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BSI Standards Publication

Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TAFV)

Part 17: Consignment and location monitoring (CLM)

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National foreword

This Published Document is the UK implementation of ISO/TS 15638-17:2013.

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A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Part 17: Consignment and location monitoring (CLM)

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Partie 17

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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. 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. www.iso.org/patents.

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

ISO 15638 consists of the following parts, under the general title *Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated Commercial freight Vehicles (TARV)*:

— *Part 1 Framework and architecture*

— *Part 2: Common platform parameters using CALM*

— *Part 3: Operating requirements, Approval Authority' procedures, and enforcement provisions for the providers of regulated services*

— *Part 5: Generic vehicle information*

— *Part 6: Regulated applications* [Technical Specification]

— *Part 7: Other applications*

— *Part 8: Vehicle access monitoring (VAM)* [Technical Specification]

— *Part 9: Remote electronic tachograph monitoring (RTM)* [Technical Specification]

— *Part 10: Emergency messaging system/eCall (EMS)* [Technical Specification]

— *Part 11: Driver work records (work and rest hours compliance) (DWR)* [Technical Specification]

— *Part 12: Vehicle mass monitoring (VMM)* [Technical Specification]

— *Part 14: Vehicle access control (VAC)* [Technical Specification]

— *Part 15: Vehicle location monitoring (VLM)* [Technical Specification]

— *Part 16: Vehicle speed monitoring (VSM)* [Technical Specification]

— *Part 17: Consignment and location monitoring (CLM)* [Technical Specification]

— *Part 18: ADR (Dangerous Goods) transport monitoring (ADR)* [Technical Specification]

— *Part 19: Vehicle parking facilities (VPF)* [Technical Specification]

— The following parts are under preparation:

— *Part 4: System security requirements* [Technical Specification]

— *Part 13: 'Mass' information for jurisdictional control and enforcement*

Introduction

Many ITS technologies have been embraced by commercial transport *operators (4.36)* and freight owners, in the areas of fleet management, safety and security. *Telematics (4.47)* applications have also been developed for governmental use. Such regulatory services in use or being considered vary from *jurisdiction (4.31)* to *jurisdiction*, but include electronic on-board recorders, digital *tachograph (4.46)*, on-board *mass* (4.34) monitoring, '*mass' data for regulatory control and management (4.35)* , vehicle *access (4.1)* methods, *hazardous goods (4.26)* tracking and e-call *(4.21)*. 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 (4.13)*, it is timely to consider an overall *architecture (4.9)* (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 (4.45)* of new applications that build upon the functionality of a generic specification platform. A suite of standards documents is required to describe and define the *framework (4.24)* 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 (4.31)*.

This suite of standards addresses and defines the *framework (4.24)* for a range of cooperative *telematics (4.47)* applications for *regulated commercial freight vehicles (4.40)* (such as *access methods (4.1)*, driver fatigue management, speed monitoring, on-board *mass (4.34)* *mass' data for regulatory control and management (4.35)*The overall scope includes the concept of operations, legal and regulatory issues, and the generic cooperative provision of services to *regulated commercial freight vehicles (4.40)*, using an on-board ITS platform. The *framework* is based on a (multiple) *service provider (4.43)* oriented approach with provisions for the *approval (4.6)* and *auditing (4.10)* of *service providers*.

This suite of standards documents will:

- provide the basis for future development of cooperative *telematics (4.47)* based ITS service *(4.28)* applications for *regulated commercial freight vehicles (4.40)*. Many elements to accomplish this are already available. Existing relevant standards will be referenced, and the *specifications (4.45)* 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 (4.40)*
- a business *architecture (4.9)* based on a (multiple) *service provider (4.43)* oriented approach
- address legal and regulatory aspects for the *approval (4.6)* and *auditing (4.10)* of *service providers.*

This suite of standards deliverables is timely as many governments (Europe, North America, Asia and Australia/New Zealand) are considering the use of *telematics (4.47)* 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 part of the ISO 15638 family of standards documents provides *specifications (4.45)* for consignment and location monitoring.

NOTE: The definition of what comprises a 'regulated' vehicle is regarded as an issue for national decision, and may vary from *jurisdiction (4.31)* to *jurisdiction*. This suite of standards documents does not impose any requirements on nations in respect of how they define a *regulated vehicle (4.40)*.

NOTE: The definition of what comprises a 'regulated' service is regarded as an issue for national decision, and may vary from *jurisdiction (4.31)* to *jurisdiction*. This suite of standards documents does not impose any requirements on nations in respect of which services for *regulated vehicles (4.40) jurisdictions* will require, or support as an option, but will provide

standardised sets of requirements descriptions for identified services to enable consistent and cost efficient implementations where implemented.

Intelligent transport systems — Framework for collaborative Telematics Applications for Regulated commercial freight Vehicles (TARV) —

Part 17:
Consignment and location monitoring (CLM)

1 Scope

This part of ISO 15638 addresses the provision of *'Consignment and location monitoring'* and specifies the form and content of such data required to support such systems, and *access methods (4.1)* to that data.

This part of ISO 15638 provides *specifications (4.45)* for common communications and data exchange aspects of the *application service (4.3)* Consignment and location monitoring that a *regulator (4.41)* may elect to require or support as an option, including:

a) high level definition of the service that a s*ervice provider (4.43)* has to provide, (The service definition describes common service elements; but does not define the detail of how such an *application service (4.3)* is instantiated, not the acceptable value ranges of the data concepts defined);

b) means to realise the service;

c) application data, naming content and quality that an *IVS (4.27)* has to deliver.

The definition of what comprises a 'regulated' service is regarded as an issue for National decision, and may vary from *jurisdiction (4.31)* to *jurisdiction*. This document does not impose any requirements on nations in respect of which services for *regulated vehicle*s *jurisdictions* will require, or support as an option, but provides standardised 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' *(4.40).* 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 Conformance

Requirements to demonstrate conformance to any of the general provisions or specific *application services (4.3)* described in this part of ISO 15638 shall be within the regulations imposed by the *jurisdiction (4.31)* where they are instantiated. Conformance requirements to meet the provisions of this International Standard are therefore deemed to be under the control of, and to the specification of, the *jurisdiction* where the *application service*(s) is/are instantiated.

The protocols defined in this Part of ISO 15638 have been independently tested. Annex A (Informative) provides results of these tests. In any conformance assurance process undertaken by candidate systems, where appropriate the results may be used as part of its process of conformance compliance.