SLOVENSKI STANDARD
SIST EN ISO 17261:2012

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Nadomešča:
SIST-TS CEN ISO/TS 17261:2006
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Inteligentni transportni sistemi - Avtomatična identifikacija vozil in opreme - Referenčna arhitektura intermodalnega prevoza blaga in terminologija (ISO 17261:2012)

Intelligent transport systems - Automatic vehicle and equipment identification - Intermodal goods transport architecture and terminology (ISO 17261:2012)

Intelligente Transportsysteme - Automatische Fahrzeug- und Ausstattungsidentifizierung - Intermodaler Gütertransport Architektur und Begriffsbestimmung (ISO 17261:2012)

Systèmes intelligents de transport - Identification automatique des véhicules et des équipements - Architecture et terminologie du transport intermodal des marchandises (ISO 17261:2012)

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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 17261:2012 **en**

EUROPEAN STANDARD

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EUROPÄISCHE NORM

EN ISO 17261

September 2012

ICS 35.240.60; 03.220.01

Supersedes CEN ISO/TS 17261:2005

English Version

Intelligent transport systems - Automatic vehicle and equipment identification - Intermodal goods transport architecture and terminology (ISO 17261:2012)

Systèmes intelligents de transport - Identification automatique des véhicules et des équipements - Architecture et terminologie du transport intermodal des marchandises (ISO 17261:2012)

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

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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Contents

Page

Foreword

This document (EN ISO 17261:2012) 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of an identical text or by endorsement, at the latest by March 2013, and conflicting national standards shall be withdrawn at the latest by March 2013.

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 CEN ISO/TS 17261:2005.

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Endorsement notice

The text of ISO 17261:2012 has been approved by CEN as a EN ISO 17261:2012 without any modification.

INTERNATIONAL STANDARD

ISO 17261

First edition
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Intelligent transport systems — Automatic vehicle and equipment identification — Intermodal goods transport architecture and terminology

Systèmes intelligents de transport — Identification automatique des véhicules et des équipements — Architecture et terminologie du transport intermodal des marchandises

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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 17261 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 17261 cancels and replaces the first edition of ISO/TS 17261:2005, including ISO/TS 17261:2005/Cor. 1:2005, which has been technically revised.

Introduction

This International Standard prescribes the overall parameters within which subsidiary International Standards are constructed. The architecture description defined in this International Standard is a consistent extension to ISO 14814 (AVI reference architectures and terminology).

ISO 14814 provides an architecture context for AVI/AEI for road transport. This International Standard extends this architecture context to include intermodal and multimodal movements.

This International Standard is part of a series of International Standards defining AVI/AEI in the Intelligent Transport Systems/Road Transport and Traffic Telematics (ITS/RTTT) environment. The following documents have been issued from ISO TC 204 to form a family of International Standards for the sector:

ISO 14814 AVI/AEI Reference architectures and terminology;

ISO 14816 AVI/AEI Numbering and data structures;

ISO 14815 AVI/AEI System specification;

ISO 17261 AVI/AEI Intermodal goods transport reference architectures and terminology;

ISO 17262 AVI/AEI Intermodal goods transport: Numbering and data structures;

ISO 17263 AVI/AEI Intermodal goods transport: System parameters;

ISO 17264 AVI/AEI Intermodal goods transport: Interface requirements;

An AVI/AEI interaction in an ITS/RTTT environment comprises an identification of On-Board Equipment (OBE) by a reader/interrogator and can transfer additional data.

The data component in an ITS/RTTT environment provides the basis for unambiguous identification of the OBE, and may also share a medium for a bi-directional interactive exchange of data between the host and OBE and to other equipment (such as smart cards etc.).

The principles of data presentation determined in ISO 17262 have been adopted to provide an interoperable architecture within an International Standard framework. The use of Abstract Syntax Notation One (ASN.1) PER is therefore an integral part of the data architecture determined in this International Standard.

The numbering and data structure are capable of operation both by read/write devices, and by read only devices where there is no requirement (and sometimes no possibility) to write to the OBE.

A key feature of the structure is to provide interoperability of data constructs.

Within the ITS/RTTT sector, applications can range from simple vehicle and equipment identification to complex international systems.

The reference architecture model and the data construct schemes described in this family of International Standards/Technical Specifications extend the approved AVI conceptual architecture to provide a comprehensive conceptual and logical system architecture to describe the relationships and functionality for a wide range of media so that the currency of the International Standard remains good for both existing and future technologies. This International Standard recognises that there are existing AVI/AEI applications and provides a means of supporting such data constructs within this International Standard.

In many cases it is necessary or desirable to use one air carrier frequency and protocol, but this is not always possible or even desirable in all situations.

In accordance with the resolutions of ISO TC 204 and CEN TC 278 the use of Abstract Syntax Notation One (ASN.1) from ISO 8824 as a data definition structure is adopted. Its usage provides maximum interoperability and conformance to existing ITS/RTTT and related International Standards and Technical Specifications.

Intelligent transport systems — Automatic vehicle and equipment identification — Intermodal goods transport architecture and terminology

1 Scope

This International Standard describes the conceptual and logical architecture for automatic vehicle and equipment identification (AVI/AEI) and supporting services in an intermodal/multimodal environment.

It presents a high level view of AEI intermodal and multimodal system architecture, and describes the key sub systems, their associated interfaces and interactions and how they fit into system wide functions such as management, security and information flow.

This International Standard identifies the context of intermodal/multimodal AEI within the overall AVI/AEI context and key external inter-dependencies and interfaces to the intermodal/multimodal sector IT infrastructure. These include interfaces to the external and internal users of the intermodal/multimodal system services and their associated IT systems, interfaces to intermodal/multimodal management systems, existing intermodal/multimodal networks and system operations, and specifically interfaces to item identification and the domain of JTC 1/SC 31, item logistics International Standards. As an architecture it is designed to be complementary and interlocking to that domain.

This International Standard is intended to be complementary and consistent with the work of ISO/TC 104, Freight containers.

It extends the conceptual and communication AVI architecture determined in ISO 14814 and is neither frequency nor air interface protocol specific. It provides maximum interoperability, has a high population capability, and provides the possibility of upwards migration to more capable systems.

It does not include the air interface nor any implementation aspect, only the reference architectures. Subsequent International Standards define data structures for general AVI/AEI and for specific sectors of application.

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.

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

ISO 14813-6, *Intelligent transport systems — Reference model architecture(s) for the ITS sector — Part 6: Data presentation in ASN.1*

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