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

**Part 18:
ADR (Dangerous Goods)**

*Systèmes intelligents de transport — Cadre pour applications
télématiques coopératives pour véhicules de fret commercial
réglementé (TARV) —*

Partie 18: Monitoring du transport (de biens dangereux) d'ADR



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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 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 Technical Committee ISO/TC 204, *Intelligent transport systems*.

This first edition of ISO 15638-18 cancels and replaces ISO/TS 15638-18:2013, which has been technically revised to bring the MSD and optional data concept specifications in line with the current revisions to EN 15722 and CEN TS 16405.

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

Introduction

Many ITS technologies have been embraced by commercial transport operators and freight owners, in the areas of fleet management, safety and security. Telematics applications have also been developed for governmental use. Such regulatory services in use or being considered vary from jurisdiction to jurisdiction but include electronic on-board recorders, digital tachograph, on-board mass monitoring, “mass” data for regulatory control and management, vehicle access methods, hazardous goods tracking and e-call. Additional applications with a regulatory impact being developed include fatigue management, speed monitoring and heavy vehicle penalties imposed based on location, distance and time.

In such an emerging environment of regulatory and commercial applications, it is timely to consider an overall architecture (business and functional) that could support these functions from a single platform within a commercial freight vehicle that operate within such regulations. International Standards will allow for a speedy development and specification of new applications that build upon the functionality of a generic specification platform. A series of standards is required to describe and define the framework and requirements so that the on-board equipment and back-office systems can be commercially designed in an open market to meet common requirements of jurisdictions.

This series of standards addresses and defines the framework for a range of cooperative telematics ITS service applications for regulated commercial freight vehicles (such as access, driver fatigue management, speed monitoring, on-board mass monitoring, “mass” data for regulatory control and management). The overall scope includes the concept of operation, legal and regulatory issues and the generic cooperative provision of services to regulated commercial freight vehicles, using an on-board ITS platform. The framework is based on a (multiple) service provider-oriented approach with provisions for the approval and auditing of service providers.

This series of standards will:

- provide the basis for future development of cooperative telematics applications for regulated commercial freight vehicles. Many elements to accomplish this are already available. Existing relevant standards will be referenced and the specifications will use existing standards (such as CALM) wherever practicable;
- allow for a powerful platform for highly cost-effective delivery of a range of telematics applications for regulated vehicles;
- a business architecture based on a (multiple) service provider oriented approach;
- address legal and regulatory aspects for the approval and auditing of service providers.

This series of standards is timely as many governments (Europe, North America, Asia and Australia/New Zealand) are considering the use of telematics for a range of regulatory purposes. Ensuring that a single in-vehicle platform can deliver a range of services to both government and industry through open standards and competitive markets is a strategic objective.

This document provides specifications for ADR (dangerous goods).

NOTE 1 The definition of what comprises a “regulated” vehicle is regarded as an issue for National decision and can vary from jurisdiction to jurisdiction. This series of standard does not impose any requirements on nations in respect of how they define a regulated vehicle.

NOTE 2 The definition of what comprises a ‘regulated’ service is regarded as an issue for National decision, and can vary from *jurisdiction* to *jurisdiction*. This series of standards documents does not impose any requirements on nations in respect of which services for regulated vehicles *jurisdictions* will require, or support as an option, but will provide standardized sets of requirements descriptions for identified services to enable consistent and cost-efficient implementations where implemented.

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

Part 18: ADR (Dangerous Goods)

1 Scope

This document addresses the provision of “ADR (dangerous goods)” and specifies the form and content of such data required to support such systems and access methods to that data.

The scope of this document is to provide specifications for common communications and data exchange aspects of the application service ADR (dangerous goods) that a regulator may elect to require or support as an option, including

- a) high-level definition of the service that a service provider has to provide (the service definition describes common service elements, but does not define the detail of how such an application service is instantiated, nor the acceptable value ranges of the data concepts defined),
- b) means to realize the service, and
- c) application data, naming content and quality that an IVS has to deliver.

The definition of what comprises a “regulated” service is regarded as an issue for national decision and may vary from jurisdiction to jurisdiction. This document does not impose any requirements on nations in respect of which services for regulated vehicles jurisdictions will require, or support as an option, but provides standardized sets of requirements descriptions for identified services to enable consistent and cost-efficient implementations where instantiated.

ISO 15638 has been developed for use in the context of regulated commercial freight vehicles (hereinafter referred to as “regulated vehicles”). There is nothing, however, to prevent a jurisdiction extending or adapting the scope to include other types of regulated vehicles, as it deems appropriate.

2 Normative references

The following referenced documents are indispensable for the application 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) — Common platform parameters using CALM*

ISO 15638-3, *Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Operating requirements, ‘approval authority’ procedures, and enforcement provisions for the providers of regulated services*

ISO 15638-4¹⁾, *Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — System security requirements*

ISO 15638-5:2013, *Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — General vehicle information*

ISO 15638-6:2014, *Intelligent transport systems — Framework for collaborative telematics applications for regulated commercial freight vehicles (TARV) — Regulated applications*

ISO 15638-10, *Intelligent transport systems — Framework for cooperative telematics applications for regulated vehicles (TARV) -Emergency messaging system/eCall*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 15638-1 and the following apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1 access methods

procedures and protocols to provision and retrieve data

3.2 app

small (usually) *Java*[™] (3.28) applets, organized as software bundles, that support *application services* (3.3) by keeping the *data pantry* (3.18) provisioned with up to date data

3.3 application service

service provided by a *service provider* (3.40) enabled by accessing data from the *IVS* (3.25) of a *regulated vehicle* (3.37) via a wireless communications network

3.4 application service provider ASP

party that provides an *application service* (3.3)

3.5 app library

separately secure area of memory in *IVS* (3.25) where apps are stored (with different access controls to *data pantry* (3.18))

3.6 approval

formal affirmation that an applicant has satisfied all the requirements for appointment as an *application service provider* (3.4) or that an application service delivers the required service levels

3.7 approval agreement

written agreement made between an *approval authority (regulatory)* (3.8) and a *service provider* (3.40)

Note 1 to entry: An *approval authority (regulatory)* (3.8) approval agreement recognizes the fact that a *service provider* (3.40), having satisfied the approval authority's requirements for appointment as a service provider, is appointed in that capacity and sets out the legal obligations of the parties with respect to the ongoing role of the service provider.

1) To be published.