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S.R. CEN ISO/TS 17419:2014

Intelligent transport systems - Cooperative systems - Classification and management of ITS applications in a global context (ISO/TS 17419:2014)

S.R. CEN ISO/TS 17419:2014

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English Version

**Intelligent transport systems - Cooperative systems -
Classification and management of ITS applications in a global
context (ISO/TS 17419:2014)**

Systèmes intelligents de transport - Classification et gestion
des applications de systèmes intelligents de transport dans
un contexte global (ISO/TS 17419:2014)

Intelligente Transportsysteme - Kooperative Systeme -
Klassifikation und Steuerung von ITS Anwendungen im
globalen Zusammenhang (ISO/TS 17419:2014)

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CEN ISO/TS 17419:2014 (E)

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Foreword

This document (CEN ISO/TS 17419:2014) has been prepared by Technical Committee CEN/TC 278 "Intelligent transport systems", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 204 "Intelligent transport systems".

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The text of ISO/TS 17419:2014 has been approved by CEN as CEN ISO/TS 17419:2014 without any modification.

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TECHNICAL SPECIFICATION

**ISO/TS
17419**

First edition
2014-04-15

Intelligent transport systems — Cooperative systems — Classification and management of ITS applications in a global context

*Systèmes intelligents de transport — Classification et gestion des
applications de systèmes intelligents de transport dans un contexte
global*



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ISO/TS 17419:2014(E)

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.

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ISO/TS 17419 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 278, *Intelligent transport systems*, in collaboration with ISO Technical Committee ISO/TC 204, *Intelligent transport systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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 exchange of messages dedicated to ITS applications, and exchange of messages from ITS message sets.

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 Technical Specification.

NOTE 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. The definition of ITS application classes is based on the concept of the DSRC Application entity as introduced in Reference [4], which is identified by a DSRCApplicationEntityID.

In Reference [17] ITS message sets were referred to as ITS application objects. This definition is not adopted in this Technical Specification due to the fundamentally 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 Technical Specification.

This Technical Specification is an extension towards more general and global applicability of Reference [17]. This Technical Specification introduces the term “ITS-S object” as a general reference to ITS application objects, ITS message sets and other objects that may require globally unique identification and registration.

NOTE 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 of International Standards [6][7][8][9][10][11] and in the Technical specification ISO/TS 17423. This Technical Specification focuses on some management aspects related to authorized and controlled operation of ITS-S objects which requires considerations of ITS-S object identifiers, i.e. ITS-AID, ITS-MsgSetID, ITS-SUID, ITS-SCUID, addresses and protocol identifiers used in the communication protocol stack of an ITS-S, and others.

Intelligent transport systems — Cooperative systems — Classification and management of ITS applications in a global context

1 Scope

This Technical Specification illustrates and specifies “Global Classification and Management of ITS Applications” (GCMA). It

- is based on the ITS station and communication architecture described in ISO 21217,
- 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, and
- defines and specifies management procedures at a high functional level.

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/TS 17423, *Intelligent transport systems — Cooperative systems — ITS application requirements and objectives for selection of communication profiles*

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

ISO/IEC 8825-2:2008, *Information technology — ASN.1 encoding rules: Specification of Packed Encoding Rules (PER) — Part 2*

3 Terms and definitions

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

3.1

authorization

prescription that a particular behaviour shall not be prevented

Note 1 to entry: Unlike *permission* (3.22), an authorization is an empowerment.

3.2

ITS application

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

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