

Q. 6/1 Interconnection

1 Statement of Problem

The key to development of a telecommunication infrastructure and to the promotion of competition generally is the determination of an interconnection framework and interconnection charges. Interconnection is essential for new entrants, as it is the only way to reach customers of existing telecommunication networks. The pricing of interconnection, unbundling the network and the basis for establishing interconnection arrangements are the critical factors affecting the speed with which competition and choice develop in a liberalized telecommunications market. This is the case regardless of the competitive model which is adopted or the Member State's level of economic development.

This Question is directed toward providing details and practical suggestions for implementation of interconnection regimes in an increasingly competitive market for telecommunications services. In fact, as the developing countries open up their telecommunications sector for competition, the incumbent telecommunications operators will be required to provide the necessary communication facilities without discrimination and at fair prices.

Many new issues provoked by these facts did not exist in a monopoly status.

The international telecommunications operators will be keen to enter into these markets, and due to their long experience in competitive markets and negotiation skills, they may put the incumbent operators at a disadvantage while negotiating the interconnection agreement.

Many developing countries are not prepared to face these changes. With the pressure of liberalization, it is becoming crucial that the developing countries have the tools necessary to handle these changes.

Setting interconnection charges, establishing cost accounting systems, defining the scope of interconnection and making sure that interconnection is actually available at any technically feasible point of the network are all practical problems facing ITU Member States.

2 Question or issue proposed for study

The study group should establish a set of best practice guidelines for countries to take into consideration when developing policies, legislation and regulations to address the critically important issues involving interconnection. The study group should build on the work already done for Questions 2/1 and 3/1 for the 1994-1998 study period and other available materials. To establish best practice guidelines, the study group should:

- 1) Describe the legislative and regulatory framework that would be needed to implement appropriate interconnection arrangements, unbundling, collocation, and interconnection pricing. Identify the technical facilities major suppliers are required to provide in order to offer interconnection to new competitors.
- 2) Identify the most common approaches for interconnection pricing, cost accounting, unbundling, describing the advantages and disadvantages of each approach thereby taking into account the guiding principles for interconnection pricing, such as cost-orientation[, long-run incremental costing] and transparency.
- 3) Identify the most common approaches for arriving at interconnection arrangements, including those set by the regulator and those arrived at through commercial negotiations. With regard to commercial negotiations, identify the most common approaches to dispute resolution procedures, timetables for completion of negotiations, sanctions for failure to comply, likely outcomes if regulatory arbitration or determination is necessary. Take into account the guiding principles for interconnection arrangements, such as non-discrimination, transparency, publication of interconnection charges, availability of cost information.
- 4) Create a model interconnection agreement.
- 5) Provide for liaison with ITU-T study groups on key items to be identified, e.g.:

- Numbering plan of ITU-T SG 2 (E.164) with the new facilities (freephone, premium rate services, international shared-cost services), the data country code of ITU-T SG 7 (X.121), the SANC code assignment for Signalling System No. 7 by ITU-T SG 11 (Q.708) and the non-standard services and facilities of ITU-T SG 8 (T.35).
- Number portability as studied by ITU-T SGs 2 and 11. For the international freephone, there is the ITU-T database for assignment.
- The interconnection, the establishment of interfaces, the access to networks, and interworking are being studied by ITU-T SGs 2, 11, 13, and 15 - technical standards have already been developed.

3 Description of Expected Output

The output produced during the study of the question should be divided into two stages. The first stage would be mainly descriptive and would provide an overview of currently existing approaches to interconnection pricing, unbundling and interconnection arrangements. This information would provide background on alternatives for achieving interconnection objectives for government officials and telecommunication operators. This information would also serve as a framework for developing detailed procedures to implement an effective interconnection regime. It could also serve as a stimulus for legislative or regulatory action to address the issues associated with interconnection.

The second stage would focus on practical information that would be directly applicable to regulators, administrators and telecommunication operators at the working level in order to implement and operate an interconnection regime. The information obtained during the first stage would be used to establish best practice guidelines and recommendations for determining interconnection pricing, implementing cost accounting and unbundling requirements, establishing interconnection arrangements either through regulatory action or commercial negotiation, and creating dispute settlement procedures and models of regulatory intervention in those disputes.

4 Required Timing of Expected Output

Because the information gathered for the Question will be very useful for countries introducing competition, it should be disseminated as early as possible and without waiting for a final work product. By the end of the first year of the study period, the first stage of the output should be completed. The second stage should be distributed as soon as practicable after the first stage but not later than the third meeting of the Study Group during the 1998-2002 study period.

5 Proposers/Sponsors of the Question

This Question is a result of the study of Question 2/1 during the study period 1994-1998. There was a consensus that the issue of interconnection is of tremendous importance to all countries, particularly developing countries, and that a study should continue on that particular aspect of Question 2/1. *Further, the ITU World Telecommunication Policy Forum urged ITU Member States to share experience in the implementation of WTO commitments and invited the ITU to serve as a depository of information on the experiences of Member States*

Contributions from ITU-T Study Group dealing with related issues is required.

6 Sources of Input Required for Carrying Out the Study

The major source of input will be the experiences of those countries that have introduced competition and addressed the question of interconnection. Contributions from Member States and Sector Members will be essential to the successful study of this issue. Interviews, existing

reports and surveys should also be used to gather data and information for distillation into a comprehensive set of best practice guidelines for administering interconnection. Materials from regional telecommunication organizations and working groups should also be utilized to avoid duplication of work. Close cooperation with ITU-T and other activities within ITU-D is required and highly important.

7 Target Audience for the Output

a) Indicate expected types of target audience, by noting all relevant points on the matrix which follows

	Developed Countries	Developing Countries	LDC's
Telecom Policy Makers	Interested	Highly interested because of lack of experience	Highly interested because of lack of experience
Telecom Regulators	Interested and experienced with different models	Highly interested and some countries have immediate need for information	High interest but may need specific models
Service Providers (Operators)	New entrants, regardless of size, extremely interested. Major suppliers cautious and usually beneficiary of status quo	New entrants, regardless of size, extremely interested. Major suppliers cautious and usually beneficiary of status quo	New entrants, regardless of size, extremely interested. Major suppliers cautious and usually beneficiary of status quo
Manufacturers	High interest as will promote development of infrastructure	High interest as will promote development of infrastructure	High interest as will promote development of infrastructure

b) Target Audience - Who specifically will use the output

Based on the foregoing evaluation matrix, a broad range of telecom policy makers, regulators, and service providers from LDC's and developing countries will all be highly interested in the results of this Question. Policy makers and regulators from developed countries may be interested in the compendium. Manufacturers will also have a high interest in the Question since appropriate interconnection measures will promote development of infrastructure.

c) Proposed methods for implementing the results

The study should be carried out and distributed in the traditional manner at the ITU-D Study Group meetings. However, given the importance of this issue, the BDT could also conduct regional seminars and meetings, perhaps in conjunction with regional telecommunication organizations and together with the VAP Programme 1, to disseminate the results of the Question. The results could be published by the ITU for wider distribution.

The participants in the study will learn the experiences of the various practical examples and will be able to study their own cases.

8 Proposed method for handling this Question

Proposed method for handling this Question

Because the issue of interconnection is of such great importance to many countries, the lead study of this Question should be within a study group over a multi-year study period with interim results.

The Questionnaire should be sent to the ITU-D Members seeking information on their existing experience. This Questionnaire could be incorporated in the ITU Annual Regulatory Survey. The interaction and participation by experts from around the world in this issue will result in a useful product for developing countries. However, some items might be entrusted to focus groups to achieve interim results within an appropriate time-frame.

9 Coordination Requirements of the Study

Because the issue of interconnection is related to other issues being studied by the ITU, coordination will be required within the ITU-D Study Groups and programmes (Valletta Action Plan Programme 1) as well as with the Study Groups from other ITU sectors. In particular, work carried out by ITU-T Study Groups working in the field of numbering plan (Study Groups 2 and 11) and tariff issues (Study Group 3) is to be taken into consideration.

Close coordination will also be required between the BDT and those responsible for this Question. Regional organizations such as CITELE and APEC are also currently considering issues regarding interconnection. Thus coordination with those organizations should be undertaken to reduce duplication of efforts.