SLOVENSKI STANDARD
SIST EN ISO 17262:2012

01-november-2012

Nadomešča:
SIST-TS CEN ISO/TS 17262:2003

Inteligentni transportni sistemi - Avtomatična identifikacija vozil in opreme - Strukture oštevilčenja in podatkov (ISO 17262:2012)

Intelligent transport systems - Automatic vehicle and equipment identification - Numbering and data structures (ISO 17262:2012)

Automatische Identifizierung für Fahrzeug und Ausrüstungen - Intermodaler Gütertransport - Nummerierung und Datenstruktur (ISO 17262:2012)

Systèmes intelligents de transport - Identification automatique des véhicules et des équipements - Numérotation et structures des données (ISO 17262:2012)

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ICS:

03.220.20	Cestni transport	Road transport
35.240.60	Uporabniške rešitve IT v transportu in trgovini	IT applications in transport and trade

SIST EN ISO 17262:2012 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 17262

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ICS 35.240.60; 03.220.20

Supersedes CEN ISO/TS 17262:2003

English Version

Intelligent transport systems - Automatic vehicle and equipment identification - Numbering and data structures (ISO 17262:2012)

Systèmes intelligents de transport - Identification automatique des véhicules et des équipements - Numérotation et structures des données (ISO 17262:2012)

Intelligente Transportsysteme - Automatische Fahrzeug- und Ausstattungsidentifizierung - Nummerierung und Datenstruktur (ISO 17262:2012)

This European Standard was approved by CEN on 31 August 2012.

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Contents

Page

Foreword

This document (EN ISO 17262:2012) has been prepared by Technical Committee CEN/TC 278 “Road transport and traffic telematics”, the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 204 "Intelligent transport systems".

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of an identical text or by endorsement, at the latest by March 2013, and conflicting national standards shall be withdrawn at the latest by March 2013.

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Endorsement notice

The text of ISO 17262:2012 has been approved by CEN as a EN ISO 17262:2012 without any modification.

INTERNATIONAL STANDARD

ISO 17262

First edition
2012-09-01

Intelligent transport systems — Automatic vehicle and equipment identification — Numbering and data structures

Systèmes intelligents de transport — Identification automatique des véhicules et des équipements — Numérotation et structures des données

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Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 17262 was prepared by Technical Committee ISO/TC 204, *Intelligent transport systems*, in collaboration with Technical Committee CEN/TC 278, *Road transport and traffic telematics*.

This first edition of ISO 17262 cancels and replaces the first edition of ISO/TS 17262:2003, which has been technically revised.

Introduction

Within the context of Intelligent transport systems (ITS) (previously known as RTTT/TICS), intermodal goods transport AVI/AEI systems have the specific objective of achieving a unique or unambiguous positive identification of equipment, and to make that identification automatically. this International Standard defines data to achieve this particular objective.

This International Standard specifies data that enable future upward integration and expansion for intermodal goods transport AVI/AEI systems. The standard is thus designed to be flexible and enabling rather than prescriptive.

For the definition of data, “Abstract Syntax Notation One” (ASN.1) is applied. This usage provides maximum interoperability and conformance to existing Standards within the ITS sector.

Annex C can be consulted prior to the main body of this International Standard for an overview of ASN.1. ISO/IEC 8824, ISO/IEC 8825 and other publications on ASN.1 can also be consulted for further information.

Intelligent transport systems — Automatic vehicle and equipment identification — Numbering and data structures

1 Scope

This International Standard defines generic numbering and data structures for unambiguous identification of equipment used for Intermodal goods transport. These data are known as “Intermodal Goods Transport Numbering and Data Structures”.

This International Standard defines data independently of the data carrier. The modelling of data is based on Abstract Syntax Notation One (ASN.1) as defined in ISO/IEC 8824. This International Standard excludes any physical aspects such as interfaces, dimensions etc. Data that form part of transmission or storage protocols (headers, frame markers and checksums) are excluded.

Data defined in this International Standard require a system for control and distribution of number series independent of the different AVI/AEI systems. This is required in order to avoid ambiguity and to provide the necessary level of security where appropriate. For this reason the registration authority defined in ISO 14816 applies for this International Standard.

This International Standard enables the use of optimised encoding schemes such as ASN.1 Packed Encoding Rules (PER).

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 13044, *Swap bodies — Coding, identification and marking*

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

ISO/IEC 8824-2, *Information technology — Abstract Syntax Notation One (ASN.1): Information object specification*

ISO/IEC 8824-3, *Information technology — Abstract Syntax Notation One (ASN.1): Constraint specification*

ISO/IEC 8824-4, *Information technology — Abstract Syntax Notation One (ASN.1): Parameterization of ASN.1 specifications*

ISO 14816:2005, *Road traffic and transport telematics — Automatic vehicle and equipment identification — Numbering and data structure*

ISO 17621, *Intelligent transport systems — Automatic vehicle and equipment identification — Intermodal goods transport architecture and terminology*

ISO 26683-2, *Intelligent transport systems — Freight land conveyance content identification and communication — Part 2: Application interface profiles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17621 and the following apply.

3.1
AEI manager
component, which receives data from 'AEI Readers' and compares it with information in a data base at which point an ok or error message is generated and transferred to the message display component

3.2
reader
complete set of equipment even if it consists of more than one components required to interrogate, receive and interpret the data in the TAG in order to present the identification

3.3
AEI system
AEI application in a RTTT/TICS system either as a stand-alone system or as part of a RTTT/TICS application

3.4
component
type, class or any other work-product that has been specifically engineered to be reusable

EXAMPLE TAG, reader, AEI manager

3.5
conveyance
means of transport

3.6
intermodal transport
movement of goods in one and the same loading unit or vehicle that uses successively several modes of transport without handling of the goods themselves when changing modes

3.7
load unit
cargo transportation unit, which may be loaded on a transport means

NOTE Synonyms: package, container.

3.8
message display
receives data from AEI manager, and display the data on a variable message sign to the driver

3.9
terminal monitoring point
terminal access control point
point administered by the AEI manager where the monitoring of transport objects is performed

3.10
transport object
transport means, load unit or goods item

4 Symbols and abbreviated terms

AEI	Automatic Equipment Identification
ASN.1	Abstract Syntax Notation number One
DSRC	Dedicated Short Range Communication
ITS	Intelligent Transport System(s)
RTTT	Road Transport and Traffic Telematics (CEN/TC 278)

NOTE Legacy European name for ITS

TICS Transport Information and Control Systems (ISO/TC 204)

NOTE now known as ITS

5 Components of AVI/AEI for intermodal goods transport

5.1 Context

This International Standard provides interoperability, not only between simple AVI/AEI and more complex ITS/RTTT functions, but also with pre-existing standards such as container (ISO 10374). Specifications for protecting against changes, classifying and qualifying security aspects of the data are out of scope of this International Standard.

This International Standard relates to AVI/AEI units, but not to smaller containers and units being transported. For smaller units (pallet loads, trays, parcels etc.) please refer to ISO 26683 and JTC 1/SC31 standards, ISO 18000 series, etc.. However, CS10 defined herein, provides a means to provide land conveyance content data using such standards. The numbering structure defined in this International Standard is designed to enable combinations with the data definitions from ISO 18000 series. This combination is covered in ISO 17264.

This International Standard provides the capability to carry application data, associated with the identification, to be carried as part of the AVI/AEI message. Within this International Standard this is provided as a “black box” facility. The definition of the structure and contents of such messages are outside the scope of this International Standard (examples are shown in ISO 17264).

5.2 General

The components, which are involved in the AVI/AEI intermodal goods transport are the:

AEI manager;

reader;

message display;

transport object/TAG.

The overview of components are illustrated in Figure 1:

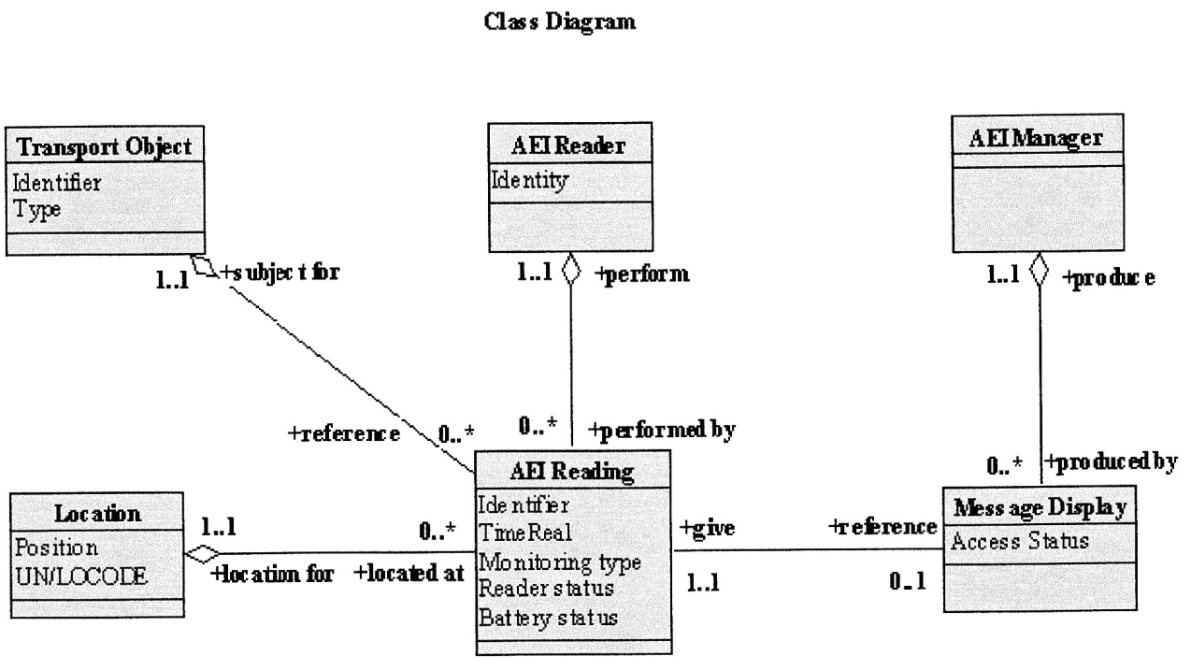

Figure 1 — Components of AVI/AEI for intermodal goods transport

One possible instance of data resided in different components defined in this International Standard is illustrated in Figure B.1. See Annex B for example.

6 Overview of data definitions

This clause contains an overview of the data content of ASN.1 types defined in this International Standard.

'Access Control Status'	'Terminal Monitoring Type'
— Access OK	—Entry
— Access denied	—Exit
—Access pending	—Loading
	—Unloading
'AEI Message Type'	—Stacking
— TimeReal	—Unstacking
— ReaderLocation	—Stuffing
— TerminalMonitoringType	—Stripping
— TransportObjectMessageType	—Registration
'Display Message Type'	'Transport Object Type'
— AccessControlStatus	—Goods item
— TransportObjectMessageType	—Package item
— MsgInfo	—Transport