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SECTION 14

CHARGING AND ACCOUNTING FOR INTERNATIONAL SATELLITE SERVICES

Recommendation D.185

GENERAL TARIFF AND ACCOUNTING PRINCIPLES FOR INTERNATIONAL ONE-WAY POINT-TO-MULTIPOINT SATELLITE SERVICES

(Melbourne, 1988)

The CCITT,

considering

(a) the development at world and regional levels of satellite systems permitting the provision of international multi-destination services;

(b) the need to meet customers’ requirements by offering a wide range of services, in particular, a service to find a replacement for the HF Press Broadcast Service;

(c) the capital invested by the Administrations in satellite systems on which they expect an acceptable return, but which should not hinder the development of these multi-destination telecommunication services;

(d) the provisions of CCITT Recommendation F.140 regarding the definition and provision of these services and their characteristics;

(e) the interest to achieve as far as possible a certain degree of harmonization in general tariff and accounting principles for the provision of such services;

(f) finally, the need to adopt principles which are flexible enough to take into account the different technical possibilities in the provision of these services as well as the national legislations governing the status of earth stations,

recommends

to the Administrations to apply the following tariff and accounting principles for international multi-destination satellite services.

1 Preamble

1.1 The present Recommendation contains general tariff and accounting principles applicable to one-way point-to-multipoint satellite services ' |

Multipoint-to-point and two-way multiple access services are not yet addressed in this Recommendation, and are for further study.

The application of the provision of this Recommendation to one-way point-to-multipoint services involving communications with mobiles is for further study.

1.2 In the provision of those services a distinction may be drawn if necessary between tariff and accounting principles applying respectively to:

— the space segment,

— the transmitting earth station (including associated equipments which may include the control management centre),

— the receiving earth stations (including associated equipments),

— and, when appropriate, the extensions between earth stations and customers' premises.

1.3 When applying the present Recommendation the Administrations should also take into account the general provisions of CCITT Recommendation D.1.

1.4 This Recommendation does not apply to sound and television transmission services as may be provided under CCITT Recommendations D.4 and D.180.

2 Definitions

2.1 The **international point-to-multipoint telecommunications service via satellite** consists of making one or more analogue or digital international telecommunication links available to a customer exclusively dedicated to the use for which they have been authorized on the terms and conditions set out in a lease agreement between the customer and the Administrations of the countries at each end of the link. The Administrations are in no way responsible for transmission content or enforcement of copyright laws.

2.2 This service may be provided in the following basic categories, subject to the agreement of the Administrations concerned:

a) point-to-multipoint;

b) full-time, part-time, occasional;

c) non-pre-emptible protected, non-pre-emptible unprotected, and pre-emptible, taking into account the availability of the space segment to the Administrations.

2.2.1 *Full-time use*

The links are established 24 hours per day, seven days per week for a specified contract period. In determining such a period, Administrations may take into account the conditions established by the organizations managing the satellite system.

2.2.2 *Part-time*

The links are made available according to a pre-arranged schedule of discrete transmission intervals reserved over a period of one or more months or years.

2.2.3 *Occasional*

For the purposes of this Recommendation the customer is the individual or entity that leases one or more international links from an Administration and is responsible for payment of all charges or rentals due to that Administration.

The links are established on an ad hoc basis with prior reservation for a minimum period agreed upon between the Administrations concerned.

2.2.4 *Non-pre-emptible*

A service which may not be interrupted or terminated for the provision of a service to another customer.

There are two types of non-pre-emptible services :

a) protected — a service for which restoration is guaranteed, and,

b) unprotected — a service for which restoration is not guaranteed and which may only be restored subject to availability of an alternate facility.

2.2.5 *Pre-emptible*

A service which may be interrupted to provide a service of higher priority.

3 Charging principles

3.1 *Tariff components*

In determining their collection charges, the Administrations should take the following principles into account.

3.1.1 *Space segment*

The utilization charge for the space segment is determined by a number of factors such as the cost, the power, the bandwidth, the bit rate made available and the number of participating countries, whether use is full time, part time or occasional, and the pre-emptibility/protection status afforded the service.

3.1.2 *Earth stations (including associated equipments)*

3.1.2.1 *Use of earth stations owned and operated by the Administrations*

The provision of service through earth stations owned and operated by the Administrations entails the payment of a rental. The level of that charge applied by each Administration concerned is established according to the service rendered.

3.1.2.2 *Use of earth stations installed and operated by the customer*

In countries where it is permitted by national law, the competent authorities may authorize customers to install and/or operate earth stations. Such authorizations may entail the collection of charges or fees for the licence granted to the customer(s).

3.1.3 *Service extensions*

When the earth stations are located in the Administrations premises, the charging in the terminal countries of the extensions from/to these earth stations is subject to the principles adopted by the Administrations of the countries concerned.

3.1.4 *Service reservation*

For the reservation of facilities by customers, prior to service initiation, Administrations may establish and notify, as appropriate, reservation fees and their conditions of application.

3.1.5 *Service cancellation*

At the ordering of the service the Administrations notify to customers, when appropriate, the level and the conditions of application of cancellation charges.

3.2 *Collection charges*

The establishment of collection charges is a national matter.

3.3 *Methods of collection of charges*

3.3.1 Charges for the use of the space segment may be collected according to either of the following procedures.

3.3.1.1 Each Administration involved in the provision of the service collects its charges for the service provided to the customer(s) situated in its own country.

3.3.1.2 The Administration of the transmitting country collects the total charges for the service provided to the customer.

3.3.2 Charges for fees relating to the earth stations (including associated equipment and extensions where applicable) may be collected as follows:

3.3.2.1 The Administrations providing and operating the earth stations collect their charges for the provision of the service required by the customer(s).

3.3.2.2 When the earth stations are installed and operated by the customer(s), their use does not usually entail the application of charges. However the Administrations may levy a fee for the granting of the license covering the installation and operation of the station.

3.3.3 The Administration of the transmitting country may collect the total charges for the service (space segment, earth station(s) and extensions) in one or more country(ies), subject to the agreement of the Administrations concerned.

3.3.4 When charging the customer, the Administrations may combine the relevant components in one sum or may charge them separately.

4 Accounting

4.1.1 Charges levied under the provisions mentioned in § 3.3.1.1 above do not entail the establishment of international accounts. Each Administration pays its share of remuneration due to the organization managing the satellite system.

4.1.2 When the Administration of the transmitting country collects the total charges for the space segment, as mentioned in § 3.3.1.2 above, the Administrations involved in the provision of the service may agree:

a) either that the Administration of the transmitting country credits the organization managing the satellite system used with the full remuneration due for the space segment; or

b) that they establish accounts between themselves, every Administration paying its share due for the space segment utilization to the organization managing the satellite system used.

4.2.1 The charges and fees which may be levied as indicated in § 3.3.2 above do not involve international accounts.

4.2.2 When the Administration of the transmitting country collects charges as indicated in § 3.3.3 above, the collecting Administration credits the concerned Administration(s) through the international accounts.

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SECTION 15

TRANSMISSION OF MONTHLY INTERNATIONAL ACCOUNTING INFORMATION

Recommendation D.190

TRANSMISSION IN ENCODED FORM OF MONTHLY INTERNATIONAL ACCOUNTING INFORMATION

(Geneva, 1976)

1 Introduction

1.1 Under the provisions of Recommendations D.42, D.67 and D.170, Administrations engage in international accounting for telephone, telegram and telex traffic handled each month.

1.2 A growing number of Administrations are processing this monthly international accounting data using computer based accounting systems. Information is drawn from traffic history tapes or manually encoded from data such as inward international accounts and statistical summaries prepared by manual abstraction from copies of telegrams and telephone and telex tickets.

1.3 It is usual at present to complete computer processing by producing conventional printed accounts following the specifications described in the various accounting Recommendations (D.42 for telegram; D.67 for telex; D.170 for telephone). Where the receiving Administration also uses computer facilities, however, this information has to be re-encoded for processing through its system.

1.4 Transmission of data in encoded form avoids the decoding/re-encoding step. It also offers a faster transfer of information than by printed forms through the mail. The latter remains true even if the forwarding Administration has prepared the data by manual/mechanical means.

2 Aim

2.1 The aim of this Recommendation is:

2.1.1 to enable Administrations using computer based accounting systems to transfer information to each other in encoded form, without the need for decoding into conventional printed form and subsequent encoding into machine-readable form;

2.1.2 to enable other Administrations, if they so desire, to benefit from the greater efficiency of speedier transfer of information to them and to prepare themselves for the introduction of computer working by introducing transmission of data in encoded form in advance of installation of a computer.

For the transmission in encoded form of maritime telecommunications accounting information, see Recommendation D.91.

2.1.3 to facilitate provision of printed output from computer based systems in a format suitable for manual/mechanical processing where it is to be forwarded to Administrations not using computer facilities;

2.1.4 to facilitate provision of printed output from manual/mechanical accounting systems in a format suitable for data encoding where it is to be forwarded to Administrations employing computer processing.

3 Method

3.1 *Data record*

3.1.1 The aim of this Recommendation can be met by use of a standard data record format for the various elements of information to be transferred. The information elements and their sequence must be compatible with the provisions of the various accounting Recommendations so that decoding to and encoding from printed output for exchange of information with Administrations using manual/mechanical systems will be as simple as possible.

3.1.2 Between Administrations operating computer based accounting systems, adherence to the standard data record format for data transmission purposes will ensure that only one interface programme will be needed to enable any one computer installation to generate suitable input for, and accept output from, other computer installations.

3.2 *Data transfer*

3.2.1 Procedures already exist for transfer of data in conventional (printed) form through the mails. Data in encoded form could be transferred by mailing of magnetic or paper tapes, paper tape transmission by telex or data transmission over circuits utilized for this purpose.

3.2.2 While mailing of tapes avoids the encoding task for the receiving Administration there can be delays and loss in transit. In addition, there can be difficulties caused by the fragility of paper tape and incompatability of various forms of magnetic tape recording.

3.2.3 Transfer of data via the telex service using paper tape transmission and reception can be advantageous for Administrations whether they have computer based accounting systems or manual/mechanical systems. As both page copy and punched paper tape can be generated at the receiving point users of either type of accounting system can benefit. Page copy can be used for checking paper tape, with the latter becoming input to a computer. Page copy can also be used as the incoming international account avoiding the need for use of the postal service.

3.2.4 Where large volumes of data are to be exchanged, transmission over higher speed circuits offers significant benefits. Where suitable data links are in use for service transmissions these could be utilized. Data terminals and modems capable of transmission speeds in the range 600 to 2400 bits per second should be sufficient but higher speeds could be used. For manual/mechanical systems data received on data terminals can be reproduced as page copy representing an incoming international account. For computer based accounting systems data transmission offers the possibility of complete automation of the process by computer-to-computer transfer.

4 Specific recommendations

4.1 It is recommended that:

4.1.1 where possible data transferred in printed form should be placed in the order shown in § A.2;

4.1.2 for transfer of data in encoded form, the standard data record format detailed in Annex A should be followed;

4.1.3 transmission of data in encoded form should be by the following means:

a) use of the telex system;

b) use of data transmission over telephone circuits, dedicated telegraph circuits or special data links;

4.1.4 transmission speeds, operating practices and technical standards should be agreed between the Administrations concerned and should conform with the appropriate CCITT Recommendations.

5 Code maintenance

The CCITT Secretariat is responsible for maintenance of the record of codes used for Item 3 of the Batch header and Items 5, 6, 7, 8 (except tariff indicators, see Recommendation F.31 [1]), 11 and 12 of the Detail Record shown in Annex A.

New codes can be allocated by the authority of the Director of the CCITT. Applications should be made through the CCITT Secretariat which will arrange for notification of the new codes in the *Operational Bulletin* .

ANNEX A

(to Recommendation D.190)

Monthly international accounting information

Fixed record formats

A.1 *Batch header*

Table [T1.190], p.

A.2 *Detail record*

Table [1T2.190], p.

A.2 *Detail record*

Table [2T2.190], p.

A.3 *Batch trailer*

Table [T3.190], p.

References

[1] CCITT Recommendation *Telegram transmission system* , Vol. II, Rec. F.31.

[2] CCITT Recommendation *List of destination indicators* , Vol. II, Rec. F.96.

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SECTION 16

PRIVILEGE TELECOMMUNICATIONS

Recommendation D.193

SPECIAL TARIFF PRINCIPLES FOR PRIVILEGE TELECOMMUNICATIONS

(Melbourne, 1988)

The CCITT,

considering

(a) that according to Article 28 of the International Telecommunication Convention (Nairobi, 1982), the various cases in which free services are accorded are set forth in the Administrative Regulations annexed to the Convention;

(b) that No. 601 of Article 77 of the International Telecommunication Convention (Nairobi, 1982) mentions franking privileges as one of the procedural rules of the conferences and meetings of the ITU;

(c) that in response to the Articles of the Convention referred to in (a) and (b) above, the World Administrative Telegraph and Telephone Conference (Geneva, 1973) indicated in its Opinion No. 1 (Telegraph and Telephone Regulations [1]) more concrete rules on the franking privileges which should be observed by administrations and as far as possible by recognized private operating agencies;

(d) that provisions on the privilege telecommunications in the International Telecommunication Regulations [2] adopted by the World Administrative Telegraph and Telephone Conference (Melbourne, 1988) reflect the basic principles derived from the rules stipulated in the Opinion No. 1 of the World Administrative Telegraph and Telephone Conference (Geneva, 1973) [1];

(e) that additional provisions are needed in a CCITT Recommendation to complement the draft regulatory principles;

(f) that the Administration of the country in which the conferences and meetings of the ITU are held would normally need to agree on a reciprocal basis with the Administrations concerned in order to forego international accounting for privilege telecommunications,

(g) that more detailed accounting and operational aspects specific to the various services are covered in various D, E and F Series Recommendations,

recommends

1 During the conferences and meetings of the ITU, members of delegations, representatives of Members of the Administrative Council, senior officials of the permanent organs of the Union and their authorized colleagues attending such conferences and meetings, may be granted the privilege of exchanging their communications by telephone, telex, facsimile, teletex, data transmission or telegram free of charge with their Administration or the ITU relating either to matters under discussion by such conferences and meetings or to public international telecommunications, subject to arrangements made between the Administration of the country in which such conferences and meetings are held and the Administrations concerned.

2 During the conferences and meetings of the ITU, members of delegations, representatives of Members of the Administrative Council, senior officials of the permanent organs of the Union attending such conferences and meetings and staff of the secretariat of the Union seconded to such meetings and conferences may be granted the privilege of telephoning their country of residence free of charge within the limits of either one six-minute call per week or of two three-minute calls per week subject to arrangements made between the Administration of the country in which such conferences and meetings are held and the Administrations concerned.

3 Similarly, the persons referred to in § 2 may send telegrams free of charge to their country of residence within the limits of one telegram of up to 100 words or two telegrams of up to 50 words per week. Such telegrams shall bear the service indication CONFERENCE.

4 To facilitate the arrangements to be made between Administrations under §§ 1, 2 and 3 above, the Administrations of the countries in which conferences and meetings of the ITU are held should announce by means of the ITU Operational Bulletin their intention to provide privilege telecommunications.

5 Those Administrations that are unable to forego inclusion in international accounting of their share of the accounting rate for providing any of the telecommunications as specified in §§ 1, 2 and 3 above, should so notify the ITU General Secretariat, which will keep an up-to-date list of the restrictions announced. Failing an indication to the contrary from each Administration concerned, these restrictions shall continue to apply.

6 Administrations may notify a general exception to the provisions of this Recommendation.

References

[1] *Final Acts of the World Administrative Telegraph and Telephone Conference, Telegraph Regulations, Telephone Regulations,* ITU, Geneva, 1973. (See also Preliminary Note No. 3, page XIV.)

[2] *Final Acts of the World Administrative Telegraph and Telephone Conference, International Telecommunication Regulations* , ITU, Melbourne, 1988.

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SECTION 17

SETTLEMENT OF INTERNATIONAL TELECOMMUNICATION BALANCES OF ACCOUNTS

Recommendation D.195

SETTLEMENT OF INTERNATIONAL TELECOMMUNICATION BALANCES OF ACCOUNTS

(Geneva, 1980; amended Melbourne 1988)

The CCITT,

considering

(a) that the Plenipotentiary Conference of the International Telecommunication Union (Nairobi, 1982) adopted the monetary unit of the International Monetary Fund (IMF) and the gold franc as monetary units to be used in the composition of accounting rates for international telecommunication services and in the establishment of international accounts;

(b) that the monetary unit of the IMF is at present the Special Drawing Right (SDR) and that international accounts may henceforth be established either in SDRs or in gold francs;

(c) that the final provisions for applying Article 30 of the International Telecommunication Convention (Nairobi, 1982) will have to be established in the administrative regulations;

(d) that the conference competent to revise these regulations cannot take place until 1988;

(e) that, in the meantime, interim provisions are required to apply Article 30 of the Convention;

(f) that Articles 30 and 31 of the International Telecommunication Convention (Nairobi, 1982) empower Administrations and recognized private operating agencies (RPOAs) to enter into special arrangements;

(g) provisions of § 6.3 (Monetary unit) of the International Telecommunication Regulations [1] and § 3.2 (Determination of the amount of payment) of its Appendix 1, covering the settlement of international telecommunication balances of accounts which have been adopted by the World Administrative Telegraph and Telephone Conference 1988 (WATTC 88),

having noted

the Resolution No. 70 by the Plenipotentiary Conference of the International Telecommunication Union (Nairobi, 1982) to the effect that, pending the decisions of the Conference competent to revise the Administrative Regulations [2], the parity rate between the gold franc and the SDR shall be that provided by the appropriate CCITT Recommendation,

recommends

in order to meet the varying requirements of all ITU member Administrations and RPOAs, until the entry into force of the new Regulations as adopted by WATTC for provisions of § 6.3 (Monetary unit) and § 3.2 (Determination of the amount of payment) of its Appendix 1:

1 the application of the following interim method for the conversion of gold franc balances into currencies of payment:

the use of the Special Drawing Right (SDR) as valued by the IMF as the basis for arriving at settlements in the specified currency. The method to be applied is as follows:

i) convert the balance in gold francs into an amount of SDRs using a linking coefficient of 3.061 gold francs = 1 SDR;

ii) adopt the following provisions for the conversion of the amount in SDRs into an amount in the currency of payment:

— for currencies for which the SDR exchange rate is published by the IMF, use the exchange rate on the day prior to payment or the most recent rate published;

— for other currencies, calculate the amount due in the the currency of payment as follows:

as a first stage , convert the amount in SDRs into an intermediate currency for which the value is published daily by the IMF in terms of the SDR, using the exchange rate on the day prior to payment or the most recent rate published;

as a second stage , convert the result thus obtained into the currency of payment, applying the latest rate of exchange quoted on the exchange market of the debtor country;

2 The application only of the method given in point ii) above, in the case where accounts are already established in SDRs.

Note — The present Recommendation shall not affect the establishment of special arrangements for mutually agreeable coefficients which Administrations are empowered to enter into in accordance with Articles 30 and 31 of the International Telecommunication Convention (Nairobi, 1982).

References

[1] *Final Acts of the World Administrative Telegraph and Telephone Conference, International Telecommunication Regulations* , ITU, Melbourne, 1988.

[2] *Final Acts of the World Administrative Telegraph and Telephone Conference, Telegraph Regulations, Telephone Regulations* , ITU, Geneva, 1973. (See also Preliminary Note No. 3, page XIV.)

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SECTION 18

CHARGING AND ACCOUNTING FOR INTERNATIONAL TELECOMMUNICATION SERVICES PROVIDED OVER

THE INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

Recommendation D.210

GENERAL CHARGING AND ACCOUNTING PRINCIPLES FOR INTERNATIONAL TELECOMMUNICATION SERVICES PROVIDED OVER THE INTEGRATED SERVICES

DIGITAL NETWORK (ISDN)

(Melbourne, 1988)

Preamble

This Recommendation sets out the general principles for charging and accounting to be applied by Administrations for the provision of international telecommunication services over an Integrated Services Digital Network (ISDN). These services are defined in the relevant CCITT Recommendations.

Charging and accounting principles for interworking between services provided over the ISDN and services provided over other networks are contained in other Recommendations in the Series D.200.

The CCITT,

considering

(a) that an Integrated Services Digital Network (ISDN) provides digital connections between user-network interfaces, enabling Administrations to offer integrated access to a wide range of international services in association with a multi-service signalling system;

(b) that it is desirable to achieve as far as practicable the harmonization of charging and accounting principles for the international services to be provided over the ISDN;

(c) that charging and accounting principles and structures for the ISDN should be flexible enough to accommodate the variety of ISDN implementation and regulatory approaches that apply in different countries;

(d) that it is desirable to adopt charging and accounting structures, which are as simple and easy to understand as is practicable with the wide range of services envisaged;

(e) that the installation of the ISDN in various countries will in all probability take place in several stages known as the ‘‘transition phase’’ during which ISDN and other networks will coexist and interwork, and that during this phase due account should be taken of charging and accounting structures and levels for services provided over other networks,

recommends

1 General principles

The charging and accounting principles applicable to the services to be provided over the ISDN should:

a) take into account the provisions of existing D-Series and other pertinent CCITT Recommendations;

b) take into account the different categories of service as defined in CCITT Recommendations I.210, I.211 and I.212 (see Annex A);

c) take into account the network resources and the functions required for the provision of the services requested and their degree of utilization;

d) not be discriminatory, i.e. should not depend on the type of information transmitted except where the costs incurred by the Administrations differ;

e) ensure for Administrations a revenue which is commensurate with the costs borne by them;

f) be based on the principle that each subscriber who authorized a specific service component would be billed by that subscriber's Administration.

2 Collection charges

2.1 Collection charges are a national matter.

2.2 *Components*

Collection charges for the ISDN may be divided into two fundamental components:

— the access component;

— the utilization component.

2.2.1 *Access component*

This component is intended to compensate Administrations for the facilities required for a customer to access a service or services, (i.e. those facilities specifically provided to that customer), and is independent of utilization.

Network access charges will be determined by national policy and may take account of the type of access provided and the type of services to which the customer subscribes.

2.2.2 *Utilization component*

Principles for the permanent basis and reserved basis are for further study.

2.2.2.1 Utilization charges should be in accordance with the service(s) requested by the customer and the basis of provision (demand, reserved or permanent basis).

These charges should in principle be determined on the basis of the network resources and any additional functions required to provide the service requested by the customer.

2.2.2.2 In principle, there should be no discrimination between telecommunication services which require the same resources and/or functions to provide them.

Additional charges may be raised for some supplementary services.

2.2.2.3 Utilization charges normally depend on one or more of the following parameters:

— service requested;

— basis of provision;

— duration of communication and/or the volume of data transmitted by the user;

— distance between correspondents;

— time of usage (to allow for modulation of tariffs according to peak/off-peak periods);

— call set-up;

— call attempts (for further study).

3 Accounting

3.1 Where applicable, Administrations should, by agreement, establish the accounting rate(s) for a given relation for a given telecommunications service.

3.2 International accounting rates should relate to the utilization of the network and should in principle be determined by the network resources and functions required to provide the service(s) requested by the customer.

3.3 In principle there should also be no discrimination between the level of accounting rate for services which require the same network resources and functions to provide them.

3.4 The accounting rate may be supplemented by additional components where additional functions in the network of the country of destination and/or transit are required to support requested teleservice and supplementary services (i.e. in addition to the supporting bearer capability).

Note — Transition phase: | uring the transition phase, Administrations may make adjustments to the application of the provisions of this Recommendation (see Recommendation D.251) in order to take into account:

— the arrangements that will have to be made to ensure interworking between the ISDN and other networks;

— the structures and levels of the charges in force and the effect of the evolution of tariffs on Administrations' income;

— provisions contained in relevant CCITT Recommendations particularly with respect to accounting.

ANNEX A

(to Recommendation D.210)

Summary description of bearer services, teleservices

and supplementary services

The different categories of service as defined in CCITT Recommendations I.210, I.211 and I.212, and the relationship between them are summarized as follows:

Figure A-1/D.210 shows in a simplified graphic manner the scope of these service categories and the relationships between them.

Figure A-1/D.210, p.

Bearer services provide for information transfer between ISDN access points. They are characterized by a set of low layer attributes including information transfer and access attributes depicting the bearer capability associated with each bearer service, and general attributes. The attribute method of characterizing services is described in Recommendation I.130.

Teleservices provide the full capability for communication by means of terminal equipment functions and network functions and possibly functions provided by dedicated centres. Teleservices are characterized by the low layer attributes used to describe bearer services, and a set of high level attributes. The high level attributes generally relate to the functions and protocols of layers 4 to 7 of the Open Systems Interconnection (OSI) model.

Supplementary services modify or supplement bearer services and teleservices. They cannot be offered as stand alone services and must be offered in association with bearer services or teleservices.

Recommendation D.211

INTERNATIONAL ACCOUNTING FOR THE USE OF THE SIGNAL TRANSFER POINT (STP)

IN CCITT SIGNALLING SYSTEM No. 7

(Melbourne, 1988)

The CCITT,

considering

(a) that in CCITT Signalling System No. 7 (SS No. 7), the signalling need not follow the same path as the traffic, but may be routed via an STP provided by a third Administration;

(b) that in SS No. 7, user-to-user information and inter-Administration data may be passed over the signalling system in addition to call control data;

(c) that although STP facilities are likely to be limited initially, as use of SS No. 7 grows, it is likely to become a common and important feature both for primary and reserve signalling;

(d) that use of STPs will increase network reliability and resilience, and enable the advantages offered by common channel signalling to be fully realized. Accounting should therefore be on as simple and reasonable basis as possible, so as not to discourage STP working;

(e) that the ISDN offers the capability of non-traffic-related information transfer, and user-to-user information transfer, which could be expected to have considerable impact on the signalling network in general, and the STP in particular, and therefore may in the longer term justify a more precise method of accounting;

(f) that it will be necessary to measure the levels and types of traffic routed via an STP not only for international accounting purposes, but also for route dimensioning and STP capacity purposes.

recommends

1 that in the interests of simplicity and of minimizing costs, no accounting should take place until a threshold of traffic pre-determined by the STP provider has been attained. Thereafter, STP providers should be remunerated on a flat rate basis. The level of remuneration will be determined by the STP provider, on the basis of an apportionment of the various cost elements;

2 that where STP facilities are provided by Administrations on a reciprocal basis including temporary routing via STP facilities, for example in the case of network failure, Administrations may bilaterally agree to dispense with international accounting;

3 that as the usage of STP facilities increases, and experience of the pattern of traffic over the signalling system is gained, a requirement to account according to traffic volumes may emerge. Hence it should be possible to monitor STP usage so that the levels and types of traffic concerned can be kept under review.

Recommendation D.220

CHARGING AND ACCOUNTING PRINCIPLES TO BE APPLIED TO INTERNATIONAL CIRCUIT MODE DEMAND BEARER SERVICES

PROVIDED OVER THE INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

(Melbourne, 1988)

Preamble

This Recommendation sets out the general principles for charging and accounting to be applied by Administrations for the provision of international circuit mode demand bearer services provided over the ISDN. These services are defined in the relevant CCITT Recommendations.

The CCITT,

considering

(a) Recommendation D.210;

(b) that the following circuit mode bearer services have been categorized thus far as essential for demand international service:

— speech (for voice),

— 3.1 kHz audio (voice or voiceband data up to 9.6 kbit/s),

— 64 kbit/s unrestricted (voice and/or high speed data);

recommends

1 General principles

In principle, there should be no charging and accounting discrimination between bearer services which require the same network resources and/or functions to provide the service requested by the customer.

2 Collection charges

2.1 Collection charges should be in accordance with the bearer service requested by the customer.

2.2 If the network resources necessary to support the requested services are different:

2.2.1 the basic utilization charges for a service requiring 64 kbit/s unrestricted may in principle be at a rate higher than those for a service requiring 3.1 kHz audio,

These points are further study.
2.2.2 the basic utilization charges for a service requiring 3.1 kHz audio may in principle be higher than those for a service requiring speech only.

2.3 Measurement of a call for charging purposes should in principle be based on duration and should commence when the information channel is open for communication.

3 Accounting

3.1 Administrations should, by agreement, establish the accounting rate(s) applicable in a given relation.

The accounting rate should be divided into terminal shares payable to the Administrations of the terminal countries and, where applicable, into transit shares payable to the transit Administration. These shares should be established in accordance with the relevant provisions of the Administrative Regulations [1] [2] and the CCITT Recommendations.

3.2 The accounting rate should, in principle, relate to the network resources and functions required to provide the service requested.

3.3 Measurement of traffic for accounting purposes should in principle be based on duration and take into account other relevant CCITT Recommendations.

References

[1] *Final Acts of the World Administrative Telegraph and Telephone Conference Telegraph Regulations, Telephone Regulations* , ITU, Geneva, 1973. (See also Preliminary Note No. 3, page XIV.)

[2] *Final Acts of the World Administrative Telegraph and Telephone Conference, International Telecommunication Regulations* , ITU, Melbourne, 1988.

Recommendation D.230

GENERAL CHARGING AND ACCOUNTING PRINCIPLES FOR SUPPLEMENTARY SERVICES ASSOCIATED WITH INTERNATIONAL TELECOMMUNICATION SERVICES PROVIDED OVER THE INTEGRATED SERVICES DIGITAL NETWORK (ISDN)

(Melbourne, 1988)

Preamble

This Recommendation sets out the general principles for charging and accounting to be applied by Administrations for the provision of supplementary services associated with international telecommunication services provided over the ISDN. These services are defined in the relevant CCITT Recommendations.

The relevant provisions for certain specific supplementary services are to be found in separate D-series Recommendations.

The CCITT,

considering

(a) the general provisions of Recommendations D.210 and D.220;

(b) that the introduction of ISDN enables Administrations to offer a range of supplementary services;

(c) that supplementary services are associated with telecommunication services (bearer services or tele services) which they complement or modify, and cannot be offered as stand alone services;

(d) that provision of supplementary services may be inherent to call establishment procedures in the ISDN or may require implementation of additional resources or functions provided by:

— network capabilities;

— terminal capabilities;

— capabilities of dedicated service centres;

— or, some combinations of these capabilities;

(e) that although the establishment of charging structures and levels is a national matter, a harmonized approach to certain charging principles is desirable in order to encourage the understanding and use of supplementary services by customers.

recommends

1 Collection charges

1.1 the establishment of the collection charges is a national matter.

1.2 In addition to those charges relating to the provision of telecommunication services (bearer services or teleservices), Administrations may apply extra charges to cover additional costs incurred when providing supplementary services.

1.3 Depending on the supplementary services offered, additional charges may be raised by one of the following methods:

a) through a rental or subscription charge for supplementary services whose costs do not depend on their level of utilization;

b) by applying utilization charges for supplementary services whose costs of provision depend on their level of utilization;

c) when appropriate, by a combination of methods described under a) and b) above;

d) without additional charge.

1.4 Administrations may also provide groups of supplementary services either:

a) without additional charge, or

b) by collecting a single charge for the group of services provided.

2 Accounting

2.1 When additional costs associated with the provision of supplementary service are incurred by the Administration of the destination country and if appropriate by the Administration(s) of the transit country(ies), Administrations should establish additional remuneration by agreement.

2.2 This additional remuneration should supplement the accounting rate(s) for telecommunication service(s) (bearer services or teleservices). This may be:

a) usage dependent (duration, volume, per call),

b) usage independent.

Recommendation D.231

CHARGING AND ACCOUNTING PRINCIPLES RELATING TO THE USER-TO-USER INFORMATION (UUI) SUPPLEMENTARY SERVICE

(Melbourne, 1988)

Preamble

The present Recommendation deals only with user-to-user information exchanged over the signalling channel in association with a communication on the information channel [B-channel(s)]. The question of the offering of services on the signalling channel independently of the use of the information channel is for further study.

The CCITT,

considering

(a) that a limited volume of user-to-user information may be exchanged over the signalling channel during the call set-up and clear down phases;

(b) that a limited volume of user-to-user information may be exchanged over the signalling channel during the call set-up phase, even if a call subsequently fails to mature on the information channel [B-channel(s)];

(c) that user-to-user information may also be exchanged over the signalling channel throughout the duration of a call over the information channel;

(d) that the exchange of user-to-user information over the signalling channel will occupy channel capacity, involve a degree of processing and will impact on signalling network dimensioning, and thereby represent an additional cost to Administrations;

(e) that the possibility to exchange user-to-user information over the signalling channel represents an additional, and chargeable supplementary service within ISDN for customers, *and recognizing*

(a) that although collection charges are essentially a national matter, a harmonised approach towards charging and accounting principles is desirable;

(b) that initially, the volumes of traffic are likely to be small, and a flexible approach towards the options for raising a charge for this supplementary service is desirable until traffic patterns are established and experience gained,

recommends

1 Charging principles

1.1 User-to-user information exchanged over the signalling channel during call set-up and clear down as well as during clear set-up only, should be charged by one of the following methods:

a) by inclusion in the subscription or rental charges raised against customers;

b) by setting an appropriate minimum call charge for communications originated over the information channel;

c) by a per call fee (for further study);

d) when appropriate, by a combination of methods a) and b) or a) and c) above;

The determination of the volume unit is for further study. One simple solution would be to charge for the number of user-to-user data blocks exchanged.
In practice, the introduction of a charge will be determined by the extent to which user-to-user information actually will be exchanged, and initially at least, Administrations may deem the facility to be covered by the normal bearer service or teleservice charges, or by the subscription or rental charges raised against customers.

e) for the user-to-user information exchanged during call set-up it may also be appropriate to charge according to the volume of information exchanged. ’ |

1.2 User-to-user information exchanged over the signalling channel while a call is in progress over the information channel should, in principle, be charged according to the volume of information (data) exchanged over the signalling channel. ’ |

2 Accounting

In principle, this charge should not apply to unsuccessful call attempts due to congestion or a fault in the Administration’s equipment.

2.1 To minimise the costs associated with recording and processing, it is desirable that the traffic units used for accounting purposes should be compatible with those used for customer charging.

2.2 User-to-user information exchanged over the signalling channel during call set-up and clear down or during set-up only should be accounted for by one of the following methods to be agreed between Administrations, as a supplement to the normal accounting rates for the bearer service, or teleservice, with which the user-to-user information supplementary service is associated:

a) a monthly flat rate (for further study),

b) a per call rate.

2.3 User-to-user information exchanged over the signalling channel while the associated bearer service or teleservice communication is in progress should, in principle, be accounted for according to the volume of information exchanged over the signalling channel. Alternatively, Administrations may agree to adopt the method 2.2 |) or b) above for this category of user-to-user information.

2.4 The accounting rate established by agreement between Administrations should be divided into terminal shares and, when appropriate, into transit shares.

2.5 Administrations may bilaterally agree not to account for user-to-user information service (or mode).

Recommendation D.250

GENERAL CHARGING AND ACCOUNTING PRINCIPLES FOR NON-VOICE SERVICES

PROVIDED BY INTERWORKING BETWEEN THE ISDN | AND EXISTING PUBLIC DATA NETWORKS

(Melbourne, 1988)

The CCITT,

considering

(a) that, during the transition period, it is essential that Administrations provide interworking between existing public data networks and the ISDN in order to continue providing users with non-voice services;

(b) that, it is desirable to adopt general charging and accounting principles for these services when their provision needs interworking between ISDN and existing public data networks;

(c) that, in principle, the interworking between these networks should take place in the ISDN country or in the country of origin (if ISDN is available in both terminal countries);

(d) the relevant D-series Recommendations,

recommends

1 General interworking principles

See Recommendation D.15 concerning the general charging and accounting principles for non-voice services provided by interworking between public data networks.

2 Specific interworking principles

Specific applications for interworking not addressed by the general principles of Recommendation D.15 are for further study.

Recommendation D.251

GENERAL CHARGING AND ACCOUNTING PRINCIPLES FOR THE BASIC | TELEPHONE SERVICE PROVIDED OVER THE ISDN OR BY INTERCONNECTION BETWEEN THE ISDN

AND THE PUBLIC SWITCHED TELEPHONE NETWORK

(Melbourne, 1988)

The CCITT,

considering

(a) that, during the transition period, it is essential that Administrations provide interconnection between the public switched telephone network (PSTN) and the ISDN in order to continue providing users with a basic telephone service;

(b) that it would thus be advisable to adopt general charging and accounting principles to be applied to this service irrespective of whether it is provided over the ISDN, the PSTN or by interconnection between these networks;

(c) the relevant CCITT Recommendations,

recommends

1 Charging principles for the basic telephone service

1.1 Collection charges are a national matter.

1.2 *Basic telephone service provided by interconnection between the ISDN and the PSTN*

In any given relation there should, in principle, be a common collection charge for the basic telephone service provided by interconnection of the ISDN and the PSTN, and the telephone service provided over the PSTN.

1.3 *Basic telephone service provided over the ISDN*

The collection charge should take account of charges for similar services on the PSTN, in addition to commercial and network developmental objectives.

2 International accounting

2.1 The Administrations may agree to apply the same accounting rates for the basic telephone service irrespective of whether it is provided over the ISDN, the PSTN or by interconnection between these two networks.

2.2 The possibility of applying a different accounting rate for the basic telephone service provided over the ISDN is for further study.

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