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

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EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA **NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 1545-1:2005 sisaldab Euroopa standardi EN 1545-1: 2005 ingliskeelset teksti. Käesolev dokument on jõustatud 25.11.2005 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 1545-1:2005 consists of the English text of the European standard EN 1545-1: 2005. This document is endorsed on 25.11.2005 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This European Standard specifies data formats, data elements, data types and data elements with associated codelists for general use within surface transport applications (STAs) on ICs.	**Scope:** This European Standard specifies data formats, data elements, data types and data elements with associated codelists for general use within surface transport applications (STAs) on ICs.

ICS 35.240.15

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

Système de cartes d'identification - Applications pour le transport terrestre - Partie 1: Types de données élémentaires, codes généraux et éléments de données généraux

Identifikationskartensysteme - Landgebundene Transportanwendunden - Teil 1: Datentypen, Codelisten und generelle Datenelemente

This European Standard was approved by CEN on 19 May 2005.

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents

Page

1 Scope 10
2 Normative references 11
3 Terms and definitions 11
4 Abbreviations 13
5 Approach for definition of data types and data elements 13
5.1 Data types and data elements 13
5.2 ASN.1 type naming conventions 14
5.3 Existing standards 14
5.4 Value range identifiers 14
5.5 Size constraints 14
6 Elementary data types 14
6.1 Address 14
6.2 Amount 14
6.3 ApplicationInstanceNumber 15
6.4 Authenticator 15
6.5 BCDStringType 15
6.6 BitMap 15
6.7 Capacity 16
6.8 CompanyId 16
6.9 Counter 16
6.10 CountryAlpha 16
6.11 CountryNumeric 16
6.12 Currency 16
6.13 Databin 16
6.14 DateCompact 16
6.15 Datef 17
6.16 DateStamp 17
6.17 DateTimeCompact 17
6.18 DateTimeStamp 17
6.19 DayOfWeek 18
6.20 Duration 18
6.21 Flag 18
6.22 HalfDayOfWeek 18
6.23 HalfDayType 19
6.24 IAI 20
6.25 IIN 20
6.26 InstancePointer 20
6.27 INT1 20
6.28 INT2 20
6.29 INT3 21
6.30 INT4 21
6.31 INTM 21
6.32 INTP 21
6.33 INTS 21
6.34 LanguageAlpha 21
6.35 LanguageId 21
6.36 Length 21
6.37 MappingType 22
6.38 MeasuredParameters 22

6.39 Name 22
6.40 NetworkAccess 23
6.41 NetworkId 24
6.42 NetworkSpecificCompanyId 24
6.43 Number 24
6.44 NumberUnit 24
6.45 ObjectIdentifier 24
6.46 Payment 24
6.47 PayUnitMap 24
6.48 Percentage-0 25
6.49 Percentage-1 25
6.50 Percentage-2 25
6.51 PeriodOfDay 25
6.52 Permission 26
6.53 PointerValue 26
6.54 PTag 26
6.55 Quantity 26
6.56 ReferenceIdentifier 26
6.57 ReferenceNumber 26
6.58 Restriction 26
6.59 SequenceNumber 26
6.60 ShortName 27
6.61 SignedAmount 27
6.62 SignedInteger1 27
6.63 SignedInteger2 27
6.64 SignedInteger3 27
6.65 Speed 27
6.66 TimeCompact 27
6.67 TimeMeasure 28
6.68 TimeReal 28
6.69 TimeStamp 28
6.70 VehicleNumber 28
6.71 VersionNumber 28
6.72 Weight 28

7 Data elements with associated code lists 29
7.1 CapacityUnit 29
7.2 CommercialTransportProductCode 29
7.3 ConditionCode 30
7.4 DayOfValidityCode 31
7.5 DestinationOrOriginCode 31
7.6 DeviceTypeCode 31
7.7 DirectionCode 31
7.8 EntitlementTypeCode 32
7.9 EventTypeCode 32
7.10 GenderCode 33
7.11 HotListStatusCode 33
7.12 LanguageCode 34
7.13 LegislationCode 38
7.14 LengthUnit 38
7.15 LocationQualifierCode 38
7.16 LocationTypeCode 38
7.17 PersonalisationBiometricCode 39
7.18 PersonalisationTypeCode 39
7.19 PointerQualifierCode 39
7.20 PreferenceTypeCode 40
7.21 ProfileCodeIOP 40
7.22 ProfileCodeNetwork 41
7.23 ReferenceTypeCode 41
7.24 RestrictTimeCode 41

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7.25 ResultCode 42
7.26 RevocationDetailsCode 42
7.27 RoundingCode 42
7.28 SecurityServicesCode 43
7.29 SeriousnessCode 43
7.30 SpeedUnit 43
7.31 StatusCode 43
7.32 TimeUnit 44
7.33 TransactionModeCode 44
7.34 TransportTypeCode 44
7.35 UserActionCode 45
7.36 WeightUnit 46

8 General data elements 46
8.1 AccountingId 46
8.2 ActionListSequenceNumber 46
8.3 AlgorithmId 46
8.4 ApplicationId 46
8.5 ApplicationOwner 46
8.6 BirthDate 47
8.7 BirthName 47
8.8 BirthPlace 47
8.9 CollectionAndForwardingOperator 47
8.10 CompanyName 47
8.11 ContractDependencyPointer 47
8.12 ContractTypesAllowed 47
8.13 CustomerContractProvider 48
8.14 CustomerNumber 48
8.15 Date 48
8.16 DateTime 48
8.17 DateTimeBand 48
8.18 DeductionPercentage 48
8.19 DelayCounter 48
8.20 DeviceId 48
8.21 DisplayMessageNumber 49
8.22 EmailAddress 49
8.23 EndDate 49
8.24 EndDatePeriod 49
8.25 EndDatePeriodStamp 49
8.26 EndDateStamp 49
8.27 EndTime 49
8.28 EndTimeStamp 50
8.29 EntryPointer 50
8.30 EventClassification 50
8.31 EventDateStamp 50
8.32 EventDisplayMessageId 50
8.33 EventPointer 50
8.34 FacilityProvider 51
8.35 FarthestPlace 51
8.36 Fax 51
8.37 Forename 51
8.38 HangoverPeriod 51
8.39 HolderAddress 51
8.40 HolderCompany 51
8.41 HolderId 52
8.42 HolderProfiles 52
8.43 IdentityDocumentId 52
8.44 IssueDateStamp 52
8.45 KeyVersionNumber 52
8.46 LastMinuteSale 52

This document is a preview generated by EVS

8.47 LevelIndicator 52
8.48 LocationId 53
8.49 LocationIdentifier 53
8.50 LockTime 53
8.51 MaxAbnormalEvents 53
8.52 MostRecentPointer 53
8.53 NotOKCounter 53
8.54 NumberOfContracts 54
8.55 NumberOfEntries 54
8.56 NumberOfTimePeriods 54
8.57 PermitPeriodOfDay 54
8.58 PostCodeId 54
8.59 Priority 54
8.60 ProductOwner 54
8.61 ProductRetailer 55
8.62 ProductStatus 55
8.63 ReceiptData 55
8.64 ReceiptPoint 55
8.65 ReservationId 55
8.66 RestrictedDayOfWeek 55
8.67 RestrictedHalfDayOfWeek 56
8.68 RestrictedLocation 56
8.69 RestrictedPeriodOfDay 56
8.70 RestrictionEnd 56
8.71 RestrictionEndDate 56
8.72 RestrictionStart 56
8.73 SalesPoint 56
8.74 SecondaryFlag 57
8.75 SectionNumber 57
8.76 SecurityVersion 57
8.77 SerialNumber 57
8.78 ServiceOperator 57
8.79 StartDate 58
8.80 StartDatePeriod 58
8.81 StartDatePeriodStamp 58
8.82 StartDateStamp 58
8.83 StartTime 58
8.84 StartTimeStamp 58
8.85 StructureReferenceNumber 58
8.86 Surname 59
8.87 Telephone 59
8.88 TestFlag 59
8.89 Time 59
8.90 TransactionOperator 59
8.91 TransactionSequenceNumber 60
8.92 UnblockInstanceNumber 60
8.93 UserData 60
8.94 ValidationCounter 60
8.95 ValidationStatus 60
8.96 ValidDayOfExpiry 60
8.97 ValidDayOfIssue 61
8.98 ValidityCheckFlag 61
8.99 ValidityDuration 61
8.100 VehicleId 61
8.101 VersionNumberFor1545 61

9 Encoding rules 62
9.1 General 62
9.2 Basic encoding rules (BER) 62
9.3 Alternative encoding rules 62

This document is a preview generated by EVS

9.3.1 General 62
9.3.2 Packed encoding rules 62
9.3.3 Other encoding rules 62
9.4 Value and size range definitions 62
10 Backwards compatibility 63
11 Transport general module definition 63
Annex A (normative) Assignment of object identifiers 81
Annex B (normative) Tags 82
Annex D (informative) Index 90

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Foreword

This European Standard (EN 1545-1:2005) 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 April 2006, and conflicting national standards shall be withdrawn at the latest by April 2006.

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 codelists.

This document supersedes EN 1545-1:1998.

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

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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, data types and specifies data elements with associated codelists. 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. 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 applications to define the relevant data structures (data objects) strictly based on the definitions of EN 1545

4. Any transport application
    - data structures (objects)
        - 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 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 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).

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

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 accordance with the normal CEN practice.

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1 Scope

This European Standard specifies data formats, data elements, data types and data elements with associated codelists for general use within surface transport applications (STAs) on 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.

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2 Normative references

The following referenced documents are indispensable for the application of this European Standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1332-4, *Identification card systems - Man-machine interface - Part 4: Coding of user requirements for people with special needs*

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

ISO 639-2, *Codes for the representation of names of languages – Part 2: Alpha-3 code*

ISO 7372, *Trade data interchange -- Trade data elements directory*

ISO 4217, *Codes for the representation of currencies and funds*

ISO/IEC 5218, *Information technology-- Codes for the representation of human sexes*

ISO/IEC 7812-1:2000, *Identification cards – Identification of issuers – Part 1: Numbering system*

ISO/IEC 7816-5:2004, *Identification cards – Integrated circuit cards – Part 5: Registration of application providers*

ISO/IEC 7816-6:2004, *Identification cards – Integrated circuit cards – Part 6: Inter-industry data elements for interchange*

ISO 8824-1/IEC:2002, *Information technology – Abstract Syntax Notation One (ASN.1) : Specification of basic notation*

ISO/IEC 8825-1:2002, *Information technology – ASN.1 encoding rules : Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER)*

ISO 8825-2/IEC:2002, *Information technology – ASN.1 encoding rules : Specification of Packed Encoding Rules (PER)*

ISO/TS 14816, *Road transport and traffic telematics -- Automatic vehicle and equipment identification -- Numbering and data structure*

3 Terms and definitions

For the purposes of this European Standard, the following terms and definitions apply.

3.1
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

3.2
application