INTERNATIONAL TELECOMMUNICATION UNION

CCITT D.260

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

GENERAL TARIFF PRINCIPLES

CHARGING AND ACCOUNTING IN INTERNATIONAL TELECOMMUNICATIONS SERVICES

CHARGING AND ACCOUNTING CAPABILITIES TO BE APPLIED ON THE ISDN

Recommendation D.260

Geneva, 1991

FOREWORD

The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the International Telecommunication Union (ITU). CCITT 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 Plenary Assembly of CCITT which meets every four years, establishes the topics for study and approves Recommendations prepared by its Study Groups. The approval of Recommendations by the members of CCITT between Plenary Assemblies is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988).

Recommendation D.260 was prepared by Study Group III and was approved under the Resolution No. 2 procedure on the 22 of March 1991.

CCITT NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication Administration and a recognized private operating agency.

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CHARGING AND ACCOUNTING CAPABILITIES TO BE APPLIED ON THE ISDN

1 Preamble

Tariff and accounting principles for services supported by ISDNs are contained in other Recommendations in the D.200-Series. This Recommendation provides a methodology for identifying and displaying charging and accounting capabilities requiring network support.

2 General

The tariff and accounting principles contained in the D.200-Series Recommendations, describe those principles in terms that may not be readily understood by the technical experts who are developing the charging and accounting support mechanisms.

This Recommendation provides a methodology for the development and displaying of a more detailed level of information that results from expert interpretation of general tariff and accounting principles applied to specific services to be supported by ISDNs.

3 Methodology

In order for the technical experts to provide appropriate support mechanisms, there is a need for them to be advised of the structure of the charging and accounting requirements. The level of charges is a national matter and is not of concern to the system design technical experts. It may be that the relative size of fields used in the transmission of charging and accounting information will need to be defined in the protocol development stage (further study). Tariff experts need to examine each specific service and systematically develop and display potential charging and accounting requirements. Emphasis must be placed on the word “potential” since Administrations may select different combinations of the provided support mechanisms in the implementation of their charging systems.

In general, the system design technical experts will need to be advised of the structure of the charging and accounting elements to be supported.

4 Application

To ensure that consistency between the tariff and accounting principles and the charging and accounting requirements is maintained, each D.200-Series Recommendation that deals with a specific service should contain an additional section that details the charging and accounting requirements. To ensure consistency of approach in the displaying of that detail, it is recommended that the approach described in Table A-1/D.260 for charging and Table A-2/D.260 for accounting be utilized.

This approach follows the sequence of identifying the charging or accounting element, identifying its form and unit and further identifying if any of a number of modifying characteristics may be present. Annex B displays a typical application.

5 Application detail

5.1 Recommendation D.210 establishes the basic components for charging and accounting. This Recommendation applies the network mechanisms to those components which are contained in Table A-1/D.260 for charging and in Table A-2/D.260 for accounting.

5.2 Certain modifiers to the charging and accounting components will also need to be supported. Modifiers that have been identified so far are defined below:

a) *Requested service:* In principle, charges are raised in relation to the service requested by the customer (e.g. telephony, 64 kbits/s unrestricted, etc.).

b) *Distance:* Utilization charges normally reflect distance sensitivity which tends to be established on the basis of either the crowflight distance between the calling and called locations or between the international zones in which they reside.

c) *Time/volume:* Utilization charges may also be dependent on the rate period in effect or on the volume transmitted.

d) *Chargeable/non-chargeable units:* Certain types of calls or packets may be carried free of charge. Such calls or packets will need to be identified.

e) *Transit:* For accounting purposes, it may be required that the use of transit facilities be identified (for further study).

ANNEX A

(to Recommendation D.260)

General structure of network charging and accounting capability elements

TABLE A-1/D.260

Charging

Elements	Form	Unit
Access	Subscription	Uniform periodic charge
Invocation	Call or service set-up or attempt[a)]	Uniform charge per successful invocation[a)]
Usage	Call duration. Volume transmitted	Time, pulse. Packet, segment

[a)] Attempt charges and invocation charges are for further study.

TABLE A-2/D.260

Accounting

Elements	Form	Unit
Invocation	(For further study)	(For further study)
Usage	Call duration Volume transmitted	Time Packet, segment

ANNEX B

(to Recommendation D.260)

Example of charging and accounting attribute application

Charging and accounting support requirements

B.1 The following charging and accounting elements have been identified as being in need of network support mechanisms.

B.2 Administrations may elect to use all, none or any combination of the charging and accounting elements identified. Accounting arrangements are subject to bilateral agreement.

B.3 Service requested: circuit mode demand bearer Service, 64 kbits/s unrestricted, 3.1 kHz audio, speech.

Charging element	Form	Unit	Modifier
Invocation	Call set up or call attempt	(For further study)	
Usage	Call duration	Time[a)] pulse[a)]	Calling and called numbers, time of day, date. Service call (if applicable)

a) The chosen unit is a function of the charging mechanism at place in the charging Administration.

Accounting element	Form	Unit	Modifier
Usage	Call duration	Time	
			Transit facility usage (applicable)