



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

D.140

(07/98)

SERIES D: GENERAL TARIFF PRINCIPLES

General tariff principles – Charging and accounting in the
international telephone service

**Accounting rate principles for international
telephone services**

ITU-T Recommendation D.140

(Previously CCITT Recommendation)

ITU-T D-SERIES RECOMMENDATIONS
GENERAL TARIFF PRINCIPLES

TERMS AND DEFINITIONS	D.0
GENERAL TARIFF PRINCIPLES	
Private leased telecommunication facilities	D.1–D.9
Tariff principles applying to data communication services over dedicated public data networks	D.10–D.39
Charging and accounting in the international public telegram service	D.40–D.44
Charging and accounting in the international telemesssage service	D.45–D.49
Charging and accounting in the international telex service	D.60–D.69
Charging and accounting in the international facsimile service	D.70–D.75
Charging and accounting in the international videotex service	D.76–D.79
Charging and accounting in the international phototelegraph service	D.80–D.89
Charging and accounting in the mobile services	D.90–D.99
Charging and accounting in the international telephone service	D.100–D.159
Drawing up and exchange of international telephone and telex accounts	D.160–D.179
International sound- and television-programme transmissions	D.180–D.184
Charging and accounting for international satellite services	D.185–D.189
Transmission of monthly international accounting information	D.190–D.191
Service and privilege telecommunications	D.192–D.195
Settlement of international telecommunication balances of accounts	D.196–D.209
Charging and accounting principles for international telecommunication services provided over the ISDN	D.210–D.279
Charging and accounting principles for universal personal telecommunication	D.280–D.284
Charging and accounting principles for intelligent network supported services	D.285–D.299
RECOMMENDATIONS FOR REGIONAL APPLICATION	
Recommendations applicable in Europe and the Mediterranean Basin	D.300–D.399
Recommendations applicable in Latin America	D.400–D.499
Recommendations applicable in Asia and Oceania	D.500–D.599
Recommendations applicable to the African Region	D.600–D.699

For further details, please refer to ITU-T List of Recommendations.

ITU-T RECOMMENDATION D.140

ACCOUNTING RATE PRINCIPLES FOR INTERNATIONAL TELEPHONE SERVICES

Source

ITU-T Recommendation D.140 was revised by ITU-T Study Group 3 (1997-2000) and was approved under the WTSC Resolution No. 1 procedure on the 1st of July 1998.

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.

NOTE

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

INTELLECTUAL PROPERTY RIGHTS

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 members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU 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.

© ITU 1998

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the ITU.

CONTENTS

	<i>Page</i>
Annex A – Guidelines for the cost elements to be taken into account when determining accounting rates and accounting rate shares for the international telephone service	2
A.1 Network elements	2
A.1.1 International transmission facilities.....	2
A.1.2 International switching facilities	3
A.1.3 National extension.....	3
A.2 Related costs	3
A.2.1 Direct costs.....	3
A.2.2 Indirect or common costs	3
A.3 Other related costs.....	3
Annex B – Guidelines regarding the provision of information relating to accounting rates for the international automatic telephone service.....	3
Appendix B.I	4
Appendix B.II – Global accounting rate percentage movement	4
Annex C – Guidelines for bilateral negotiation of accounting rates and accounting rate shares in the international telephone service	5
C.1 Introduction.....	5
C.2 General guidelines	5
C.3 Approaches	6
C.3.1 Approach 1	6
C.3.2 Approach 2.....	6
Annex D – Transitional arrangements to cost-orientated mechanisms.....	7

Recommendation D.140

**ACCOUNTING RATE PRINCIPLES FOR INTERNATIONAL
TELEPHONE SERVICES**

(Geneva, 1992; revised in 1995 and 1998)

The ITU-T,

bearing in mind

- a) that the International Telecommunication Regulations indicate that Administrations shall by mutual agreement establish and revise accounting rates to be applied between them, taking into account the Recommendations of the ITU-T and trends in the cost of providing the telecommunication services;
- b) that the costs incurred in providing telecommunication services, although based on the same components, may have a different impact depending on the country's development status which, in turn, may affect the quality of international services;
- c) that one of the purposes of the ITU is to foster collaboration among its Members with a view to the establishment of rates at levels as low as possible consistent with an efficient service,

considering

- a) that Administrations should endeavour to lower the provisioning costs of international telephone services;
- b) that Administrations should strive to offer customers high quality international telephone services at the lowest possible prices;
- c) that too great a dissymmetry between the charges applicable in each direction of the same relation may contribute to the distortion of the balance of traffic and encourage the retention of high accounting rates;
- d) that the remuneration for the use of telecommunication facilities made available to Administrations should cover the costs incurred in providing those facilities, such as:
 - network costs;
 - financial costs;
 - overheads;
- e) that costs depend on many factors which vary by country;
- f) that international telephone networks should be used in an efficient way;
- g) that demand for international telephone services should be stimulated;
- h) that some accounting rates have not kept pace with the recent cost trends and are therefore too high;
- i) that accounting rates that are not cost-orientated may encourage inefficient routings;
- j) that the existing accounting procedures contained in the D-series Recommendations continue to provide Administrations with efficient and flexible processes,

recommends

that the following principles be applied when establishing or revising accounting rates for international telephone services:

- 1** accounting rates for international telephone services should be cost-orientated and should take into account relevant cost trends;
- 2** each Administration should apply the above principle to all relations on a non-discriminatory basis;

3 Administrations should seek to achieve cost-orientated accounting rates in an expeditious manner, recognizing that this may need to be implemented on a scheduled basis where the level of reduction required is significant. In the event of scheduling, Administrations should aim to agree staged reductions over a period normally of one to five years. However, the actual length of the period of implementation may depend on the extent of reductions agreed and/or the difference in the development of the countries concerned,

further recommends

4 that Administrations should periodically review accounting rates to ensure that they continue to reflect current cost trends;

5 that information relative to accounting rates for the international automatic telephone service should be made available on a voluntary basis to the Director of TSB in an aggregated format, in accordance with the guidelines set out in Annex B, to assist ITU-T studies into accounting rate movements.

Annex A contains guidelines for the cost elements to be taken into account when determining international telephone accounting rates.

Annex B contains guidelines concerning the provision of information relating to accounting rates for the international automatic telephone service.

Annex C contains guidelines for bilateral negotiation of accounting rates in the international telephone service.

Annex A

Guidelines for the cost elements to be taken into account when determining accounting rates and accounting rate shares for the international telephone service

Introduction

These guidelines identify the main cost elements to be used when establishing or revising cost-orientated accounting rates and accounting rate shares for the international telephone service.

A.1 Network elements

The network elements used to provide the international telephone services are generally classified as follows:

- international transmission facilities;
- international switching facilities;
- national extension.

A.1.1 International transmission facilities

The international transmission facilities consist of international terrestrial transmission or international submarine cables, or international satellite transmission or a combination of these.

These facilities include links between earth stations or cable landing stations and the international switching facilities.

A.1.2 International switching facilities

These facilities consist of international switching centres and their associated transmission and signalling equipment.

A.1.3 National extension

The national extension, used for international telephone traffic, consists of national exchanges, national transmission facilities and, if appropriate and identified under a bilateral or multilateral agreement, the local loop.

A.2 Related costs

The related costs are those identified in accordance with generally accepted accounting practices and are divided into:

- direct costs;
- indirect or common costs.

A.2.1 Direct costs

These are:

- investment costs, i.e. depreciation, interest expenses on loans and a reasonable return on equity;
- operation and maintenance costs;
- rental and lease costs of telecommunications facilities including direct transit leasing costs where applicable;
- switched transit costs where applicable;
- cost of access to national or local networks, if applicable;
- directly attributable research and development costs.

A.2.2 Indirect or common costs

These costs cannot be solely attributed to the international telephone service and thus must be allocated. They may be related to:

- general administration (e.g. head office expenses, overheads, training, etc.);
- management systems (e.g. accounting systems);
- other research and development;
- appropriate taxes (or equivalent).

A.3 Other related costs

Other costs may qualify for inclusion by bilateral agreement.

Annex B

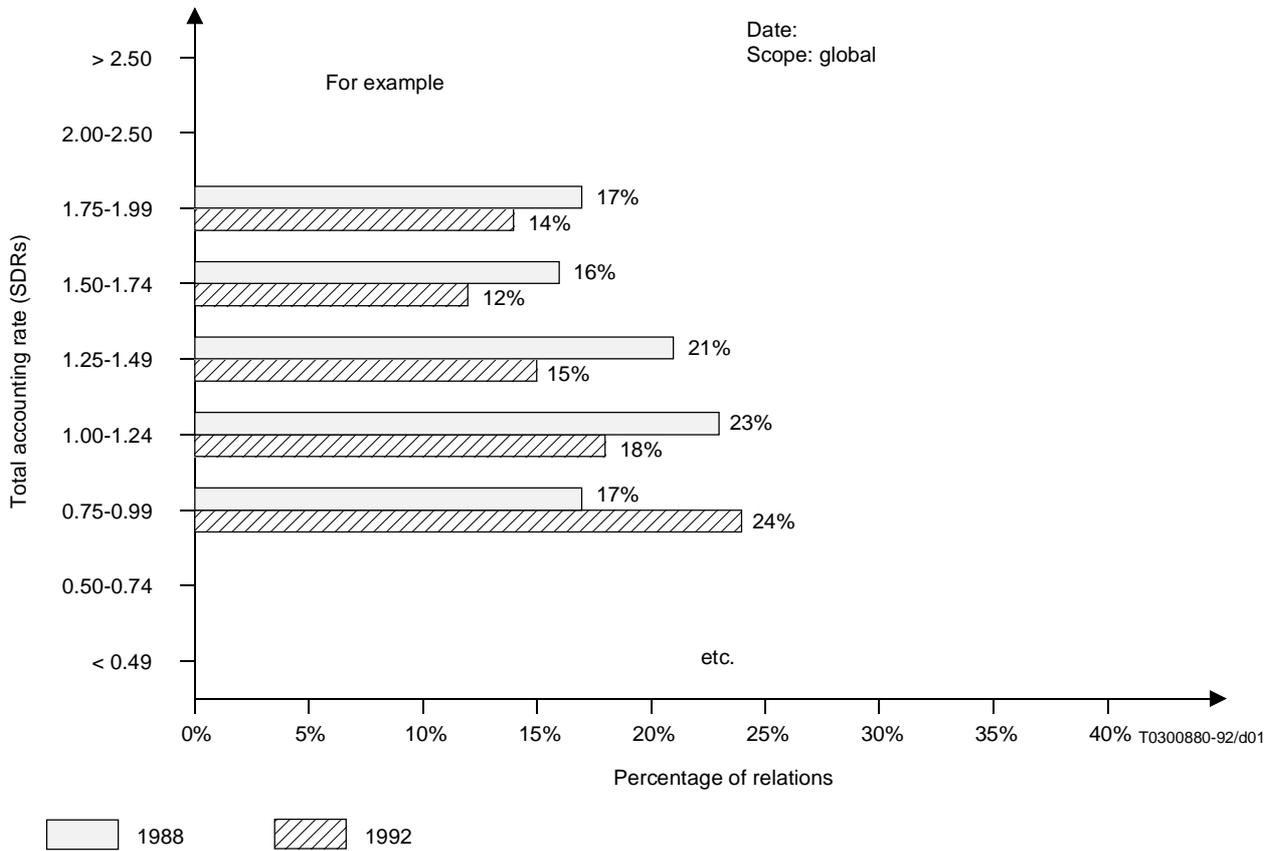
Guidelines regarding the provision of information relating to accounting rates for the international automatic telephone service

B.1 Information relating to accounting rates for the international automatic telephone accounting rates will be requested from Administrations by means of a circular-letter sent by the TSB Director.

B.2 Administrations should provide on a voluntary basis the information requested to the TSB Director in the format in Appendix I for the reference dates January 1988 and 1992. The same information will subsequently be requested on an annual basis.

B.3 Alternatively, Administrations could provide the information to the Director of TSB as an average annual global accounting rate percentage movement on a yearly basis as illustrated in Appendix II, starting with year 1988.

Appendix B.I



Distribution and movement of automatic telephone accounting rates (January 1988-January 1992)

Appendix B.II

Global accounting rate percentage movement

This information will be shown as an average annual accounting rate percentage movement.

This average percentage movement should be weighted by the traffic destined to each country on a global basis, starting with the year 1988.

Illustration of the formula to be used to calculate the average accounting rate percentage movement (var % *t*)

For example, if an Administration has three relations:

$$t = t_1 \times \frac{T_1}{T_t} + t_2 \times \frac{T_2}{T_t} + t_3 \times \frac{T_3}{T_t}$$

$$\text{var \% } t = \frac{t_{\text{period 1}} - t_{\text{period 0}}}{t_{\text{period 0}}}$$

where:

- t is the weighted average accounting rates;
- t_1 is the accounting rates related to T_1 and so on;
- T_1 is the outgoing traffic related to Administration 1 and so on;
- T_t is the total outgoing traffic;
- var % t is the variation percentage.

Annex C

Guidelines for bilateral negotiation of accounting rates and accounting rate shares in the international telephone service

C.1 Introduction

This annex contains the guidelines to be used in bilateral negotiations to establish and revise accounting rates and accounting rate shares orientated to individual parties' costs,

given:

- Recommendation D.150 (New system in accounting in international telephony);
- Recommendation D.155 (Guiding principles governing apportionment of accounting rates in intercontinental telephone relations);
- Supplement 1 (Cost and tariff study method);
- Supplement 2 (Method for carrying out a cost price study by Regional Tariff Groups).

C.2 General guidelines

C.2.1 Accounting rates and accounting rate shares are established and revised through bilateral agreement.

C.2.2 The related costs for network elements, as specified in Annex A, should be calculated by each Administration before any bilateral negotiation.

C.2.3 When negotiating on a bilateral basis the establishment or revision of the level of the accounting rates and accounting rate shares in a particular relation, the Administrations concerned should, as far as possible, agree on the approach to be used.

C.2.4 In the establishment or revision of accounting rates and accounting rate shares, due account should be taken of the impact of, among other things:

- changes in technology, the nature of the transmission routes used (land cables, submarine cables, satellite links), economies of scale and agreed routings;
- completion ratios recorded on international circuits;
- trends in the volume of incoming and outgoing traffic;
- changes in unit costs, if any, due to the provision of other telephony-based service applications (e.g. free phone, country direct, charge cards);
- differences in costs between countries.

C.2.5 Negotiations on the revision of accounting rates and accounting rate shares should be conducted periodically, for example on an annual basis.

C.2.6 Cost information presented by Administrations is of a confidential nature when identified as such by either of the parties.

C.3 Approaches

The following describes some possible approaches in which negotiation could be conducted:

C.3.1 Approach 1¹

C.3.1.1 Party A and Party B each independently conduct its own cost study using its own cost model to determine, in accordance with Annex A, its transmission, switching and national extension costs.

C.3.1.2 As a variation, both parties may agree to use the same reference values for any of the network elements and if appropriate, some cost elements contained in Annex A.

C.3.1.3 To the extent possible, factors affecting cost movement should be identified, e.g. the introduction of circuit multiplication equipment, traffic growth, etc.

C.3.1.4 From the above results, each could establish and then agree on a target cost-orientated accounting rate and accounting rate shares. The period over which the target is to be achieved should also be agreed.

C.3.1.5 Where the two parties cannot agree a target rate, they should aim nevertheless to reach an agreement for a rate adjustment, staged if appropriate, taking due account of the trend in rate movements (e.g. established via Approach 2 below).

C.3.2 Approach 2

C.3.2.1 In the absence of the necessary cost data for use of Approach 1, Party A and Party B may compare the accounting rate movement for their relation with:

- a) underlying trends developed using historical cost data; and/or
- b) accounting rate movement trends either:
 - globally, assisted for example by the results of the questionnaire associated with Annex B; or
 - regionally, by examining the movement in the various rates/values contained in the regional Recommendations of the D series; or
 - using respective achievements of rate movements in other relations (for example in the same region).

C.3.2.2 From the above cost and/or accounting rate trends, each party could establish and then agree upon a target accounting rate and accounting rate shares. The period over which the target is to be achieved should also be agreed.

C.3.2.3 Where the two parties cannot agree upon a target rate, they should aim nevertheless to reach an agreement for a rate adjustment, staged if appropriate.

¹ The Administrations of some countries may find it desirable to use the cost models developed by Regional Tariff Groups or other public information.

Annex D

Transitional arrangements to cost-orientated mechanisms²

Recognizing the change in the international telecommunications environment and the agreement to expand the menu of the remuneration arrangements to be incorporated into D.150, it is recommended that transitional arrangements to cost-orientated mechanisms be adopted as follows.

- i) As an initial step, agreement to a target for Administrations/ROAs, through bilateral agreement, to reduce total accounting rates to a level such that after deducting transit charges, where appropriate, the balance is less than 1 SDR per minute by the end of 1998. In so doing, special provisions be given to facilitate the transition by developing countries, in particular least developed countries. In this regard, where circumstances are identified, through a transparent process, of the significant difficulties these Administrations/ROAs may have in coping with the reduction, the target date may be deferred to a mutually agreed date. These provisions may include, as necessary, alterations of the 50/50 arrangement to cushion revenue reductions, provided that such alterations are made within the context of an agreement to achieve cost orientated rates³.
- ii) Administrations/ROAs whose accounting rates are below 1 SDR per minute should continue to take positive steps to reduce their accounting rates to cost-orientated levels.
- iii) Administrations/ROAs should seek to implement this proposal in an expeditious manner, recognizing that this may need to be done on a scheduled basis where the levels of reductions are significant. Accordingly, Administrations/ROAs should submit to the ITU by March 2nd 1998 a schedule of reductions pursuant to i) above.
- iv) Administrations/ROAs should utilize an appropriate costing methodology as soon as possible, but not later than the end of 1999, to determine their relevant costs⁴.
- v) The ITU-T should collect data from Administrations/ROAs to enable the measurement of progress in following these arrangements.

The ITU should continue work to define cost models and methodologies for achieving cost orientation of the current and new remuneration arrangements on an ongoing basis in order to achieve timely implementation of this Recommendation.

² India, Lebanon, Syria and Viet Nam have expressed reservations regarding the application of those arrangements.

³ Russia considers that alternations of the 50/50 arrangement should be given also to Russia because of its higher network costs stipulated by its geographical characteristics, economical and national feature.

⁴ Russia expressed a reservation on the interpretation of this paragraph.

ITU-T RECOMMENDATIONS SERIES

Series A	Organization of the work of the ITU-T
Series B	Means of expression: definitions, symbols, classification
Series C	General telecommunication statistics
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Transmission of television, sound programme and other multimedia signals
Series K	Protection against interference
Series L	Construction, installation and protection of cables and other elements of outside plant
Series M	TMN and network maintenance: international transmission systems, telephone circuits, telegraphy, facsimile and leased circuits
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Telephone transmission quality, telephone installations, local line networks
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks and open system communications
Series Y	Global information infrastructure
Series Z	Programming languages