
**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**

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

*Partie 21: Surveillance des véhicules réglementés à l'aide de capteurs
routiers et de données collectées dans les véhicules pour l'application
des lois et à d'autres fins*



iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

ISO 15638-21:2018

<https://standards.iteh.ai/catalog/standards/iso/6d4b85bc-3718-498f-a5e8-54feca97f634/iso-15638-21-2018>



COPYRIGHT PROTECTED DOCUMENT

© ISO 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

Page

Foreword	v
Introduction	vi
1 Scope	1
2 Normative references	1
3 Terms and definitions	2
4 Abbreviated terms	6
5 Conformance	7
6 General overview and framework	7
7 Requirements for services using generic vehicle data	10
7.1 General	10
7.2 Regulated application services using only generic basic vehicle data	10
7.3 Regulated application services using both generic vehicle data and additional regulated application specific data	11
7.4 Conveyance identifiers	11
8 Application services that require data in addition to basic vehicle data	11
8.1 General	11
8.2 Concept of operations for identified regulated application services with additional data requirements using roadside sensors	11
8.2.1 General	11
8.2.2 Statement of the goals and objectives of the system	12
8.2.3 Strategies, tactics, policies, and constraints affecting the system	12
8.2.4 Organizations, activities, and interactions among participants and stakeholders	12
8.2.5 Clear statement of responsibilities and authorities delegated	12
8.2.6 User	12
8.2.7 Application service provider	13
8.2.8 Application service	13
8.2.9 Operational processes for the system	13
8.2.10 Service requirements definition	13
8.3 Sequence of operations for identified regulated application services with additional data requirements	13
8.3.1 General sequence of operations	13
8.4 Quality of service requirements	18
8.5 Test requirements	19
8.6 Marking, labelling and packaging	19
9 Common features of regulated TARV application services	19
9.1 Generic operational processes for the system	19
9.2 Common role of the user	21
9.2.1 Role of the driver	21
9.2.2 Role of the operator	21
9.3 Common characteristics for instantiations of regulated application services	21
9.4 Common sequence of operations for regulated application services	22
9.5 Quality of service	23
9.6 Information security	23
9.7 Data naming content and quality	23
9.8 Software engineering quality systems	23
9.9 Quality monitoring station	24
9.10 Audits	24
9.11 Data access control policy	24
9.12 Approval of IVSs and service provider	24
9.13 Approval of road side sensors	24

Annex A (informative) Application examples	25
Annex B (informative) Roadside sensors.....	30
Bibliography	32

iTeh Standards
(<https://standards.itih.ai>)
Document Preview

[ISO 15638-21:2018](https://standards.itih.ai/catalog/standards/iso/6d4b85bc-3718-498f-a5e8-54fcca97f634/iso-15638-21-2018)

<https://standards.itih.ai/catalog/standards/iso/6d4b85bc-3718-498f-a5e8-54fcca97f634/iso-15638-21-2018>

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, *Intelligence transport systems*.

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

ISO 15638-21:2018

<https://standards.iteh.ai/catalog/standards/iso/6d4b85bc-3718-498f-a5e8-54feca97f634/iso-15638-21-2018>

Introduction

The ISO 15638 series TARV application standards are based on a triumvirate of vehicle operators with in-vehicle systems, on-board application service providers (3.39) and jurisdictions (3.28). The basic TARV standards focus on the transactions between these parties via ITS-stations (3.25), and do not have measures to detect/avoid tampering/incorrect setting of on-board equipment, and are limited to using data collected from the vehicle for purposes such as control, management and enforcement. In many countries road side sensors (3.37) are already widely used for jurisdiction enforcement and other enhancement purposes. These road side sensors can be used in combination with the TARV framework (3.21) to enhance functionality by eliminating/reducing problems of incorrect setting/tampering etc. and/or complementing/corroborating data obtained from on-board systems. This provides increased capability for jurisdictions and other entities to use existing parts of the ISO 15638 series of standards (which are focussed only on the transaction of data collected from on-board systems), thus potentially providing validation of, or removing weakness in, the accuracy of the data transmitted from the vehicle to an application service provider (3.39), or to provide new management and control measures for regulated commercial freight vehicles. In some cases, new means of management and enforcement may be enabled by using this document.

It, therefore, seems appropriate to include this part of ISO 15638 to the 15638 series of standards to provide the means to use roadside/in-road sensors to validate the accuracy of on-board equipment, and/or complement the data available to application service providers (3.39) and jurisdictions and other entities.

NOTE ISO 15638-9¹⁾ already covers provisions consistent with EC165/2014. This document is complementary to and not competitive to ISO 15638-9, and therefore consistent with EC 165/2014.

(<https://standards.iteh.ai>)
Document Preview

ISO 15638-21:2018

<https://standards.iteh.ai/catalog/standards/iso/6d4b85bc-3718-498f-a5e8-54feca97f634/iso-15638-21-2018>

1) To be published. Stage at publication: ISO/DIS 15638-9.