on a transmission channel
30/9	Terminology for television and sound transmission

STUDY GROUP 10

Question	Title
1/10	Description techniques for GII interfaces
2/10	ITU-T Object definition language
3/10	Software platforms and middlewares for the telecom domain
4/10	Software quality of telecommunication systems
5/10	Specification of behaviour in GDMO
6/10	Maintenance and support of SDL
7/10	Support for fast development of protocol standards using formal methods
8/10	Testing based on formal specifications and validation of formal specifications
9/10	Maintenance of Message Sequence Charts (MSCs) syntax and semantics
10/10	Maintenance and evolution of CHILL
11/10	Graphic GDMO
12/10	Specification of HMI data for a GDMO/ASN.1 object model
13/10	Design principles for human-machine interfaces (HMI) for the management of telecommunications network resources and services

STUDY GROUP 11

Questions	Title
1/11	Signalling and protocol framework for an evolving environment
2/11	Signalling System No. 7 – Management (OMAP)
3/11	Access and network security requirements
4/11	The unified functional methodology for the specification of protocol requirements for services and network capabilities
5/11	Intelligent network capability sets
6/11	New signalling capabilities and requirements for advanced broadband multimedia services
7/11	Signalling, call handling and management requirements for universal personal telecommunications and for user mobility in future public land mobile systems
8/11	Signalling requirements for emerging land mobile and satellite mobile networks
9/11	Signalling requirements for transmission equipment including satellite systems
10/11	Common upper layer protocols to support signalling applications
11/11	Access signalling to support narrow-band and broadband ISDN services and third generation (FPLMTS) mobile networks
12/11	Network signalling for the support of narrow-band ISDN services
13/11	Network signalling for the support of broadband services and third generation land mobile networks (FPLMTS)
14/11	Updating and enhancements of ISDN user-network interface data link layer protocol
15/11	Asynchronous transfer mode adaptation layer for signalling
16/11	Common channel Signalling System No. 7 - Network service part (MTP and SCCP)
17/11	Updating of Q-series Recommendations
18/11	Reliability aspects of Signalling System No. 7
19/11	Signalling methods used by alternative calling procedures

STUDY GROUP 12

Question	Title
1/12	Evolution of the programme of work
2/12	Definitions in the fields of telephonometry, speech signal processing, video signal processing, multimedia, terminal equipment and of characteristics of international connections and circuits
3/12	Radio frequency effects on telecommunication voice terminals
4/12	Updating the "Handbook on Telephonometry"
5/12	Efficiency of devices for preventing the occurrence of excessive acoustic pressure by telephone receivers
6/12	Specification and test principles for hands-free terminals, acoustic echo cancellers and speech enhancement devices
7/12	Analysis methods using complex measurement signals
8/12	General aspects in telephone electroacoustic measurement
9/12	Speech transmission characteristics and measurement methods for digital handset and handsfree terminals for both telephone band (300-3400 Hz) and wideband (50-7000 Hz)
10/12	Subjective methods for evaluating audiovisual quality in multimedia services
11/12	Objective methods for evaluating audiovisual quality in multimedia services
12/12	Cordless and mobile terminal audio performance and testing requirements
13/12	Objective measurement of speech quality under conditions of non-linear processing
14/12	Methods and tools for the subjective assessment of digital transmission systems
15/12	In-service non-intrusive assessment of voiceband channel transmission performance
16/12	Transmission planning in the evolving mixed analogue/digital and ISDN networks
17/12	Noise aspects in evolving networks
18/12	Interconnection of private networks with the public ISDN/PSTN
19/12	Transmission performance considerations for networks which are implemented using ATM technology
20/12	Analysis and extension of the E-model
21/12	Echo, transmission time and stability in multicarrier network environments

STUDY GROUP 13

Question	Title
1/13	New network capabilities for networks other than B-ISDN
2/13	Network capabilities required for the support of B-ISDN based services
3/13	Network capabilities for interactive multimedia services
4/13	ATM layer
5/13	ATM Adaptation layer
6/13	OAM and network management in B-ISDN
7/13	B-ISDN resource management
8/13	B-ISDN interworking
9/13	Interworking of 64 kbit/s ISDNs with other networks
10/13	ISDN Frame mode bearer service (FMBS)
11/13	Enhancement and maintenance of ISDN layer 1 Recommendations
12/13	Access network architecture principles and the interface functional characteristics
13/13	General performance issues
14/13	B-ISDN ATM cell transfer performance
15/13	Availability performance
16/13	Transmission error performance
17/13	Call processing performance
18/13	Network synchronization and time distribution performance
19/13	Transport network architecture and interworking principles
20/13	Support of broadband connectionless data service on B-ISDN
21/13	General coordination of the network aspects for the support of interactive multimedia services
22/13	Use of the satellite transmission medium in the framework of the ISDN
23/13	General network studies
24/13	Global Information Infrastructure (GII)
25/13	GII principles and framework
26/13	Multimedia customer access layer requirements
27/13	Interworking between mobile and other networks
28/13	Vocabulary for general network aspects
29/13	Telecommunications architecture for an evolving environment

STUDY GROUP 15

Question	Title
1/15	Access network transport
2/15	Characteristics of optical systems in local access networks for transport and distribution
3/15	DCEs for digital leased circuits
4/15	DCEs for subscriber access system
5/15	Operation and administration aspects of signal processing network equipment
6/15	Circuit multiplication equipment (CME) and systems (CMS)
7/15	Network echo control and interaction of acoustic echo controllers and network equipment
8/15	Speech, voiceband and audio transmission in ATM/B-ISDN systems
9/15	SDH equipment and network protection/restoration
10/15	ATM equipment
11/15	Digital hierarchy bit rates, interfaces, multiplexing structures and interworking
12/15	Muldexes and statistical muldexes for telegraphy and data transmission using digital bearer channels
13/15	Management functions and services of transmission systems and equipment
14/15	Management of transmission equipment from the network element level view
15/15	Characteristics and test methods of optical fibres and cables
16/15	Characteristics of optical systems for inter-office and long distance networks
17/15	Characteristics of active and passive optical components and subsystems
18/15	Characteristics of optical fibre submarine cable systems
19/15	Reliability and availability of optical systems
20/15	Characteristics of optical networking

STUDY GROUP 16

Question	Title
1/16	Audiovisual/multimedia services
2/16	Interactive multimedia information retrieval services (MIRS)
3/16	Data protocols for multimedia conferencing
4/16	Modems for switched telephone network and telephone-type lease circuits
5/16	ISDN terminal adapters, and interworking of DTEs on ISDNs with DTEs on other networks
6/16	DTE-DCE interchange circuits
7/16	DTE-DCE protocols
8/16	DCE/DTE protocols
9/16	Text telephony
10/16	Testing
11/16	Circuit-switched network (CSN) multimedia systems and terminals
12/16	B-ISDN multimedia systems and terminals
13/16	Packet-switched multimedia systems and terminals
14/16	Common protocols, MCUs and protocols for interworking with H.300-Series terminals
15/16	Advanced video coding
16/16	Harmonization of multimedia systems, applications and services
17/16	AVMMS coordination
18/16	Interaction of high-speech voiceband data systems with signal processing equipment in the public-switched telephone network
19/16	Extension to existing ITU-T speech coding standards at bit rates below 16 kbit/s
20/16	Audio and wideband coding in public telecommunication networks
21/16	Encoding of speech signals at bit rates around 4 kbit/s
22/16	Software and hardware tools for signal processing standardization activities

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