

Intelligent transport systems — Management of electronic traffic regulations (METR)~~—~~ —

Part 3: System of systems requirements and architecture (SoSR)

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

<https://standards.iteh.ai/catalog/standards/iso/d69ba837-71e6-4f5c-847f-bcebf52850f5/iso-dts-24315-3>

~~DTS~~ stage

~~Warning for WDs and CDs~~

~~This document is not an ISO International Standard. It is distributed for review and comment. It is subject to change without notice and may not be referred to as an International Standard.~~

~~Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.~~

© ISO 2024

Systèmes de transport intelligents — Gestion des règles de circulation sous forme électronique —

Partie 3: Exigences et architecture pour le système des systèmes

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

ISO/DTS 24315-3

<https://standards.iteh.ai/catalog/standards/iso/df9ba837-71e6-4f5c-847f-bcebf52850f5/iso-dts-24315-3>

© ISO 2025

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
~~Email~~E-mail: copyright@iso.org
Website: www.iso.org~~www.iso.org~~

Published in Switzerland

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

ISO/DTS 24315-3

<https://standards.iteh.ai/catalog/standards/iso/df9ba837-71e6-4f5c-847f-bcebf52850f5/iso-dts-24315-3>

Contents

Foreword.....	vi
Introduction	vii
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions	1
4 Abbreviated terms.....	2
5 Overview	3
5.1 METR purpose.....	3
5.2 METR scope.....	3
5.3 METR overview.....	4
5.4 Assumptions and dependencies	10
5.5 Traceability conventions	11
5.6 Naming conventions	13
5.7 Traceability and conformance	13
6 System of systems requirements	13
6.1 General.....	13
6.2 Input requirements.....	14
6.3 Output requirements.....	17
6.4 Functional requirements	23
6.5 Applicable intelligent transport system (ITS) station unit requirements.....	24
6.6 Information requirements	27
6.7 Efficient exchange constraint.....	31
7 Actor responsibilities.....	31
7.1 Rule maker responsibilities.....	31
7.2 User responsibilities.....	31
7.3 Implementer responsibilities.....	32
7.4 Auditor responsibilities	32
8 System-level reference architecture.....	32
8.1 Overview	32
8.2 Physical view	33
8.3 Enterprise view	65
9 Variables	82
9.1 General.....	82
9.2 catalogueUpdateInterval.....	82
9.3 criteriaLatencyTime	82
9.4 distributionResponseTime.....	82
9.5 informationRefreshDuration	82
9.6 metrRecoveryTime	82
9.7 metrResponseTime.....	82
9.8 metrUpdateCycle.....	82
9.9 metrUpTimePercent	82
9.10 provisionLatency	83
9.11 subscriptionRefreshTime	83
9.12 translationUpdateInterval.....	83
Annex A (informative) Conformance	84
Annex B (normative) Diagram conventions.....	87

Annex C (informative) Possible deployments of role-based architecture	92
Bibliography	102

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

ISO/DTS 24315-3

<https://standards.itih.ai/catalog/standards/iso/df9ba837-71e6-4f5c-847f-bcebf52850f5/iso-dts-24315-3>

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~~ISO draws attention to the possibility that ~~some of the~~ ~~elements~~implementation of this document may ~~be involve~~ the ~~subject~~use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of ~~any claimed~~ patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. 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).~~

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*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 278, *Intelligent Transport Systems*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

~~This is the first edition of ISO 24315-3.~~

A list of all parts in the ISO 24315 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.

Introduction

0.1 System overview

The ISO 24315 series on the management of electronic traffic regulations (METR) is intended to provide users access to geo-specific, trustworthy, timely, authoritative, machine-interpretable, traffic and transport related rules enacted by jurisdictional entities, including those who define rules for campuses (i.e., private grounds). This is conceptually shown in Figure 0-1.

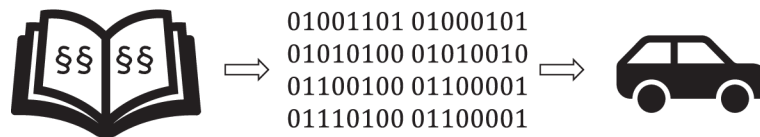


Figure 0-1: — METR concept

0.1.1 Purpose

METR is designed to assist developers and manufacturers of driving automation systems (i.e., automation Levels 1-~~to~~ 5) and driver information systems (including those at automation Level 0) to electronically obtain traffic rules to better enable:

- a) interacting safely with other road users;
- b) following instructions from law enforcement organizations, and those authorized to direct traffic;
- c) maintaining smooth and safe flow of traffic; and
- d) complying with other rules enacted to support legislative policies (such as environmental protection, noise, manage height and weight restrictions, and societal aspects such as market days, fiestas, pedestrian zones, etc.).

METR is designed to provide a reference framework for the trustworthy distribution of electronic versions of legal traffic rules, however content and application of the traffic rules is outside of the scope of the METR standards and specifications.

0.1.2 Flow of information

The general flow of METR information is illustrated in Figure 0-2 and subsequently described.