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Vägtrafikinformatik – Samverkande system – Tillämpningskrav och mål (ISO 17423:2018)

Intelligent transport systems – Cooperative systems – Application requirements and objectives (ISO 17423:2018)



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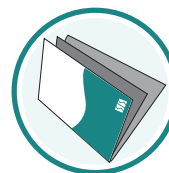
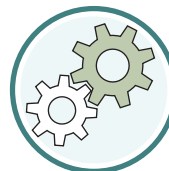
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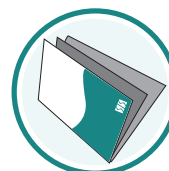
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Denna standard är framtagen av kommittén för Vägtrafikinformatik, SIS/TK 255.

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EUROPEAN STANDARD

EN ISO 17423

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2018

ICS 03.220.20; 35.240.60

Supersedes CEN ISO/TS 17423:2014

English Version

**Intelligent transport systems - Cooperative
systems - Application requirements and objectives
(ISO 17423:2018)**

Systèmes de transport intelligents - Systèmes
coopératifs - Exigences d'application
et objectifs (ISO 17423:2018)

Intelligente Transportsysteme - Kooperative
Systeme - ITS Anwendungsanforderungen
und Grundsätze (ISO 17423:2018)

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

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European foreword

This document (EN ISO 17423:2018) 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of an identical text or by endorsement, at the latest by December 2018, and conflicting national standards shall be withdrawn at the latest by December 2018.

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Introduction

Abstracting applications from communications is a useful basic architectural principle of Intelligent Transport Systems¹⁾ (ITS) embodied in the ITS station and communication architecture presented in ISO 21217:2014.

Applications and communications are linked together using the concepts of flows and paths and communication profiles described in ISO 21217:2014 with related flow and path management procedures specified in ISO 24102-6²⁾[11]. The ITS station management uses communication requirements and objectives of applications together with the capabilities of the ITS station (status of available communication protocol stacks) and sets of decision rules (regulations and policies) to select suitable parameterized ITS-S communication protocol stacks, also referred to as "ITS-S Communication Profiles" (ITS-SCP), for each source of a potential flow as illustrated in [Figure 1](#). A set of communication requirements is referred to as a Flow Type in ISO 24102-6[11]. There may be well-known registered Flow Types as specified in ISO 17419.

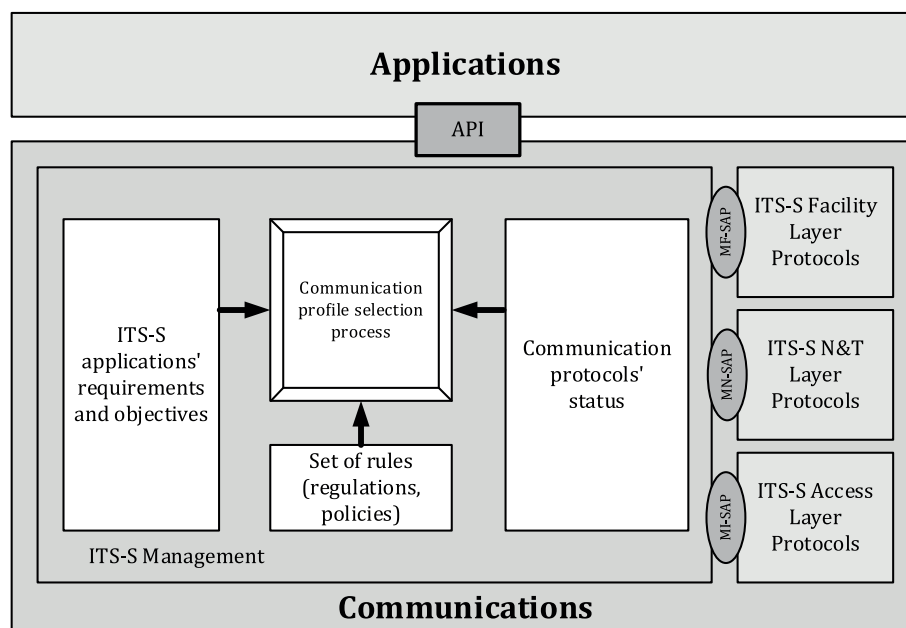


Figure 1 — ITS-S communication profile selection process

An ITS-S communication profile is independent of any destination address. However an instantiation of a communication profile includes the address of the next hop recipient, and a path includes address information of the next hop recipient, the anchor and the destination as specified in ISO 24102-6[11].

A user of an ITS station unit may be able to influence the selection of ITS-S communication profiles by providing his own policies.

Information from a Local Dynamic Map (LDM) on neighbouring stations offering certain communication capabilities may also be useful for the ITS-S communication profile selection process, although not indispensable.

1) The term “Cooperative ITS” (C-ITS) indicates specific features of ITS [4]. For the purpose of this document, no distinction between ITS and C-ITS is needed.

2) To be published.

Intelligent transport systems — Cooperative systems — Application requirements and objectives

1 Scope

This document

- specifies communication service parameters presented by ITS station (ITS-S) application processes to the ITS-S management in support of automatic selection of ITS-S communication profiles in an ITS station unit (ITS-SU),
- specifies related procedures for the static and dynamic ITS-S communication profile selection processes at a high functional level,
- provides an illustration of objectives used to estimate an optimum ITS-S communication profile.

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 4217:2015, *Codes for the representation of currencies*

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

ISO 17419, *Intelligent transport systems — Identifiers — Globally unique identification*

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

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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* (3.10), an authorization is an empowerment.

Note 2 to entry: From ITU-T X.911^[14].

3.2

ITS-S application process

element in an ITS station that performs information processing for a particular application and uses ITS-S services to transmit and receive information

Note 1 to entry: Examples of ITS-S application processes are ITS-S applications, ITS-S facility applications (e.g. for CAM), and ITS-S management applications (e.g. FSAP specified in ISO 22418^[10]).

[SOURCE: ISO 21217:2014, 3.19, modified — Note 1 to entry has been added.]