SLOVENSKI STANDARD
SIST EN ISO 17419:2018

01-september-2018

Nadomešča:

SIST-TS CEN ISO/TS 17419:2014

Inteligentni transportni sistemi - Kooperativni sistemi - Globalna enotna identifikacija (ISO 17419:2018)

Intelligent transport systems - Cooperative systems - Globally unique identification (ISO 17419:2018)

Intelligente Verkehrssysteme - Kooperative ITS - Klassifikation und Steuerung von ITS Anwendungen im globalen Zusammenhang (ISO 17419:2018)

Systèmes intelligents de transport - Classification et gestion des applications de systèmes intelligents de transport dans un contexte global (ISO 17419:2018)

Ta slovenski standard je istoveten z: **EN ISO 17419:2018**

ICS:

03.220.20	Cestni transport	Road transport
35.240.60	Uporabniške rešitve IT v prometu	IT applications in transport

SIST EN ISO 17419:2018 en,fr,de

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 17419

June 2018

ICS 03.220.20; 35.240.60

Supersedes CEN ISO/TS 17419:2014

English Version

Intelligent transport systems - Cooperative systems - Globally unique identification (ISO 17419:2018)

Systèmes intelligents de transport - Systèmes coopératifs - Identification unique au niveau global (ISO 17419:2018)

Intelligente Verkehrssysteme - Kooperative ITS - Klassifikation und Steuerung von ITS Anwendungen im globalen Zusammenhang (ISO 17419:2018)

This European Standard was approved by CEN on 9 June 2018.

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EN ISO 17419:2018 (E)

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European foreword

This document (EN ISO 17419:2018) has been prepared by Technical Committee ISO/TC 204 "Intelligent transport systems" in collaboration with Technical Committee CEN/TC 278 "Intelligent transport systems" the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by December 2018, and conflicting national standards shall be withdrawn at the latest by December 2018.

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

This document supersedes CEN ISO/TS 17419:2014.

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Endorsement notice

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The text of ISO 17419:2018 has been approved by CEN as EN ISO 17419:2018 without any modification.

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INTERNATIONAL STANDARD

ISO
17419

First edition
2018-05

Intelligent transport systems — Cooperative systems — Globally unique identification

Systèmes intelligents de transport — Systèmes coopératifs — Identification unique au niveau global

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by ISO/TC 204, *Intelligent transport systems*.

This first edition cancels and replaces ISO/TS 17419:2014, which has been technically revised to become an International Standard.

ISO 17419:2018(E)

Introduction

Classification and management of ITS applications in a global context covers more than just the ITS applications themselves. It also covers elements of the environment in which ITS applications are instantiated.

Intelligent Transport Systems (ITS) provide ITS services to users by execution of ITS applications which typically requires communications between ITS station application processes residing in ITS station units (ITS-SU). Communications includes messages dedicated to ITS applications, and messages from ITS message sets.

Following the definition in TS 102 860[20], ITS applications and ITS application classes are referred to as ITS application objects. ITS application objects are uniquely identified by the registered "ITS Application Identifier" (ITS-AID) specified in this document.

NOTE 1   An ITS application class groups ITS applications together that provide the same type of service, e.g. "Electronic Fee Collection" (EFC), but operate in different contexts. Prior to start of service provisioning the applicable context is negotiated. The definition of ITS application classes is based on the concept of the DSRC Application entity as introduced in ISO 15628[7], which is identified by a DSRCApplicationEntityID; negotiation of the applicable context is performed by BST/VST exchange.

In ETSI TS 102 860[20], ITS message sets were referred to as ITS application objects. This definition is not adopted in this document due to the very different nature of ITS message sets and ITS application objects. ITS message sets are uniquely identified by the registered "ITS Message Set Identifier" (ITS-MsgSetID) specified in this document.

This document is an extension towards more general and global applicability of ETSI TS 102 860[20]. This document introduces the term "ITS-S object" as a general reference to ITS application objects, ITS message sets and other objects which may require globally unique identification and registration.

NOTE 2   Examples of other ITS-S objects are ITS-S communication protocols and ITS-S security protocols.

Management of ITS-S objects is specified in the ISO 24102 series (all parts)[9]–[12][14] and in ISO 17423[2]. This document focuses on some management aspects related to authorized and controlled operation of ITS-S objects, which requires considerations of ITS-S object identifiers, e.g. ITS-AID, ITS-MsgSetID, ITS-SUID, ITS-SCUID, addresses and protocol identifiers used in the communication protocol stack of an ITS-S, and others.

This document replaces ISO/TS 17419 without change of scope.

INTERNATIONAL STANDARD

ISO 17419:2018(E)

Intelligent transport systems — Cooperative systems — Globally unique identification

1 Scope

This document

— describes and specifies globally unique addresses and identifiers (ITS-S object identifiers) which are both internal and external to ITS stations and are used for ITS station management,

— describes how ITS-S object identifiers and related technical parameters are used for classification, registration and management of ITS applications and ITS application classes,

— describes how ITS-S object identifiers are used in the ITS communication protocol stack,

— introduces an organizational framework for registration and management of ITS-S objects,

— defines and specifies management procedures at a high functional level,

— is based on the architecture of an ITS station specified in ISO 21217:2014 as a Bounded Secured Managed Domain (BSMD),

— specifies an ASN.1 module for the identifiers, addresses, and registry records identified in this document, and

— specifies an ASN.1 module for a C-ITS Data Dictionary containing ASN.1 type definitions of general interest.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 8824-1:2015, *Information technology — Abstract Syntax Notation One (ASN.1): Specification of basic notation — Part 1*

ISO 21217:2014, *Intelligent transport systems — Communications access for land mobiles (CALM) — Architecture*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 21217:2014 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
authorization
prescription that a particular behaviour shall not be prevented

Note 1 to entry: Unlike a permission, an authorization is an empowerment.

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Note 2 to entry: From Reference [21].

3.2
ITS application
instantiation of an ITS service that involves an association of two or more complementary ITS-S application processes

[SOURCE: ISO 21217:2014, 3.9, modified — the Note 1 to entry is deleted]

3.3
ITS application class
ITS application designed for operation in different contexts involving real-time negotiation of the appropriate context

Note 1 to entry: The functional concepts of "application class" and "application context" were introduced in ISO 15628. ITS application class is used, e.g. in ISO 22418. An example of an application class can be found in ISO 14906.

3.4
ITS application identifier
globally unique, registered number identifying an ITS application object

3.5
ITS application object
ITS application or ITS application class

3.6
ITS message
message designed for an ITS-related purpose

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3.7
ITS message set
collection of one or more uniquely identified ITS messages

3.8
ITS message set identifier
globally unique, registered identifier of an ITS message set

3.9
ITS protocol stack identifier
globally unique, registered identifier of a non-parameterized communications protocol stack

3.10
ITS registration authority
entity authorized to register ITS-S object identifiers

3.11
ITS service
functionality provided to users of intelligent transport systems designed, e.g. to increase safety, sustainability, efficiency, and comfort

[SOURCE: ISO 21217:2014, 3.11.]

3.12
ITS trusted authority
entity authorized to issue ITS-S object security credentials

3.13
ITS-S application process
element in an ITS station that performs information processing for a particular application, and may use ITS-S services to transmit and receive information[SOURCE: ISO 21217:2014, 3.19, modified — "uses" replaced by "may use"].

3.14
ITS-S application process provisioner
functionality in an ITS-SU offering ITS-S application processes for download and installation to other ITS-SUs

3.15
ITS-S communication protocol
protocol used in a communication protocol stack of an ITS-S

3.16
ITS-S communication protocol stack
consistent set of ITS-S communication protocols enabling communications between an ITS-SCU and other nodes which may be identified by a registered globally unique reference number

Note 1 to entry: See ISO 17423[2].

3.17
ITS-SCU configuration management centre
entity that retains information about capabilities of ITS-SCUs, status of objects in ITS-SCUs, and supports management and update of this information

3.18
ITS-S object
entity used in ITS related to ITS-S management that may require a globally unique identifier

Note 1 to entry: Examples of ITS-S objects include ITS-SU, ITS-SCU, ITS application object, ITS message set, ITS-S communication protocol, ITS flow type.

3.19
ITS-S object identifier
identifier of an ITS-S object

3.20
ITS-S object owner
entity responsible for the specification (design), maintenance and registration of an ITS-S object

3.21
ITS-S service
communication functionality of an ITS-S that provides the capability to connect to other nodes

[SOURCE: ISO 21217:2014,3.37.]

3.22
ITS-S unit
implementation of an ITS station

[SOURCE: ISO 21217:2014, 3.38.]

3.23
permission
rule that a particular behaviour is allowed to occur

Note 1 to entry: From ITU-T X.911[21].

3.24
policy
set of rules related to a particular purpose, expressed as an obligation, an authorization, a permission or a prohibition

Note 1 to entry: From ITU-T X.911[21].