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**ITU-T**

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SERIES E: TELEPHONE NETWORK AND ISDN

Operation, numbering, routing and mobile service –  
International operation – General provisions concerning  
Administrations

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**The international telecommunication  
charge card**

ITU-T Recommendation E.118

(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).

ITU-T Recommendation E.118 was revised by ITU-T Study Group 1 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 19th of July 1996.

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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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## **THE INTERNATIONAL TELECOMMUNICATION CHARGE CARD**

*(revised in 1996)*

### **1 Preamble**

Telecommunication charge cards may be issued by Recognized Operating Agencies (ROAs) to allow customers to use their card in connection with various international services at appropriate charges for each transaction and have the charges billed to their account in the country where the ROA issued the charge card. Cards issued by ROAs in accordance with this Recommendation conform to the appropriate ISO Standards.

### **2 Numbering system**

#### **2.1 Card numbering structure**

The numbering of the card to be issued by ROAs shall be as follows based on International Standard ISO/IEC 7812 [1] (Identification cards – Numbering system and registration procedure for issuer identifiers).

The maximum length of the visible card number (primary account number) should be 19 characters and is composed of the following subparts (see Figure 1):

- Major Industry Identifier (MII);
- country code;
- issuer identifier;
- individual account identification number;
- parity check digit computed according to the Luhn formula (see International Standard ISO/IEC 7812 [1], Annex B). In addition to the parity check digit, ROAs may incorporate a validation check device in some location on the card which could be changed when new cards are issued.

NOTE – Major industry and issuer identifier numbers of the form 66xxxx have already been assigned to some Administrations as a transitional measure. Charge cards of this type are fully compatible with ISO standards.

#### **2.2 Issuer identifier number assignment and registration procedure**

- a) The assignment of specific issuer identifier numbers should be the responsibility of a country or group of countries as appropriate. These numbers should only be assigned to ROAs with the agreement of their Administrations.
- b) These issuer identifier numbers are normally used to distinguish among multiple ROAs who issue cards within a country. However, these numbers may also be used to distinguish individual countries sharing the same country code (as defined in Recommendation E.164 [2]) or, if appropriate, to distinguish both countries and issuers.
- c) The Director of the TSB is responsible for the registration and/or cancellation of issuer identifier numbers (IINs) for ROAs with the approval of their Administrations. An illustrative registration form is contained in Figure 2.
- d) A one time fee shall be collected in order for an IIN to be assigned and registered by the TSB. Applications shall be accompanied by evidence of payment to the ITU of the one time fee.
- e) In the event of technical or operational difficulties in allocating an IIN, the Director of the TSB should consult the Chairman of Study Group 1.
- f) The TSB shall maintain a list of the allocated IINs.
- g) Additions, deletions and changes to this list should be published in the first available ITU Operational Bulletin.
- h) The consolidated list of allocated IINs should be published periodically in the ITU Operational Bulletin.

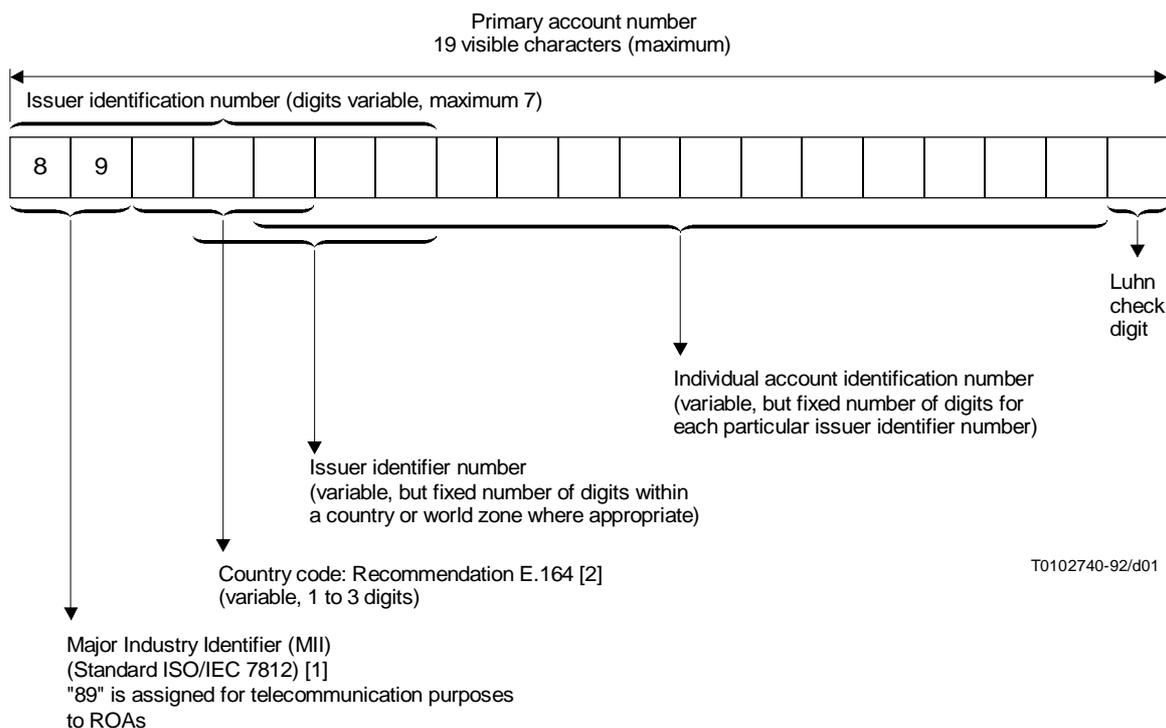


FIGURE 1/E.118  
Charge card numbering system

### 2.3 Information content

The information on an international telecommunication charge card should clearly include:

- 1) the card number (on a combined national/international card; the national number, if different, should be appropriately designated);

and optionally include:

- 2) the name of the issuing ROA<sup>1)</sup> and, where appropriate, the country of issue;
- 3) the card holder's name and signature;
- 4) the date of expiry;
- 5) instructions on how the card should be used. (Some ROAs may prefer to issue instructions separately.)

In addition, the logo of the ITU may, at the card issuer's option, appear somewhere on the card to facilitate recognition of the card by card acceptors where presentation of the card is required as a part of the service (i.e. bureau services).

### 3 Printed cards

The charge card should be designed to be conveniently on one's person. Current ISO Standards define the dimensions of financial transaction cards to be 85.60 mm × 53.98 mm (3.370 × 2.125 inches) and the ITU-T considers that telephone charge cards issued by ROAs should have similar dimensions.

<sup>1)</sup> Although optional, card issuer ROAs are encouraged to include their name, where possible, to avoid problems when the card is presented to an operator.

## 4 Magnetic stripe cards

For maximum flexibility, convenience of use and economic benefits, the magnetic stripe cards to be issued by ROAs should conform to the relevant ISO Standards concerning materials, recording techniques, physical dimensions and the type and format of embossed information.

These are:

ISO 7810: Identification cards – Physical characteristics.

ISO 7811-1: Identification cards – Recording technique – Part 1: Embossing.

ISO 7811-2: Identification cards – Recording technique – Part 2: Magnetic stripe.

ISO 7811-3: Identification cards – Recording technique – Part 3: Location of embossed characters on ID-1 cards.

ISO 7811-4: Identification cards – Recording technique – Part 4: Location of read-only magnetic tracks – Tracks 1 and 2.

ISO 7811-5: Identification cards – Recording technique – Part 5: Location of read-write magnetic track – Track 3.

ISO 7813: Identification cards – Financial transaction cards.

### 4.1 Encoding requirements

Track 2 of the magnetic stripe on the telecommunication charge card shall be used as a primary means of communicating data encoded on the magnetic stripe. The Primary Account Number (PAN) is the only field that is required to be encoded. An example of the encoding of this minimum information is contained in Table 1.

TABLE 1/E.118

#### Minimum encoding requirements

STX	Start Sentinel	BCD 11
PAN	Primary Account Number	89...(e.g. 8912538360010000L)
FS	Field Separator	BCD 13
ED	Expiration Date	BCD 13
SC	Service Code	BCD 13
DD	Discretionary Data	null
ETX	End Sentinel	BCD 15
LRC	Longitudinal Redundancy Check	[1 digit]

A card issuer may, at their own discretion, encode data on track 2 of the telecommunication charge card in addition to the required information. This data is defined below. An example of the encoding of all such information (except discretionary data) is contained in Table 2.

### 4.2 Expiration date

If the expiration date is embossed on the front of the telecommunication charge card, it should also be encoded on track 2 of the magnetic stripe. The format is defined by ISO 7813 as YYMM. The position of the expiration date is shown in Table 2 and is dependent on encoding requirements and service agreements. If the expiration date is not embossed on the front of the card and it is not encoded on the magnetic stripe, a field separator shall be encoded in its place (see Table 1).

### 4.3 Service code

Administrations are encouraged to encode information within the service code field. If it is not encoded on the magnetic stripe, a field separator shall be encoded in its place (see Table 1). There are three positions to the service code field. The positions and the interpretation for each of the possible values are contained in Annex A.

TABLE 2/E.118

#### Full encoding requirements

STX	Start Sentinel	BCD 11
PAN	Primary Account Number	89...(e.g. 9812538360010000L)
FS	Field Separator	BCD 13
ED	Expiration Date	YYMM (e.g. "9612" for December 1996)
SC	Service Code	XXX (e.g. "125" – International use, positive authorization is mandatory, telecommunications services only with a PIN being required)
DD	Discretionary Data	...
ETX	End Sentinel	BCD 15
LRC	Longitudinal Redundancy Check	[1 digit]

### 4.4 Discretionary data

Any information contained in the discretionary data field is for further study.

## 5 Integrated Circuit (IC) cards

The standard for the IC card is to be established by ISO/IEC JTC 1/SC 17.

## 6 History

CCITT *Blue Book*, 1988.

Revised 1992.

Revised 1996.

**Registration form for a single Issuer Identifier Number for the international telecommunication charge card system issued by the telecommunications Administrations**

**To be returned with registration fee to:** INTERNATIONAL TELECOMMUNICATION UNION  
 TELECOMMUNICATION STANDARDIZATION BUREAU  
 PLACE DES NATIONS  
 CH - 1211 GENEVE 20  
 SWITZERLAND  
 FAX: +41 22 730 5853

This registration is submitted in accordance with International Standard ISO 7812. *Identification cards – Numbering system and registration procedure for issuer identifiers.*

**A. TO BE COMPLETED BY APPLICANT (Card Issuer)**

Name or organization		
Address to be registered (maximum two lines, 30 characters per line)		
Principal contact in organization		
Telephone number +	Telex number	Telefax number +
Address for correspondance		
Effective date of usage or cancellation		
Date	Signature	

**B. TO BE COMPLETED AND APPROVED BY THE TELECOMMUNICATIONS ADMINISTRATION<sup>1)</sup> OR DULY AUTHORIZED COORDINATING ORGANIZATION**

- a) Action requested (check appropriate box)  
 Registration  or Cancellation
- b) Major industry identifier (MII): 89
- c) Country code (CC): \_\_\_\_\_  
 (according to the List, Complement to ITU-T Recommendation E.164)
- d) Issuer identifier number: \_\_\_\_\_  
 (according to ITU-T Recommendation E.118)

Name of approving organization	
Date	Signature

**C. TO BE COMPLETED BY ITU (CENTRAL REGISTRATION AUTHORITY)**

Issuer Identification Number registered or cancelled [ 8 ] [ 9 ] [ ] [ ] [ ] [ ] [ ] [ ]	Date:
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<sup>1)</sup> and/or recognized operating agency (ROA).

METHOD OF PAYMENT  
(Please specify the form of payment used)

- Switzerland: to the ITU's current postal account, Geneva 12-50-3;
- All other countries: – by international money order, or  
– by bank transfer to Swiss Bank Corporation,  
2-4 rue de la Confédération, CH-1204 Geneva (Switzerland)  
ITU Account No. C8-765-565.0

(payment may also be effected by a cheque made out in another currency freely convertible into Swiss francs, provided that the cheque, when cashed and converted, will cover the amount of the registration fee in Swiss francs)

- By credit card EUROCARD-MASTERCARD  VISA  AMERICAN EXPRESS

Credit card number: \_\_\_\_\_ Valid date: \_\_\_\_\_

Holder's name: \_\_\_\_\_ Signature: \_\_\_\_\_

(this form must be signed if you pay by credit card); **Please note:** letters of credit are not accepted.

FIGURE 2/E.118

**Illustrative Registration Form**

## Annex A

### Service code assignments

(This annex forms an integral part of this Recommendation)

Tables A.1 to A.3 describe the various values that may be used in each of the three positions of the service code field. For each value, the second column of each table describes how the value is interpreted specifically for cards defined by this Recommendation.

The first digit of the service code describes the type of interchange permissible for the card. The second digit describes the level of authorization processing required to validate the card. For this Recommendation, this value is only interpreted for card systems using fully automated validation (see Recommendation E.113). The third digit describes the types of services allowable by the card holder.

TABLE A.1/E.118

#### Permissible interchange values – Position 1

Values	Telecommunication usage
0	not used
1	international use is permitted
2	not used
3	not used
4	not used
5	restricted to use on national networks only
6	not used
7	restricted for use only on the card issuer's network
8	not used
9	usable for test purposes only

TABLE A.2/E.118

#### Level of authorization – Position 2

Values	Telecommunication usage
0	no specific authorization defined
1	not used
2	positive authorization is required when used in a full validation environment
3	not used
4	positive authorization is required when used in a full validation environment but special backup arrangements are defined in the service agreement
5	not used
6	not used
7	not used
8	not used
9	not used

TABLE A.3/E.118

**Service availability – Position 3**

Values	Telecommunication usage
0	card not restricted to telecommunication services; PIN required
1	card not restricted to telecommunication services
2	can be used to charge telecommunications service only
3	not used within the scope of Recommendation E.116
4	not used within the scope of Recommendation E.116
5	can be used to charge telecommunication services only; PIN required
6	not used
7	not used
8	not used
9	not used

**Annex B****Alphabetical list of abbreviations used in this Recommendation**

(This annex forms an integral part of this Recommendation)

- IC Integrated Circuit
- IIN Issuer Identifier Number
- MII Major Industry Identifier

**References**

- [1] ISO/IEC 7812:(1993), *Identification cards – Numbering system and registration procedure for issuer identifiers.*
- [2] CCITT Recommendation E.164 (1991), *Numbering Plan for the ISDN era.*