ICS 35.240.15 SLOVENSKÁ TECHNICKÁ NORMA September 2015

| STN | **Systémy s identifikačnými kartami. Aplikácie pre povrchovú dopravu. Časť 2: Dátové prvky a zoznamy kódov súvisiace s dopravnými a cestovnými platbami.** | **STN EN 1545-2**<br><br>36 9738 |
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Identification card systems - Surface transport applications - Part 2: Transport and travel payment related data elements and code lists

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

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Supersedes EN 1545-2:2005

English Version

# Identification card systems - Surface transport applications - Part 2: Transport and travel payment related data elements and code lists

Systèmes de cartes d'identification - Applications pour le transport terrestre - Partie 2: Éléments de données et listes de codes relatifs au transport et au paiement des voyages

Identifikationskartensysteme - Landgebundene Transportanwendungen - Teil 2: Datenelemente und Codelisten für Zahlungsvorgänge in Transport- und Reiseanwendungen

This European Standard was approved by CEN on 27 September 2014.

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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

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# Foreword

This document (EN 1545-2:2015) has been prepared by Technical Committee CEN/TC 224 “Personal identification, electronic signature and cards and their related systems 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 October 2015 and conflicting national standards shall be withdrawn at the latest by October 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1545-2:2005.

This European Standard comprises the following parts, under the general title "*Identification card systems - Surface transport applications*":

General part:

*Part 1: Elementary data types, general code lists and general data elements*.

Sector specific part:

*Part 2: Transport and travel payment related data elements and codes*.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

# Introduction

ICs offer far greater opportunities for use in surface transport applications (STA) when compared to magnetic stripe and barcoded cards. The standardisation of data elements, which is the purpose of this European Standard, facilitates the use of ICs across multiple transport applications and operators, and in a variety of transport related terminals. This European Standard also permits application builders to minimise data duplication.

This European Standard contains definitions of data formats, data elements and specifies data elements with associated codelists related to transport and travel payment. It is for use in the creation of surface transport related data structures that may reside on a transport application. Abstract Syntax Notation One (ASN.1) has been used in the definition of data types in this European Standard.

This European Standard provides a comprehensive toolbox of data elements and types as the basis for the creation of data structures to be used in STAs. This European Standard alone does not ensure interoperability; this is left to the application builders. The definition of data structures to be used in STAs is left to applications.

This European Standard has a hierarchical approach:

1. basis for all definitions used in this European Standard is ASN.1 (ISO/IEC 8824);

2. EN 1545-1 standardises its general elements, data types and data elements with associated code lists in accordance with ASN.1;

3. The sectoral parts of this European Standard (EN 1545-2) define the sector specific elements and codes. Apart from the sector specific codes that are directly based on ASN.1 all definitions of sector specific data elements have to be based on EN 1545-1 definitions;

4. It is left to the applications to define the relevant data structures (data objects) strictly based on the definitions of EN 1545:

4. Any transport application
    data structures (sets)
        sector specific data elements from EN 1545-sectoral
        sector specific codes from EN 1545-sectoral
    general data elements from EN 1545-1
        elementary data types from EN 1545-1
        general data elements with code lists from EN 1545-1
3. EN 1545-sectoral
    sector specific data elements
        general data elements from EN 1545-1
    elementary data types from EN 1545-1
    sector specific code lists
        codes expressed in ASN.1
2. EN 1545-1
    general data elements
        elementary data types from EN 1545-1

universal ASN.1 types from ISO/IEC 8824

general data elements with associated code lists

codes expressed in ASN.1

elementary data types

universal ASN.1 types from ISO 8824

1. ISO/IEC 8824

universal ASN.1 data types

This European Standard refers to existing ASN.1 encoding rules (transfer syntaxes), such as the basic and packed encoding rules, for use within surface transport applications. However this European Standard does not exclude the use of other encoding rules. The abstract syntax notation (ASN.1) has been used in the definition of data types (i.e. ASN.1 types) in this European 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 structures too large to be used in applications on ICs with restricted data storage capacity. Therefore this European Standard allows the use of alternative encoding rules such as the ones based upon the ASN.1 packed encoding rules (PER) (see Clause 9).

This European 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 Standard will be updated and added to over time as new surface transport applications are created in the normal CEN practice.

## 1 Scope

This European Standard specifies data formats, data elements and data elements with associated code lists for use within Surface Transport Applications on ICs. This European Standard defines those data elements and code lists related to transport and travel payment and the specific data elements needed for low memory capacity ICs.

The mechanism for how to establish the application context, including the decision of which encoding rules to use, is outside the scope of this European Standard.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1545-1:2015, *Identification card systems - Surface transport applications - Part 1: Elementary data types, general code lists and general data elements*

ISO 4217, *Codes for the representation of currencies*