

I n t e r n a t i o n a l T e l e c o m m u n i c a t i o n U n i o n

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

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**Supplement 5**  
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SERIES D: GENERAL TARIFF PRINCIPLES

General tariff principles – Drawing up and exchange of  
international telephone and telex accounts

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Monthly telephone and telex accounts

**Supplement on guidelines for fraud mitigation**

Recommendation ITU-T D.170 – Supplement 5



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 telex message service	D.45–D.49
Principles applicable to GII-Internet	D.50–D.59
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
<b>Drawing up and exchange of international telephone and telex accounts</b>	<b>D.160–D.179</b>
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.269
Charging and accounting principles for next generation networks (NGN)	D.270–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 the list of ITU-T Recommendations.*

## Recommendation ITU-T D.170

### Monthly telephone and telex accounts

#### Supplement on guidelines for fraud mitigation

#### Summary

Supplement 5 to Recommendation ITU-T D.170 provides a set of voluntary guidelines to assist telecommunication operators in mitigating fraud in international telecommunications traffic exchange. Since the definition of fraud is a domestic matter and varies by jurisdiction, the present supplement does not provide a definition or identify possible fraud practices. Its objective is to help operators to formulate new (or update existing) fraud mitigation guidelines according to their needs and to promote efficiency in account management.

#### History

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## FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. 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 Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 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 publication, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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## Table of Contents

	<b>Page</b>
1 Introduction .....	1
1.1 Objective and scope.....	1
1.2 Benefits of these guidelines.....	1
2 Abbreviations and acronyms .....	1
3 Voluntary guidelines.....	1
3.1 Fraud awareness .....	1
3.2 A well-defined fraud prevention, detection and management internal process with clear responsibilities and service level agreements.....	1
3.3 Communication: Frequent information sharing concerning abnormalities, and regular periodic review .....	2
3.4 Define threshold limits for further investigation .....	2
3.5 Review interconnection agreements.....	2
3.6 Detection and identification .....	2
3.7 Countermeasures .....	2
4 A quick-step guide for consideration.....	3



# Recommendation ITU-T D.170

## Monthly telephone and telex accounts

### Supplement on guidelines for fraud mitigation

#### 1 Introduction

##### 1.1 Objective and scope

The objective of this supplement is to assist telecommunication operators in mitigating fraud in international telecommunication traffic exchange. The guidelines presented below are voluntary.

As clause 3.7 (countermeasures) notes, several industry expert forums exist, including the Forum for the International Irregular Network Access (FIINA), the GSMA Fraud Group, and the i3Forum, where operators exchange information on fraudulent practices and methods for mitigating such practices. Interested operators are encouraged to participate in the work of these organizations.

How to define fraud is a national matter and varies by jurisdiction. Therefore, this supplement does not provide a definition or identify possible fraud practices.

##### 1.2 Benefits of these guidelines

The benefits that the guidelines are envisioned to bring to telecommunication operators are as follows:

- to help telecommunication operators formulate a set of guidelines (if none is yet in place) according to their needs, or review their existing policy;
- to ensure efficiency in managing accounts.

#### 2 Abbreviations and acronyms

This supplement uses the following abbreviations and acronyms:

ACD	Average Call Duration
ASR	Answer-Seizure Ratio
CLI	Calling Line Identity
PRS	Premium Rate Service
SIM	Subscriber Identity Module
SLA	Service Level Agreement

#### 3 Voluntary guidelines

##### 3.1 Fraud awareness

Operators should ensure full information sharing regarding fraud types among the various internal departments involved in the international interconnection business (i.e., sales, network, revenue assurance and billing).

##### 3.2 A well-defined fraud prevention, detection and management internal process with clear responsibilities and service level agreements

Operators should establish a set of processes and procedures encompassing all steps from the prevention to the detection of fraudulent behaviour related to international traffic exchange. These

processes and procedures should be shared with the relevant internal teams, along with a well-defined Action Plan, supported by service level agreements (SLAs).

This should include "dashboards" that have easy visibility to teams involved.

### **3.3 Communication: Frequent information sharing concerning abnormalities, and regular periodic review**

Open communication and information sharing regarding abnormalities reported in traffic and on the network should be part of the fraud-handling mechanism, along with regular periodic review of the progress made on cases that have been reported.

### **3.4 Define threshold limits for further investigation**

On the basis of the availability of a fraud management system and other resources, there should be clear financial limits that trigger investigation and focus resources on critical cases for investigation purposes.

### **3.5 Review interconnection agreements**

Interconnection agreements between operators are commercial, mutually-agreed arrangements. Some operators may consider developing an interconnection agreement to include a provision that explains how fraudulent activities will be handled.

Some current interconnection agreements may be very general in nature and operators may consider reviewing these agreements with their respective legal teams for possible updating to reflect the latest experiences and fraud-handling mechanisms.

### **3.6 Detection and identification**

- Fraud detection on suspected premium rate service (PRS) numbers – alarms, etc.
- Abnormal increase in the traffic to particular destinations
- Calling pattern analysis
- Customer profiling by volume and type of calls
- Customer complaints about a wrong calling line identity (CLI) or no CLI
- Traffic ratios for inbound and outbound calls for subscriber identity module (SIM) box detections
- Work on different parameters like average call duration (ACD), answer-seizure ratio (ASR), etc.
- Determine call originator and ask to stop routing to illegal entities.

### **3.7 Countermeasures**

- Invest in fraud management systems
- Invest in network monitoring systems and acquire skill sets to manage
- Work with network and quality control teams to pinpoint the problem
- Update the sales team on abnormal behaviour as soon as it becomes apparent
- Present problems to local regulators for intervention
- Review and change pricing actively
- Undertake investigations and intervention with the police. Such actions vary from country to country due to local laws
- Liaise with the fraud groups of domestic carriers

- Gather intelligence from international forums (e.g., FIINA, GSMA, I3Forum, among others)
- Distinguish premium rate numbering plans as a compulsory measure.
- Include number analysis, etc.

#### **4 A quick-step guide for consideration**

- Acquire automated systems and skill sets to manage them
- Review interconnection agreements
- Establish a well-defined internal fraud control process
- Undertake frequent reviews
- Issue frequent communications
- Take speedy action
- Maintain vigilance, especially on weekends and holidays
- Report block destinations immediately
- Maintain frequent communication with the next operator handling the call
- Alert the national regulator and local enforcement agencies.





## SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
<b>Series D</b>	<b>General tariff principles</b>
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	Cable networks and 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	Telecommunication management, including TMN and network maintenance
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Terminals and subjective and objective assessment methods
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, open system communications and security
Series Y	Global information infrastructure, Internet protocol aspects and next-generation networks
Series Z	Languages and general software aspects for telecommunication systems