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**CHARGING AND ACCOUNTING IN  
INTERNATIONAL TELECOMMUNICATION  
SERVICES**

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**EXCHANGE OF INTERNATIONAL TRAFFIC  
ACCOUNTING DATA BETWEEN  
ADMINISTRATIONS USING ELECTRONIC  
DATA INTERCHANGE (EDI) TECHNIQUES**

**ITU-T Recommendation D.190**

(Previously "CCITT Recommendation")

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## FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (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 (Helsinki, March 1-12, 1993).

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## NOTE

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

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**EXCHANGE OF INTERNATIONAL TRAFFIC ACCOUNTING DATA  
BETWEEN ADMINISTRATIONS USING ELECTRONIC DATA  
INTERCHANGE (EDI) TECHNIQUES**

*(Geneva, 1995)*

**1 Introduction**

**1.1** The current practice is for Administrations to exchange monthly traffic accounts with each other for the international public-switched telephone, telex, telegram and packet-switched data services, in accordance with Recommendations D.10, D.42 and D.170, and for these accounts normally to be settled on a quarterly or monthly basis. Accounts for a number of other international telecommunication services may also be included in the traffic settlement process.

**1.2** Most Administrations use a computer system to produce paper-based outgoing monthly traffic accounts which are then sent by mail or facsimile to other Administrations. Many Administrations also check and record the data contained in incoming monthly traffic accounts received from other Administrations by entering that data to a computer system. Some Administrations use a computer system to produce quarterly or monthly settlement statements or to check and record those received from other Administrations.

**2 Purpose**

**2.1** The purpose of this Recommendation is to promote a set of common data standards which can be used by Administrations to exchange traffic accounting and settlement data with each other using Electronic Data Interchange (EDI) techniques.

**2.2** The use of EDI techniques is expected to provide a faster and more secure means of exchanging data, and to reduce costs by automating the process for entering data received from other Administrations to computer systems.

**3 Common data standards**

**3.1** The common data standards provide a set of standard message formats for exchanging traffic accounting and settlement data, and a set of standard codes for identifying the items of reference data used in those formats.

**3.2** The common data standards support both flatfile data formats and formats which conform to the EDIFACT standard. It is likely that some Administrations will adopt the flatfile format and some the EDIFACT format. Administrations capable of handling both will be able to exploit use of EDI techniques to the fullest extent.

**4 Standard message formats**

**4.1** Each message has three components:

- i) A header record which contains details of the receiving and sending Administrations and a brief description of the message, such as, a service type, year, month and sequence number for a monthly traffic account.

- ii) Detail records containing the main body of the message. For example, the account line detail of a monthly traffic account – Annex A1.
- iii) A subtotal and matching record containing reconciliation totals to enable the receiving Administration to confirm the completeness of the detail records received. Annex A2 contains an example of the flatfile format for telephone and telex accounts and Annex B the EDIFACT equivalent. The two formats have a broadly similar content, with some differences of structure.

## **5 Standard reference data codes**

**5.1** Tables of standard reference data codes are maintained for the following kinds of data:

- i) Service Type codes with 2 alpha digits: for example TP = Telephone.
- ii) Traffic Type codes with 4 alpha digits, including spaces: for example, AR = International Direct Dialling Reduced Rate.
- iii) Currency codes of 3 alpha digits: for example XDR = Special Drawing Rights.
- iv) Administration/ROA Codes of 5 characters: 3 alpha, including spaces, and to identify the country, 2 numeric to identify the Administration with the country. For example ABC01 = Country A Telecom Corporation.

**5.2** Further information on how to obtain a User Guide, standard reference data codes and users of EDI will be provided on request by the TSB.

**5.3** Administrations which enter into bilateral agreements to use EDI are requested to inform the TSB in order that its list can be augmented.

## **6 Procedure for sending and receiving data**

**6.1** The procedure for sending data is that the sending Administration converts the data produced by its computer system from its own internal data standard to the common data standard and sends it to the receiving Administration mailbox over an X.400 Message Handling System or over an EDI data network. On receiving the data, the receiving Administration converts it from the common data standard to its own internal data standard for further processing by its computer system.

**6.2** Additional protocols allow the receiving Administration to formally accept a traffic account or settlement statement without amendment or to return it to the sending Administration in an amended form.



## Annex A1

### Flatfile format for monthly telephone and telex accounts detailed records

(This annex forms an integral part of this Recommendation)

#### Monthly accounts – Telephone and telex

| Detailed records |   |    |    |                      |                          |
|------------------|---|----|----|----------------------|--------------------------|
| EL Field<br>Nu   |   | LE | CL | Positions<br>From To | Remarks                  |
| 1                | Record identifier                       | 1  | A  | 1 1                  | Always "M" as Monthly    |
| 2                | Service type code                       | 2  | A  | 2 3                  |                          |
| 3                | Code of account issuing operator        | 5  | A  | 4 8                  |                          |
| 4                | Code of account destination operator    | 5  | A  | 9 13                 |                          |
| 5                | Month of the account                    | 4  | N  | 14 17                | YYMM                     |
| 6                | Code of operator origin of traffic      | 5  | N  | 18 22                | YYMM                     |
| 7                | Code of 1st operator traffic passes by  | 5  | A  | 23 27                |                          |
| 8                | Code of 2nd operator traffic passes by  | 5  | A  | 28 32                |                          |
| 9                | Code of 3rd operator traffic passes by  | 5  | A  | 33 37                |                          |
| 10               | Code of operator destination of traffic | 5  | A  | 38 42                |                          |
| 11               | Traffic month                           | 4  | N  | 43 46                |                          |
| 12               | Traffic type code                       | 4  | A  | 47 50                |                          |
| 13               | Number of calls                         | 9  | N  | 51 59                |                          |
| 14               | Number of minutes                       | 10 | N  | 60 9                 |                          |
| 15               | Share fee per call                      | 6  | N  | 70 75                |                          |
| 16               | Share fee per minute                    | 6  | N  | 76 81                | (2 + 4)                  |
| 17               | Accounting procedure                    | 1  | A  | 82 82                | D = Direct, C = Cascade  |
| 18               | Amount                                  | 16 | N  | 83 98                | (14 + 2)                 |
| 19               | Currency code                           | 3  | A  | 99 101               | ECU or XFO or USD or XDR |
| 20               | Record type                             | 1  | N  | 102 102              | 1, 3 or 4                |

Record types: 1 = detail; 2 = subtotal; 3 = wrong; 4 = corrected detail; 5 = corrected subtotal; 8 = total record; 9 = corrected total.

Null fields other than fillers must be filled with null characters (Numerics = 0; Alphanumerics = underscore).  
Negative numeric fields to start with "-" sign.

## Annex A2

### Flatfile format for monthly telephone and telex accounts subtotal and matching records

(This annex forms an integral part of this Recommendation)

| Subtotal and matching records |                                      |    |    |                      |  |
|-------------------------------|--------------------------------------|----|----|----------------------|--|
| EL Field<br>Nu                |                                      | LE | CL | Positions<br>From To | Remarks  |
| 1                             | Record-identifier                    | 1  | A  | 1 1                  | Always "M" as Monthly                              |
| 2                             | Service type code                    | 2  | A  | 2 3                  |  |
| 3                             | Code of account issuing operator     | 5  | A  | 4 8                  |  |
| 4                             | Code of account destination operator | 5  | A  | 9 13                 |  |
| 5                             | Month of the account                 | 4  | N  | 14 17                | YYMM   |
| 6                             | Filler                               | 16 | A  | 18 33                |  |
| 7                             | Total amount in ECU                  | 16 | N  | 34 49                | (14 + 2)   |
| 8                             | Filler blank                         | 1  | A  | 50 50                |  |
| 9                             | Total amount in XFO                  | 16 | N  | 51 66                | (14 + 2)   |
| 10                            | Filler blank                         | 1  | A  | 67 67                |  |
| 11                            | Total amount in USD                  | 16 | N  | 68 83                | (14 + 2)   |
| 12                            | Filler blank                         | 1  | A  | 84 84                |  |
| 13                            | Total amount in XDR                  | 16 | A  | 85 100               | (14 + 2)   |
| 14                            | Filler blank                         | 1  | A  | 101 101              |  |
| 15                            | Record type                          | 1  | N  | 102 102              | For subtotal; 2, 3, 5: for matching record 3, 8, 9 |

Record types: 1 = detail; 2 = subtotal; 3 = wrong; 4 = corrected detail; 5 = corrected subtotal; 8 = total record; 9 = corrected total.

Null fields other than fillers must be filled with null characters (Numerics = 0; Alphanumerics = underscore).  
Negative numeric fields to start with "-" sign.

## Annex B

### EDIFACT format for monthly telephone and telex accounts

(This annex forms an integral part of this Recommendation)

| Monthly accounts – Telephone & telex detail    |              |       |       |         |
|--|--------------|-------|-------|---------|
| Field  | Segment      | Group | Level | Element |
| Record id                                      | Not required |       |       |         |
| Service type code                              | IMD          | –     | 1     | 7009    |
| Issuing carrier                                | NAD          | 2     | 1     | 3039    |
| Destination carrier                            | NAzD         | 2     | 1     | 3039    |
| Account month                                  | DTM          | –     | 1     | 2380    |
| Origin carrier                                 | NAD          | 31    | 2     | 3039    |
| Bypass carrier-1                               | NAD          | 31    | 2     | 3039    |
| Bypass carrier-2                               | NAD          | 31    | 2     | 3039    |
| Bypass carrier-3                               | NAD          | 31    | 2     | 3039    |
| Destination carrier                            | NAD          | 31    | 2     | 3039    |
| Traffic month                                  | DTM          | 22    | 2     | 2380    |
| Traffic type code                              | LIN          | 22    | 1     | 7140    |
| No. calls                                      | QTY          | 22    | 2     | 6060    |
| No. minutes                                    | QTY          | 22    | 2     | 6060    |
| Share fee per call                             | PRI          | 25    | 2     | 5284    |
| Share fee per minute                           | PRI          | 25    | 2     | 5284    |
| Accounting procedure                           | RFF          | 26    | 2     | 1154    |
| Amount   | MOA          | 23    | 2     | 5004    |
| Currency code                                  | MOA          | 23    | 2     | 6343    |
| Record type                                    | LIN          | 22    | 1     | 1229    |
| Monthly accounts – Telephone & telex – Trailer |              |       |       |         |
| Record id                                      | Not required |       |       |         |
| Service type code                              | See above    |       |       |         |
| Issuing carrier                                | See above    |       |       |         |
| Destination carrier                            | See above    |       |       |         |
| Account month                                  | See above    |       |       |         |
| Amount total                                   | MOA          | 45    | 1     | 5054    |
| Record type                                    | MOA          | 45    | 1     | 5054    |
| UNB  |              |       |       |         |
| UNH  |              |       |       |         |
| BGM  |              |       |       |         |
|  | DTM          |       |       |         |
|  | IMD          |       |       |         |
|  | RFF          |       |       |         |
|  | NAD          |       |       |         |
| UNS  |              |       |       |         |
|  | LIN          |       |       |         |
|  |              | QTY   |       |         |
|  |              | DTM   |       |         |
|  |              | MOA   |       |         |
|  |              | PRI   |       |         |
|  |              | RFF   |       |         |
|  |              | NAD   |       |         |
| UNS  |              |       |       |         |
|  | CNT          |       |       |         |
|  | MOA          |       |       |         |
| UNT  |              |       |       |         |
| UNZ  |              |       |       |         |
| Message type code: INVOICE                     |              |       |       |         |
| Version : 1                                    |              |       |       |         |
| Release : 92.1                                 |              |       |       |         |

EDIFACT format for monthly telephone and telex accounts, 5

EDIFACT standard, 1

Flatfile format for monthly telephone and telex accounts subtotal and matching records, 4

Flatfile format for monthly telephone and telex accounts detailed records, 3



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