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SERIES D: GENERAL TARIFF PRINCIPLES

General tariff principles – Transmission of monthly international accounting information

Exchange of international traffic accounting data between Administrations using electronic data interchange (EDI) techniques

ITU-T Recommendation D.190

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GENERAL TARIFF PRINCIPLES

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ITU-T Recommendation D.190

Exchange of international traffic accounting data between Administrations using electronic data interchange (EDI) techniques

Summary

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.

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.

Source

ITU-T Recommendation D.190 was prepared by ITU-T Study Group 3 (2001-2004) and approved under the WTSA Resolution 1 procedure on 14 June 2002.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications. 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 Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. 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, 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.

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ITU-T Recommendation D.190

Exchange of international traffic accounting data between Administrations using electronic data interchange (EDI) techniques

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 ITU-T Recs 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 into 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) Detailed records containing the main body of the message. For example, the account line detailed of a monthly traffic account (see A.1).

iii) A subtotal and matching record containing reconciliation totals to enable the receiving Administration to confirm the completeness of the detail records received. Clause A.2 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 Flatfile formal for monthly telephone and telex accounts and set of code tables.

5.2.1 Clauses A.1 and A.2 show the Flatfile format for monthly telephone and telex accounts. The latest versions of this format can be downloaded free from the ETIS-EDI website (http://www.is.etis.org) or by contacting the ITU TSB.

5.2.2 Clause A.3 shows the convention for the code tables and types of codes available for use with the flatfile system. The code tables are regularly updated by the ETIS-EDI Group[1].

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.

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[1] The ETIS-EDI Group is a non-profit making organisation of international operators established to develop and implement a computer based system for the rapid exchange of international traffic accounts.

ETIS, who own the intellectual property rights to them, has agreed to grant a license, to an unrestricted number of individual operators, on a worldwide non-discriminatory basis and on reasonable terms and conditions. The license will provide for access to the updated code tables and any other relevant data/information related to the application of the flatfile system. Details of the license and conditions can be obtained from the ETIS-EDI website (http://www.is.etis.org) or from the ITU TSB.

Annex A

Flatfile format for monthly telephone and telex accounts

A.1 Detailed records

Detailed records						
El. Nbr	**Field**	**LE**	**CL**	**Positions**		**Remarks**
				From	**To**	
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	
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	YYMM
12	Traffic type code	4	A	47	50	
13	Number of calls	9	N	51	59	
14	Number of minutes	10	N	60	69	
15	Share fee per call	6	N	70	75	(2 + 4)
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.						

A.2 Subtotal and matching records

Subtotal and matching records						
El. Nbr	**Field**	**LE**	**CL**	**Positions**		**Remarks**
				From	**To**	
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.						

A.3 Set of code tables

The ETIS International Settlement Group maintains a set of code tables that enable the implementation of ITU-T Rec. D.190.

This annex provides examples of the tables currently available from ETIS.

The following code tables are currently in use:

1) Carrier Code;
2) Service Type;
3) Traffic Type;
4) Currency.

Below are examples of each of the tables.

A.3.1 Carrier Code

Format = 5 Characters, first 3 characters will always be 3 alpha to identify the Country; second two characters will always be 2 digits to identify the Carrier or Administration in that Country.

i.e. AAA = unique Alpha Country Code, (matching the ISO standard)

99 = unique 2 digits code identifying Carrier

AAA99

A.3.2 Service Type Code – Unique Alpha code

Format = 2 Characters, will always be alpha to identify the service being used (i.e. Telephone, Telex,..).

Examples: XX = Service 1

ZZ = Service 2.

A.3.3 Traffic Type Code

Format = 4 Characters, each will define a separate element of the call information. Within this information the 4 types of Traffic Codes can be defined as follows:

a) Basic traffic – (i.e. IDD…);

b) Connection Procedure – (i.e. Automatic/Operator…);

c) Remuneration Factor – (Billing Method (Credit Card)…);

d) Time Classification – (i.e. Standard, Peak,…).

Traffic Code can be alpha or symbol identifier to denote each of the 4 elements.

i.e. XX_X

ZZXZ.

A.3.4 Currency Code

There are 4 specific currency values in the exchange process. They can be defined as:

1) Dollar;

2) Gold Franc;

3) Special Drawing Right;

4) Euro.

Format = 3 alpha characters.

i.e. XXX.

Annex B

EDIFACT format for monthly telephone and telex accounts

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				
Field	**Segment**	**Group**	**Level**	**Element**
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				

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