Irish Standard Recommendation
S.R. CEN ISO/TS 17427:2014

Intelligent transport systems - Cooperative systems - Roles and responsibilities in the context of cooperative ITS based on architecture(s) for cooperative systems (ISO/TS 17427:2014)

S.R. CEN ISO/TS 17427:2014

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CEN ISO/TS 17427

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English Version

Intelligent transport systems - Cooperative systems - Roles and responsibilities in the context of cooperative ITS based on architecture(s) for cooperative systems (ISO/TS 17427:2014)

Systèmes intelligents de transport - Systèmes coopératifs - Rôles et responsabilités dans le contexte des ITS fondés sur l'architecture de systèmes coopératifs (ISO/TS 17427:2014)

Intelligente Transportsysteme - Kooperative Systeme - Rollen und Verantwortlichkeiten im Zusammenhang von ITS basierten Architekturen von kooperativen Systemen (ISO/TS 17427:2014)

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Foreword

This document (CEN ISO/TS 17427:2014) 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 DIN.

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TECHNICAL SPECIFICATION

ISO/TS 17427

First edition
2014-07-01

Intelligent transport systems — Cooperative systems — Roles and responsibilities in the context of cooperative ITS based on architecture(s) for cooperative systems

Systèmes intelligents de transport — Systèmes coopératifs — Rôles et responsabilités dans le contexte des ITS fondés sur l'architecture de systèmes coopératifs

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Foreword

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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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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 204, *Intelligent transport systems.*

Introduction

Cooperative-ITS (C-ITS) are a promising and remarkable advancement of Intelligent Transport Systems (ITS). Numerous cooperative applications are specified that open up new possibilities to make traffic safer, more efficient and smarter. Technologies are developed and improved to realize and support those new services and applications. But, to finally implement C-ITS and to achieve the benefits of more safety and better mobility, various actors from different industries will have to cooperate with each other in a completely new way. Actors that did not collaborate so far will have to find a way to do so. This requires a precise definition and assignment of behaviours, responsibilities and liabilities. Therefore a general, abstract organizational architecture with the description of the single roles, their behaviour and the corresponding responsibilities is the essential basis for the deployment of C-ITS.

The organizational architecture itself with the description of the roles and responsibilities is a crucial part of the whole C-ITS architecture. The organizational architectural viewpoint has extensive influences on the deployment and implementation of C-ITS.

This document describes the high level roles and responsibilities that enable C-ITS Service provision.

Intelligent transport systems — Cooperative systems — Roles and responsibilities in the context of cooperative ITS based on architecture(s) for cooperative systems

1 Scope

This Technical Specification describes the (non-actor specific) roles and responsibilities required to deploy and operate Cooperative-ITS (C-ITS). The organizational architecture described in this document is to be used for a fully operational system. The Technical Specification is couched in terms of an organizational or enterprise viewpoint, as defined in ISO/IEC 10746 Open Distributed Processing.[1]

This Technical Specification is applicable to all types of road traffic of all classes. The description of roles is completely technology agnostic and, in terms of C-ITS communication modes, embraces vehicle-vehicle communications, vehicle-infrastructure communications and infrastructure-infrastructure communications.

This Technical Specification provides a methodology for the identification of service specific roles and their corresponding responsibilities based on a process oriented approach. Additionally, the defined methodology is used to identify the roles and responsibilities for C-ITS, in general. Both the methodology, as well as, the roles and responsibilities for C-ITS are deduced from the reference model: Open Distributed Processing (ISO/IEC 10746).[1] Open Distributed Processing offers five viewpoints of which the enterprise viewpoint corresponds with the organizational architecture and the roles and responsibilities.

This Technical Specification separates C-ITS roles into 'external' and 'internal'. Those considered to be internal are all roles set up for the sole purpose of C-ITS and those considered to be external are all roles involved in C-ITS but not set up for the sole purpose of C-ITS.

This Technical Specification describes high-level architectural viewpoint on C-ITS. It can be used as a blueprint when implementing C-ITS and the corresponding organizational structures. The characteristics of C-ITS entail a huge number of data/information exchanges. Therefore, the implementation of the organizational architecture stringently needs to respect privacy and data protection, as defined in ISO/TR 12859 and in the national laws and regulations (where instantiated). Privacy and data protection affect all roles defined in this Technical Specification and due to these characteristics, all actors occupying roles in C-ITS need to respect the corresponding standards and regulations.

2 Normative references

The following referenced 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 10746:1996, *Information technology — Open Distributed Processing — Reference model*

ISO 14817:2002, *Transport information and control systems — Requirements for an ITS/TICS central Data Registry and ITS/TICS Data Dictionaries*

ISO/TS 17419, *Intelligent transport systems — Co-operative systems — Classification and management of ITS applications in a global context*"

ISO/TS 17931, *Intelligent transport systems — Extension of map database specifications for Local Dynamic Map for applications of Cooperative ITS*

