

Road vehicles - Standardized repair and maintenance information (RMI) terminology - Part 2: Standardized process implementation requirements, Registration Authority (ISO 18542-2:2014)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN ISO 18542-2:2014 sisaldab Euroopa standardi EN ISO 18542-2:2014 inglisekeelset teksti.	This Estonian standard EVS-EN ISO 18542-2:2014 consists of the English text of the European standard EN ISO 18542-2:2014.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 07.05.2014.	Date of Availability of the European standard is 07.05.2014.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 01.040.43, 43.040.15, 43.180

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

ICS 01.040.43; 43.040.15; 43.180

English Version

Road vehicles - Standardized repair and maintenance
information (RMI) terminology - Part 2: Standardized process
implementation requirements, Registration Authority (ISO 18542-
2:2014)

Véhicules routiers - Terminologie normalisée pour
l'information sur la réparation et la maintenance (RMI) -
Partie 2: Exigences de mise en oeuvre des procédés
normalisés, autorité d'enregistrement (ISO 18542-2:2014)

Straßenfahrzeuge - Standardisierte RMI-Terminologie - Teil
2: Anforderungen an die Implementierung des
standardisierten Prozesses, Registrierungsstelle (ISO
18542-2:2014)

This European Standard was approved by CEN on 17 April 2014.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 18542-2:2014) has been prepared by Technical Committee CEN/TC 301 "Road vehicles", the secretariat of which is held by AFNOR, in collaboration with Technical Committee ISO/TC 22 "Road vehicles".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 2014, and conflicting national standards shall be withdrawn at the latest by November 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 18542-2:2014 has been approved by CEN as EN ISO 18542-2:2014 without any modification.

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions, symbols and abbreviated terms	2
3.1 Terms and definitions	2
3.2 Abbreviated terms	4
4 Standard and implementation	4
4.1 Overview of Standard ISO 18542	4
4.2 Overview of the usage of the Digital Annex within the context of ISO 18541	5
5 Structure of the COTS TMS Requirements	6
5.1 Main technical requirements clusters	6
6 [1]: Overall system architecture	9
6.1 [1.1] Conceptual architecture	9
6.2 [1.2] Conceptual data and role models	9
7 [2]: System infrastructure	12
7.1 [2.1] General IT infrastructure	12
7.2 [2.2] Infrastructure components	12
7.3 [2.3] Database management system and data storage	13
7.4 [2.4]: Security	14
8 [3]: User Interface	16
8.1 [3.1] Graphical User Interface / Interactive web pages	16
8.2 [3.2] Other interfaces	18
9 [4]: Data Management	19
9.1 [4.1] Meta objects model	19
9.2 [4.2] Data exchange	19
9.3 [4.3] Data management services	20
9.4 [4.4] Reporting	21
10 [5]: Application and workflow management	22
10.1 [5.1] General workflow	22
10.2 [5.2] Proposal	22
10.3 [5.3] Evaluation	23
10.4 [5.4] Review	23
10.5 [5.5] Translation	24
10.6 [5.6] Release	24
10.7 Download for VM	25
10.8 [5.7] Publication	25
11 [6]: Operation	25
11.1 [6.1] Availability	25
11.2 [6.2] Support	26
11.3 [6.3] Change and release	26
11.4 [6.4] System administration	26
Bibliography	28

Introduction

The ISO 18542 series includes the requirements to be fulfilled by Repair and Maintenance Information (RMI) systems as applied by the:

EUROPEAN COMMISSION - ENTERPRISE AND INDUSTRY DIRECTORATE-GENERAL, Consumer goods - Automotive industry EC mandate M/421^[1] “MANDATE TO THE EUROPEAN STANDARDIZATION ORGANISATIONS FOR STANDARDIZATION IN THE FIELD OF VEHICLE OBD, REPAIR AND MAINTENANCE INFORMATION” dated Brussels, 21 January 2008.

This mandate relates to the EC type-approval system for vehicles falling into the scopes of Directives 2002/24/EC,^[2] 2003/37/EC^[3] and 70/156/EEC (replaced by 2007/46/EC),^[4] and, in particular, to requirements for access to vehicle repair and maintenance information by independent operators.

This part of ISO 18542 addresses terminology for access to automotive repair and maintenance information for light passenger and commercial vehicles¹⁾ and heavy duty vehicles²⁾ based on Directive 70/156/EEC (replaced by 2007/46/EC).

The purpose of the EC Mandate M/421 is to develop a standard or set of standards which specify the requirements to provide “standardized access to automotive repair and maintenance information (RMI)” for independent operators.

The information included in this part of ISO 18542 derives from the legislative requirements on a European level in the field of repair and maintenance information and related security requirements and can be referenced by legislation in other countries.

It is intended to be read in conjunction with:

- ISO 18542-1: General information and use case definition, that defines a framework and a process for agreeing terms for a standardized automotive terminology process;
- ISO 18541-1: General information and use case definition, that describes the requirements for the vehicle manufacturers RMI systems;
- ISO 18541-2: Technical requirements;
- ISO 18541-3: Functional user interface requirements, and;
- ISO 18541-4: Conformance test.

This part of ISO 18542-2 is predicated by some key decisions and concepts that need to be understood in order to fully appreciate its intent.

1) REGULATION (EC) No 715/2007 [5] OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information and COMMISSION REGULATION (EC) No 692/2008 of 18 July 2008 [6] implementing and amending Regulation (EC) No 715/2007 of the European Parliament and of the Council on type-approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information and amending COMMISSION REGULATION (EU) No 566/2011 of 8 June 2011 [7] amending Regulation (EC) No 715/2007 of the European Parliament and of the Council and Commission Regulation (EC) No 692/2008 as regards access to vehicle repair and maintenance information.

2) REGULATION (EC) No 595/2009 [8] OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 June 2009 on type approval of motor vehicles with respect to emissions from heavy duty vehicles (Euro VI) and on access to vehicle repair and maintenance information, COMMISSION REGULATION (EU) No 582/2011 of 25 May 2011 [9] implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI), and COMMISSION REGULATION (EU) No 64/2012 of 23 January 2012 [10] amending Regulation (EU) No 582/2011 2011 implementing and amending Regulation (EC) No 595/2009 of the European Parliament and of the Council with respect to emissions from heavy duty vehicles (Euro VI).

From the outset it was determined that a set of 'Agreed Terms' would be used by an IO to search a VM's RMI. The phrase 'Agreed Terms' is used rather than 'Standardized Terms' because the terms should not be 'standardized' in the established sense. The standardization process is lengthy and the need to have terms available for searching in a short timescale means such an approach is inappropriate. The process by which a panel of expert terminologists agrees and reviews terms is systemized and central to ISO 18542-1.

The provision of the agreed Automotive RMI Terminology itself is outside the remit of this part of ISO 18542 and therefore outside the scope of this part of ISO 18542. Rather, it is foreseen that the agreed Automotive RMI Terminology will follow a lifecycle beyond the timeframe of this part of ISO 18542 and be dependent upon the work of a Registration Authority, a Terminology Review Group for its creation and management, and of a Digital Annex for its publication. For the development of the Digital Annex existing standards will be reviewed and elements included where appropriate and practical.

- In order to effectively maintain the 'Agreed Terminology', it has been determined that a Commercial-Off-The-Shelf (COTS) Terminology Management System (TMS) is required. The COTS TMS functions as a 'back-end' database repository with a workflow element that will ensure 'Agreed Terms' are created, and managed in line with the standardized process outlined in ISO 18542-1.
- It is anticipated that there will be a maintenance agency which will be responsible for overseeing the procurement and hosting of the COTS TMS.
- A Registration Authority (RA) controls the IP for the Digital Annex (DA) and is responsible for managing and publishing the content of that DA.
- The maintenance agency for the Commercial-Off-The-Shelf Terminology Management System (COTS TMS) and the Registration Authority (RA) for the Digital Annex (DA) may be a single organization.

Road vehicles — Standardized repair and maintenance information (RMI) terminology —

Part 2: Standardized process implementation requirements, Registration Authority

1 Scope

The ISO 18542 series is structured into two parts:

- Part 1: General information and use case definition: defines a framework and a process for agreeing terms
- Part 2: Standardized process implementation requirements, Registration Authority: defines the process implementation requirements for a Terminology Management System and for a Registration Authority with a Digital Annex.

The purpose of the ISO 18542 series is to facilitate searching by Independent Operators (IOs) of Vehicle Manufacturer (VM) Repair and Maintenance Information (RMI) websites.

This part of ISO 18542 specifies:

- the technical requirements that must be met by the Terminology Management System (TMS) that will be used to manage and store the 'Agreed RMI Terminology';
- the requirements for the Registration Authority (RA) (i.e. the agency responsible for maintaining and publishing the 'Agreed RMI Terminology').

The framework and process for creating 'Agreed Terminology' is the subject of ISO 18542-1.

The target audience for this part of ISO 18542-2 is a technical one, and focused on those responsible for the implementation of mandate M/421.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 18542-1, *Road vehicles — Standardized repair and maintenance information (RMI) terminology — Part 1: General information and use case definition*

ISO 18541-1³⁾, *Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 1: General information and use case definition*

ISO 18541-2⁴⁾, *Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 2: Technical requirements*

3) To be published.

4) To be published.

ISO 18541-3⁵⁾, *Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 3: Functional user interface requirements*

ISO 18541-4⁶⁾, *Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 4: Conformance test*

3 Terms and definitions, symbols and abbreviated terms

3.1 Terms and definitions

For the purposes of this document the following terms and definitions apply.

3.1.1

access levels

one of the levels of access to RMI including the rights and permissions assigned to a category of users

EXAMPLE One may consider an access to RMI relevant to security and another one to RMI not relevant to security. They represent two different access levels.

3.1.2

commercial-off-the-shelf application

COTS application

software that is 'ready-made' and available for use by way of a license to the general public requiring no or minimal customization

3.1.3

digital annex

DA

digital library in which terms related to Automotive RMI Terminology are stored and made available in digital formats in the defined target languages

3.1.4

end user

Independent Operator or Vehicle Manufacturer user

3.1.5

entity

object, concept or notion in the automotive domain designated by a term

Note 1 to entry: An entity only exists for this process if there is a term in US-English designating it. The entity is the common meaning of the US-English term and all its translated terms in the defined target languages.

3.1.6

independent operator

IO

undertakings other than authorized dealers and repairers which are directly or indirectly involved in the repair and maintenance of motor vehicles

EXAMPLE Repairers, manufacturers or distributors of repair equipment, tools or spare parts, publishers of technical information, automobile clubs, roadside assistance operators, operators offering inspection and testing services, operators offering training for installers, manufacturers and repairers of equipment for alternative fuel vehicles.

5) To be published.

6) To be published.

3.1.7**process user**

terminology experts appointed by the Registration Authority (RA), Vehicle Manufacturers (VMs) and Independent Operators (IOs) to manage the agreed terminology using the Terminology Management System (TMS)

Note 1 to entry: Process users are assigned to different roles as described in ISO 18542-1.

3.1.8**Registration Authority****RA**

institution that is responsible for managing the Automotive RMI Terminology process, the Terminology Management System (TMS) and publishing the content of the Digital Annex (DA)

3.1.9**repair and maintenance information system****RMI system**

vehicle manufacturer repair and maintenance information system

VM RMI system

information system by which the Vehicle Manufacturer (VM) provides access to Repair and Maintenance Information (RMI) through a website

3.1.10**service level agreement****SLA**

contract between a service provider and a customer that details, usually in measurable terms, the nature, quality, and scope of the service to be provided in the form of deliverables or metrics

Note 1 to entry: It may also be called a service level contract.

3.1.11**source term**

term in US-English that starts the terminology process as a proposed term subject to the review process of acceptance, rejection or evaluation

3.1.12**term[s]**

word or standalone expression for an entity that has linguistic, semantic and grammatical integrity

3.1.13**terminology management system****TMS**

RMI terminology management system

system that is used to track the creation of, and manage, the agreed terms

Note 1 to entry: It has been agreed that it shall be web-based.

3.1.14**vehicle manufacturer****VM**

person or body responsible to the approval authority for all aspects of the type approval or authorization process and for ensuring conformity of production of a vehicle

Note 1 to entry: It is not essential that the person or body be directly involved in all stages of the construction of the vehicle, system, component or separate technical unit which is the subject of the approval process.

Note 2 to entry: Adopted from Directive 2007/46/EC.^[3]

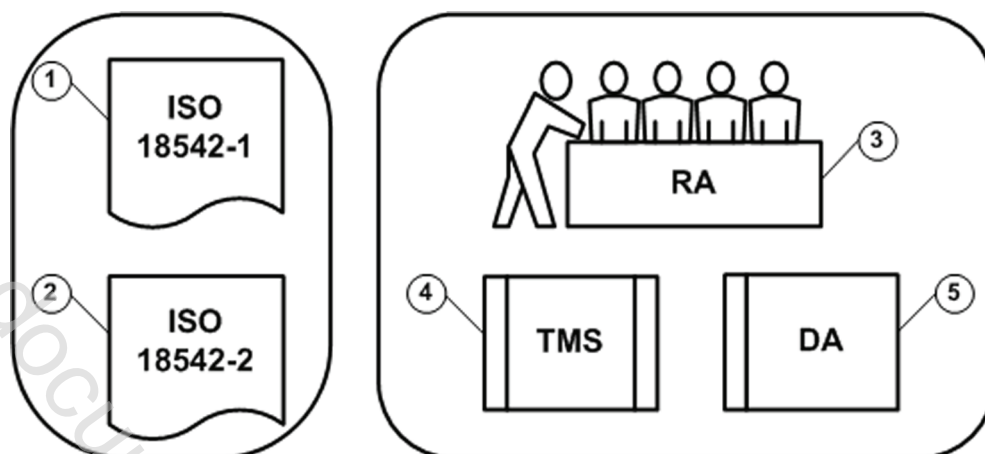
3.2 Abbreviated terms

COTS	commercial-off-the-shelf system
DA	digital annex
DBMS	database management system
GUI	graphical user interface
IO	independent operator
OS	operating system
RA	registration authority
RMI	repair and maintenance information
SLA	service level agreement
TMS	terminology management system
UC	use case
VM	vehicle manufacturer

4 Standard and implementation

4.1 Overview of Standard ISO 18542

An overview describing the framework of ISO 18542 and its constituent Parts 1 and 2 is shown in [Figure 1](#).

**Key**

- 1 ISO 18542-1: process specification to develop and maintain an agreed Automotive RMI Terminology
- 2 ISO 18542-2: standardized process implementation specification including requirements, and Registration Authority
- 3 Registration Authority – Terminology review group
- 4 Terminology Management System
- 5 Digital Annex: agreed Automotive RMI Terminology

NOTE As illustrated in [Figure 1](#), a distinction is made between ISO 18542-1 and ISO 18542-2, and the Digital Annex as an artefact resulting from the standardized process. The Digital Annex will be published for the end user.

Figure 1 — Overview of the elements of the standard

4.2 Overview of the usage of the Digital Annex within the context of ISO 18541

An overview of the usage of the Digital Annex in a standardized RMI request by an IO is shown in [Figure 2](#).