



# SLOVENSKI STANDARD

## SIST EN 1332-4:2004

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### Identification card systems - Man-machine interface - Part 4: Coding of user requirements for people with special needs

Identification card systems - Man-machine interface - Part 4: Coding of user requirements for people with special needs

Identifikationskartensysteme - Mensch-Maschine-Schnittstelle - Teil 4: Codierung von Benutzeranforderungen für Personen mit besonderem Bedarf

Systemes de cartes d'identification - Interface homme-machine - Partie 4: Codage des prescriptions utilisateur pour les personnes ayant des besoins spécifiques

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#### **ICS:**

35.040	Nabori znakov in kodiranje informacij	Character sets and information coding
35.240.15	Identifikacijske kartice in sorodne naprave	Identification cards and related devices

**SIST EN 1332-4:2004**

**en**

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EUROPEAN STANDARD  
 NORME EUROPÉENNE  
 EUROPÄISCHE NORM

**EN 1332-4**

July 1999

ICS 35.040; 35.240.15

English version

## Identification card systems - Man-machine interface - Part 4: Coding of user requirements for people with special needs

Systèmes de cartes d'identification - Interface homme-  
 machine - Partie 4: Codage des prescriptions utilisateur  
 pour les personnes ayant des besoins spécifiques

Identifikationskartensysteme - Mensch-Maschine-  
 Schnittstelle - Teil 4: Codierung von  
 Benutzeranforderungen für Personen mit besonderem  
 Bedarf

This European Standard was approved by CEN on 27 May 1999.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

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.

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## Foreword

This European Standard 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 Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2000, and conflicting national standards shall be withdrawn at the latest by January 2000.

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

This European Standard is one of a series of standards, under the general title "*Identification card systems - Man-machine interface*" and the different parts are the following :

- *Part 1 : Design principles for the user interface*
- *Part 2 : Dimensions and location of a tactile identifier for ID-1 cards*
- *Part 3 : Key-pads*
- *Part 4 : Coding of user requirements for people with special needs*

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## Introduction

Machine readable cards facilitate the provision of a growing variety of services across Europe. The purpose of EN 1332 is to increase the accessibility of these services for the benefit of consumers. This will be achieved by facilitating the inter-sector and cross-border interpretability of machine readable cards and to do so with the maximum possible degree of user-friendliness.

EN 1332 addresses the needs of all users, including people with special needs, for example the aged, minors, the disabled, the visually impaired, those with learning difficulties, first time users, those not conversant with the local language.

EN 1332 specifies :

- a) the design principles for the user interface (including symbols) to be incorporated into design of card operated equipment, but not the machine operations associated with the selection and delivery of goods or services ;
- b) a tactile identifier to be incorporated into the design of machine readable cards ;
- c) a standard layout for the keypads of card operated equipment ;
- d) coding of user requirements for people with special needs.

The contents of EN 1332 are generically based, not sector specific, and cover card operated equipment. It is recognised that the equipment can also be operated by other means, such as the insertion of notes and coins, but the scope of this standard has been, as indicated, narrowly defined.

The objective of establishing a standard on the coding of user requirements for people with special needs is to enable cardholders, in particular elderly and disabled people, to make better use of cardholder operated equipment accepting integrated circuit(s) cards (e.g. cash dispenser, ticket machine, vending machine), which is becoming more and more widespread in Europe. This also enables service providers to ensure that their equipment, and the services provided, can be made responsive to individual cardholder requirements.

## 1 Scope

This European Standard defines the data elements to be stored within an integrated circuit(s) card and exchanged in order to enable integrated circuit(s) card accepting terminals to identify specific user interface preferences. The preference information may be used by terminals to configure appropriate methods of communicating with the user during a transaction process.

The European Standard also specifies a mechanism for the retrieval of the user preference information from an integrated circuit(s) card and for the combination of data elements to form particular user profiles, through the assignment of unique tags.

Formats and detailed definitions of single data elements are specified, however, the exact method of storage of data within the integrated circuit(s) card is outside the scope of this European Standard.

This European Standard is applicable to the scenario where the cardholder operates the card accepting equipment (e.g. a cash dispenser, ticket machine, vending machine) and to integrated circuit(s) cards conforming to ISO/IEC 7816 and personalised to the individual cardholder.

## 2 Normative references

This European 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 Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

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EN ISO/IEC 7816-4, *Information technology - Identification cards - Integrated circuit(s) cards with contacts - Part 4 : Interindustry commands for interchange* (ISO/IEC 7816-4:1995)

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

ISO 639, *Code for the representation of names of languages*.

ISO/IEC 8825, *Information technology - Open Systems Interconnection - Specification for Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*.

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

## 3 Terms and definitions

For the purposes of this standard, the following definitions apply.

### 3.1

#### **composite data element**

a data element made up of a concatenation of data elements

### 3.2

#### **data element**

see EN ISO/IEC 7816-4

### 3.3

#### **data object**

see EN ISO/IEC 7816-4

### 3.4

#### **primitive/constructed data objects**

see ISO/IEC 8825

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**3.5**  
**tag**  
see EN ISO/IEC 7816-6

**3.6**  
**template**  
see EN ISO/IEC 7816-6

## 4 Abbreviations

ASN.1	Abstract Syntax Notation One.
b8.b1	Bits one to eight of a byte (lsb).
ls	Least significant byte.
ms	Most significant byte.
PIN	Personal Identification Number.
TLV	Tag, length, value.

## 5 User interface data elements

### 5.1 General remarks

For each data element, the following descriptors may be present :

- purpose (a short description of the use of the given data element) ;
- format (giving the size of the data element and possibly a symbolic format used to describe the content) ;
- content (the exact definition for the coding of the data element) ;
- remarks (other information).

Absence of a data object in the card indicates that no special requirements apply in the area concerned.

It is essential that information is only stored on a card with the consent of the user.

The interface device should not retain the data elements stored on the card.

### 5.2 Principles

The following principles apply to the identification of user preference data elements within this standard :

- a data element is generally presented in the value field of a data object ;
- a data object is the concatenation of the following string of bytes :
  - a mandatory tag field, referred to as a tag,
  - a mandatory length field indicating the number of bytes of the value field,
  - a conditional value field of L bytes (when 'L' is not equal to '00').



### 5.3 Data object structure

The following data object structures are supported :

- primitive data object

T	L	V
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where T = Tag, L = Length, V = Value

- constructed data object

T	L	T <sub>1</sub>	L <sub>1</sub>	V <sub>1</sub>	T <sub>2</sub>	L <sub>2</sub>	V <sub>2</sub>	...	T <sub>n</sub>	L <sub>n</sub>	V <sub>n</sub>
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T = Tag of constructed data object.

L = Length of the string (template) T<sub>1</sub> to V<sub>n</sub>.

T<sub>1</sub> = Tag of a data object.

L<sub>1</sub> = Length of V<sub>1</sub>.

V<sub>1</sub> = Value.

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#### 5.3.1 Structure of the tag

The tag consists of one or two bytes. The coding of these bytes shall be consistent with the basic encoding rules of ASN.1 as defined in ISO/IEC 8825. Table 1 defines the first byte.

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**Table 1 - Structure of the first byte of the tag**

b8	b7	b6	b5	b4	b3	b2	b1	Meaning
0	0	-	-	-	-	-	-	Not defined in this standard
0	1	-	-	-	-	-	-	Defined in this standard Application class, unambiguous identification
1	0	-	-	-	-	-	-	Defined in this document and only to be used within a template
1	1	-	-	-	-	-	-	Not defined in this document. Reserved for private use
-	-	0	-	-	-	-	-	Primitive data object
-	-	1	-	-	-	-	-	Constructed data object
-	-	-	1	1	1	1	1	Tag number contained in the next byte - range 31..127
-	-	-	x	x	x	x	x	Tag number - range 0 - 30 Not all equal to 1

The coding of the second byte of the tag, when present, is :

b8 = 0

b7 to b1 = binary value of the tag number in the range 31..127.