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Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) —

Part 24: Safety information provisioning

Systèmes de transport intelligents — Cadre pour applications télématiques coopératives pour véhicules réglementés (TARV) —

Partie 24: Fourniture d'informations sur la sécurité

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Contents

Page

Foreword ..... **v**

Introduction ..... **vi**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **2**

4 Abbreviated terms **2**

5 Conformance **3**

6 General overview and framework **3**

7 Basic conceptual operational requirement **6**
7.1 General 6
7.2 Basic requirement 7

8 Requirements for services using generic vehicle data **8**
8.1 General 8
8.1.1 Introduction 8
8.1.2 Unregulated application services using only generic basic vehicle data 8
8.1.3 Unregulated application services using both generic vehicle data and additional application specific data 9
8.2 Conveyance identifiers 9

9 Concept of operations for unregulated application services with additional data requirements including roadside sensors **9**
9.1 General 9
9.2 Statement of the goals and objectives of the system 9
9.3 Strategies, tactics, policies and constraints affecting the system 10
9.4 Organizations, activities and interactions among participants and stakeholders 11
9.5 Operational roles and processes for the system 11
9.5.1 Common role of the prime service provider 11
9.5.2 Common role of the application service provider 11
9.5.3 Role of the application service 12
9.5.4 Service requirements definition 12
9.5.5 Common role of user 12
9.5.6 Role of driver 12
9.5.7 Role of operator 12
9.5.8 Framework for operation 13
9.5.9 ROAM 'app' library and data pantry 13

10 Sequence of operations for identified unregulated application services with additional data requirements **14**
10.1 Overview 14
10.1.1 General 14
10.1.2 Commands 14
10.1.3 GET TARV LDT 15
10.1.4 CREATE and GET core data 16
10.2 Quality of service requirements 17
10.3 Test requirements 18
10.4 Marking, labelling and packaging 18

11 Common features of unregulated TARV application services **18**
11.1 Generic operational processes for the system 18
11.2 Common characteristics for instantiations of unregulated application services 20
11.3 Common sequence of operations for unregulated application services 21
11.4 Quality of service 21
11.5 Information security 21

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11.6 Data naming content and quality 21
11.7 Software engineering quality systems 22
11.8 Quality monitoring station 22
11.9 Audits 22
11.10 Data access control policy 22
11.11 Approval of IVSs and service provider 22
11.12 Approval of roadside sensors 22
12 Declaration of patents and intellectual property 22
Annex A (informative) **Application examples 23**
Bibliography 26

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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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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

For an explanation of 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 www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 204, *Intelligent Transport Systems*.

A list of all parts in the ISO 15638 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Introduction

Freight vehicles are heavy and therefore require longer reducing speed and manoeuvring distance in comparison to lighter vehicles. To achieve safer freight road transport of freight vehicles, an information provision service providing traffic status and incident situation well ahead of the freight vehicle is indispensable. This information provision can increase vehicle safety during freight road transport.

This document standardizes the conceptual operational framework of safety information provision provided by service providers. The ISO 15638 series of TARV application standards are based on a triumvirate of vehicle operators with in-vehicle systems, on-board application service providers and jurisdictions. The basic TARV ISO 15638-1 standard focuses on the transactions between these parties via ITS-stations and roadside sensors, and using this system architecture, additional safety information provision services to freight vehicles can be realized. The new means of safe road transport management and enforcement can be enabled by using this document where jurisdiction requires such regulated monitoring.

It therefore seems appropriate to include this additional document (Part 24) in the ISO 15638 series to provide the means for adding safe road transport of freight vehicles.

It is necessary for telematic applications to be able to be integrated into the embedded computing systems available on the market. The need for interoperability of different solutions is also important as several actors with different solutions can be involved in information needs. Securing the data exchanged is also a particularly important point.

NOTE Related to EC regulations, ISO 15638-9 already covers provisions consistent with EC 165/2014. This document is complementary to and not competitive with ISO 15638-9, and is therefore consistent with EC 165/2014.

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Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) —

Part 24:
Safety information provisioning

1 Scope

The ISO 15638 series (Parts 1 to 23) define the framework for online fleet management of regulated commercial freight vehicles utilizing data communication between in-vehicle systems and an application service provider via an on-board communication unit interfacing with road monitoring infrastructure and roadside sensors. This document defines an unregulated service architecture framework for freight vehicle safety information provision architecture. This statement does not preclude the regulated service where a jurisdiction requires such a function.

The objective of this document is to provide a freight vehicle safety information provision service function/application for non-enforcement applications (and sometimes for regulated application services [RAS]). This is for the road transport safety management purposes of regulated commercial freight vehicle movements.

This document intends to reinforce vehicle safety for non-enforcement and other purposes by providing safety advisory information provisions to the freight vehicle drivers/operators transporting heavy goods on freight vehicles.

This document defines the framework for remote vehicle safety information provision for non-enforcement and the conceptual operation of other management purpose applications.

This document is complementary to, and does not replace, any other documents in the ISO 15638 series. This document is beneficial to vehicle safety management purpose entities and it provides additional use cases for TARV service applications.

This document is specifically oriented towards the realization of safer road transport of freight vehicles by providing safety advisory information to the vehicle from the service provider. It utilizes the ISO 15638 series basic architecture framework, as defined in ISO 15638-21. The service provider provides users with safety information such as recommended safety information for that vehicle and gives adequate safety advice messages, as necessary. The various V2X communication paths can be used according to the various use cases.

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 15638-1, *Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 1: Framework and architecture*

ISO 15638-2, *Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 2: Common platform parameters using CALM*

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ISO 15638-3, *Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Part 3: Operating requirements, 'Approval Authority' procedures, and enforcement provisions for the providers of regulated services*

ISO/TS 15638-4, *Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 4: System security requirements*

ISO 15638-5, *Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 5: Generic vehicle information*

ISO 15638-7:2013, *Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) — Part 7: Other applications*

ISO 15638-21, *Intelligent transport systems — Framework for cooperative telematics applications for regulated commercial freight vehicles (TARV) — Part 21: Monitoring of regulated vehicles using roadside sensors and data collected from the vehicle for enforcement and other purposes*

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

ISO 17262, *Intelligent transport systems — Automatic vehicle and equipment identification — Numbering and data structures*

ISO 24534-3, *Intelligent transport systems — Automatic vehicle and equipment identification — Electronic registration identification (ERI) for vehicles — Part 3: Vehicle data*

ISO 26683-2, *Intelligent transport systems — Freight land conveyance content identification and communication — Part 2: Application interface profiles*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15638-21 apply.

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

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

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

4 Abbreviated terms

ASD file application service data file

ASP application service provider

CALM communications access for land mobiles

C-ITS cooperative intelligent transport system

CONOPS concept of operations

GNSS global navigation satellite system

ID identity

ITS-S intelligent transport system station

IVS in-vehicle system

LDM local dynamic map

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