

Identification card systems — Surface transport applications —

Part 1: General data elements

ICS 35.240.15

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



Document Sharing Hub

National foreword

This Draft for Development is the English language version of ENV 1545-1:1998.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature due to the limited duration of the European prestandard. It should be applied on this provisional basis, so that information and experience of its practical application may be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion into a European Standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its three-year life. The commencement of the review period will be notified by an announcement in *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it. Comments should be sent in writing to the Secretary of BSI Technical Committee IST/17, Identification cards and related devices, at 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

The UK did not participate in this prestandard due to lack of technical expertise in this area.

A list of organizations represented on this committee can be obtained on request to its secretary.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ENV title page, pages 2 to 21 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date	Comments

This Draft for Development, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Committee and comes into effect on 15 November 1998

© BSI 06-1999

ISBN 0 580 30519 8

Contents

	Page
National foreword	Inside front cover
Foreword	2
Text of ENV 1545-1	3

English version

Identification card systems — Surface transport applications — Part 1: General data elements

This European Prestandard (ENV) was approved by CEN on 19 April 1998 as a prospective standard for provisional application.

The period of validity of this ENV is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard.

CEN members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

This European Prestandard has been prepared by Technical Committee CEN/TC 224 “Machine-readable cards, related device interfaces and operations”, the secretariat of which is held by AFNOR.

This European Pre-Standard comprises the following parts, under the general title “Identification card systems — Surface transport applications”:

- Part 1: General data elements;
- Part 2: Transport payment related data elements;
- Part 3: Tachograph related data elements;
- Part 4: Driving licence related data elements;
- Part 5: Freight related data elements;
- Part 6: Vehicle licence related data elements.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to announce this European Prestandard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Contents

	Page
Foreword	2
Introduction	3
1 Scope	3
2 Normative references	3
3 Definitions	4
3.1 account	4
3.2 authenticator	4
3.3 holder	4
3.4 application	4
4 Abbreviations	4
5 Approach for definition of data types	5
5.1 Data types	5
5.2 ASN.1 type naming conventions	5
5.3 Existing standards	5
5.4 Value range identifiers	5
6 Data type definitions	5
6.1 Authenticator	5
6.2 BCDStringType	5
6.3 CapacityUnit	6
6.4 Company	6

	Page
6.5 CountryNumeric	6
6.6 CountryAlpha	7
6.7 DateCompact	8
6.8 Datef	8
6.9 Environment	8
6.10 Holder	9
6.11 HolderBirth	9
6.12 HolderName	10
6.13 HolderProfile	10
6.14 Iai	10
6.15 InstancePointer	10
6.16 Lengthdm	10
6.17 Lengthmm	10
6.18 LocationReference	11
6.19 LoyaltyPoints	11
6.20 NetworkId	11
6.21 Pointer	11
6.22 PointerData	11
6.23 PointerQualifier	12
6.24 Ptag	12
6.25 Seriousness	12
6.26 Status	12
6.27 TimeCompact	13
6.28 TimeReal	13
6.29 VersionNumber	13
7 Encoding rules	13
7.1 Basic encoding rules (BER)	13
7.2 Alternative encoding rules	13
7.3 Value and size range definitions	13
8 Transport General module definition	14
Annex A (normative) Assignment of Object Identifiers	18
Annex B (informative) Bibliography	19
Annex C (informative) Types Universal ASN.1	21

Introduction

Magnetic stripe cards and bar coded cards are used in a variety of transport applications, while IC cards offer far greater opportunities for use across multiple transport applications. The standardisation of data elements will permit the usage of transport cards across multiple applications and operators, as well as in a variety of different transport related terminals. The standard will also permit application builders to minimise data duplication.

This European Pre-Standard contains definitions of data formats, data elements, and data structures for use in the creation of surface transport related data sets which may or may not reside on a transport card. Abstract Syntax Notation One (ASN.1) has been used in the definition of data types in this Pre-Standard. The ASN.1 basic encoding rules (BER) includes significant redundancy in order to make transferred data fully self defining, which may result in data sets too large for identification cards with restricted data storage capacity. Therefore this Pre-Standard allows the use of alternative encoding rules such as the ones based upon the ASN.1 packed encoding rules (PER).

This European Pre-Standard does not pretend to identify and specify every possible ASN.1 type that may be used in future applications by application builders. In addition, local systems may be defined in their own way. This European Pre-Standard will be updated and added over time as new surface transport applications are created in the normal CEN practice.

1 Scope

This European Pre-Standard specifies data formats, data elements, and data structures for general use within surface transport applications (STAs) using identification cards. The abstract syntax notation (ASN.1) has been used in the definition of data types (i.e. ASN.1 types) in this Pre-Standard.

This European Pre-Standard refers to existing ASN.1 encoding rules (transfer syntaxes), such as the basic and packed encoding rules, for use within STAs. However this Pre-Standard does not exclude the use of other encoding rules. The mechanism for how to establish the application context, including the decision of which encoding rules to use, is outside the scope of this Pre-Standard.

2 Normative references

This European Pre-Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Pre-Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*. (ISO 3166-1:1997)

EN ISO 6346, *Freight containers — Coding, identification and marking*. (ISO 6346:1995)

EN ISO/IEC 7812-1, *Identification cards — Identification of issuers — Part 1: Numbering system*. (ISO/IEC 7812-1:1995)

EN 27816-1, *Identification cards — Integrated circuit(s) cards with contacts — Part 1: Physical characteristics*. (ISO 7816-1:1987)

EN ISO/IEC 7816-4, *Information technology — Identification cards — Integrated circuit(s) cards with contacts — Part 4: Inter-industry command for interchange*. (ISO/IEC 7816-4:1995)

EN ISO/IEC 7816-5, *Identification cards — Integrated circuit(s) cards with contacts — Part 5: Numbering system and registration procedure for application identifiers*. (ISO/IEC 7816-5:1994)

EN ISO/IEC 7816-6, *Identification cards — Integrated circuit(s) cards with contacts — Part 6: Interindustry data elements*. (ISO/IEC 7816-6:1996)

ISO/IEC 8824-1:1995, *Information technology — Abstract Syntax Notation One (ASN.1): Specification of basic notation*.

ISO/IEC 8825-1:1995, *Information technology — ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)*.

ISO/IEC 8825-2:1996, *Information technology — ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)*.

ISO 3779:1983, *Road vehicles — Vehicle identification number (VIN) — Content and structure*.

ISO 7372:1993, *Trade data interchange — Trade data elements directory (Endorsement of UNECE/TDED, volume 1)*.

ISO 8859-1:1987, *Information technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1*.

3 Definitions

For the purposes of this European Pre-Standard, the following definitions apply.

3.1

account

an account held in a central location, used for payment for services. When payment is made through the use of a card, the card identifies the centrally held account

NOTE Account details such as current balance, transaction records etc. are generally held in a central location such as a bank.

3.2

authenticator

data appended to, or a cryptographic transformation of a data unit that allows a recipient to prove the integrity of the data unit and/or the authenticity of its source. Typical implementations are Message Authentication Codes (MACs) or digital signatures

3.3

holder

the person or organisation which is recognised as being the authorised user of the application

3.4

application

a set of mechanisms related to features such as security, files, data and protocols which is located and used in the IC card and/or outside of the IC card (external application)

4 Abbreviations

For the purposes of this Pre-Standard, the following abbreviations apply.

AID	Application Identifier [EN ISO/IEC 7816-5]
ASN.1	Abstract Syntax Notation One [ISO/IEC 8824]
BCD	Binary Coded Decimal
BER	Basic Encoding Rules [ISO/IEC 8825]
EAN	European Article Numbering
EC	European Commission
GDF	Geographical Data File
GSM	Global System for Mobile Communication
ICC	Integrated Circuit Card [EN 27816-1]
IFD	Interface device
MII	Major Industry Identifier [EN ISO/IEC 7812-1]
MF	Master File [EN ISO/IEC 7816-4]
NOTOK	Not OK
PER	Packed Encoding Rules [ISO/IEC 8825-2]
STA	Surface Transport Application
VIN	Vehicle Identification Number [ISO 3779:1983]