INTERNATIONAL STANDARD

ISO 18542-1

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

Part 1: General information and use case definition

Véhicules routiers — Terminologie normalisée pour l'information sur la réparation et la maintenance (RMI) —

Partie 1: Informations générales et définition de cas d'utilisation

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 18542-1 was prepared by Technical Committee CEN/CENELEC/TC 301, *Road vehicles* in collaboration with Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

ISO 18542 consists of the following parts, under the general title *Road vehicles — Standardized repair and maintenance information (RMI) terminology*:

— *Part 1: General information and use case definition*

— *Part 2: Standardized process implementation requirements, Registration Authority*

Introduction

ISO 18542 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 [3]

"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 [5], 2003/37/EC [6] and 2007/46/EC) [7], and, in particular, to requirements for access to vehicle repair and maintenance information by independent operators.

At this time, ISO 18542 only covers the terminology for access to automotive repair and maintenance information for light passenger and commercial vehicles[1)] based on Directive 2007/46/EC [7].

The purpose of the EC Mandate M/421 [3] is to develop a standard or set of standards which specify the requirements to provide "standardized access to repair and maintenance information (RMI)" for independent operators.

The information included in this part of ISO 18542 derives from the legislative requirements at 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 related to the following future International Standards:

— ISO 18542-2, *Road vehicles — Standardized repair and maintenance information (RMI) terminology — Part 2: Standardized process implementation requirements, Registration Authority*, which defines the process implementation requirements for a terminology management system and for a Registration Authority with a digital annex;

— ISO 18541-1, *Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 1: General information and use case definition*, which describes the requirements for the vehicle manufacturer (VM) repair and maintenance information (RMI) systems;

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

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

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

The purpose of the standardized automotive terminology is to facilitate searching for RMI in the VM RMI systems.

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1) REGULATION (EC) No 715/2007 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 [7] and COMMISSION REGULATION (EC) No 692/2008 of 18 July 2008 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 [8] and amending COMMISSION REGULATION (EU) No 566/2011 of 8 June 2011 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.

The information packages that are to be searched using the standardized terminology are described in this part of ISO 18542. Not all of the use cases and information types described in this part of ISO 18542 are pertinent; rather a subset is applicable to this standard.

This subset concerns the searching of the terms described in UC 4.2 according to ISO 18541-1 of the following information package types:

— Workshop Procedures (UC 5.1);

— Wiring Diagrams (UC 5.2);

— Technical Service Bulletins (UC 5.3).

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

Part 1: General information and use case definition

1 Scope

ISO 18542 is structured in two parts:

— This part of ISO 18542 defines a framework and a process for agreeing terms.

— Part 2 defines the process implementation requirements for a terminology management system and for a Registration Authority with a digital annex.

The basic purpose of ISO 18542 is to facilitate searching of vehicle manufacturer (VM) repair and maintenance information (RMI) websites by independent operators (IOs).

This part of ISO 18542 provides a general overview and structure of each part of ISO 18542. It also specifies use cases related to repair and maintenance information (RMI) terminology in order to standardize the access to RMI for IOs.

The provision of the agreed automotive RMI terminology itself is outside the remit 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 ISO 18542. It will 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.

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

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

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

Terms, definitions and abbreviated terms

3.1 Terms and definitions

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

3.1.1
access level
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
agreed RMI terminology
set of agreed, translated and communicated terms for searching RMI packages in a vehicle manufacturer RMI system

3.1.3
applicant
individual who makes an application requesting access to the terminology management system

3.1.4
change control board
CCB
process group, established by the Registration Authority, having responsibility for approving any system change requests

3.1.5
defined target language
language defined by the Registration Authority for term translation

3.1.6
digital annex
digital library in which terms related to automotive RMI terminology are stored and made available in digital formats in the defined target languages

3.1.7
end user
independent operator or vehicle manufacturer user, where independent operator corresponds to the legal definition provided in the referenced legislation regarding vehicle type approval

3.1.8
entity
object, concept or notion in the automotive domain designated by a term

NOTE An entity only exists for this process if there is a term in US-English designating it. The entity is the common meaning of all translated terms in the defined target languages from the US-English term.

3.1.9
independent operator
IO
undertakings other than authorized dealers and repairers which are directly or indirectly involved in the repair and maintenance of motor vehicles, in particular 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

3.1.10
process object
result of a process use case

NOTE For a detailed description, see 6.2.2.

3.1.11
process user
person enabled to participate in the terminology process and to use the system for the different actions in the process

NOTE For a detailed description, see 7.1.

3.1.12
registration authority
institution that operates the automotive RMI terminology process, the terminology management system (TMS) and the digital annex

3.1.13
terminology management system
TMS
<RMI> web-based system that is used to create and manage the agreed terms

3.1.14
terminology management system administrator
TMS administrator
person who maintains the TMS and is responsible for a range of operational and maintenance activities for both the TMS and the database

NOTE Including but not limited to managing registrations, updates to the TMS, operation and maintenance support, and release management.

3.1.15
term
word or standalone expression for an entity that has linguistic, semantic and grammatical integrity

3.1.16
translation memory
TM
storage of 'segments', which can be sentences or sentence-like units (headings, titles or elements in a list), that have been previously translated

NOTE The translation memory stores the source text and its corresponding translation in language pairs called translation units.

3.1.17
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 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 Adopted from Directive 2007/46/EC [7].

3.1.18
vehicle manufacturer repair and maintenance information system
VM RMI system
information system by which the VM provides access to RMI through a website

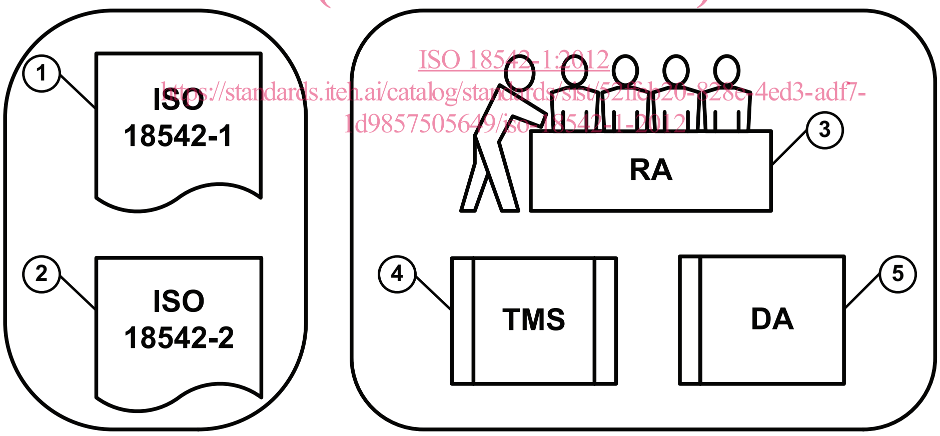
3.2 Abbreviated terms

AR	authorized repairer
CCB	change control board
DA	digital annex
GUI	graphical user interface
IO	independent operator
RMI	repair and maintenance information
TM	translation memory
TMS	terminology management system
UC	use case
VM	vehicle manufacturer

4 Standard and implementation

4.1 Overview of 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 (TRG)

4 terminology management system (TMS)

5 digital annex (DA): agreed automotive RMI terminology

NOTE As illustrated in the figure, 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 ISO 18542

This part of ISO 18542 requires a TMS and a Registration Authority to provide a digital annex.

5 Standardized RMI terminology - General information and overview

5.1 Fundamental principles

There are a number of agreed fundamental principles that underpin this document. An appreciation of these principles is important to understanding the objective of the standard, and, how this part of the standard helps to achieve this objective.

The key principles are:

— The agreed VM RMI terminology development is an on-going task not constrained by the timescales for development of this standard.

— VMs will not be required to change their internal terminology or their VM RMI systems, to meet this standard. They may choose to conduct a mapping exercise whereby the agreed term will get mapped to an internal term to facilitate IOs in searching the VM RMI system.

— The terminology sources to be agreed are derived from existing VM terminology.

— All proposals submitted by a VM for an agreed new term are to be submitted in US-English.

— All proposals submitted by the IO nominated person as a result of the feedback process for existing terms are to be submitted in US English.

— The VM terminology provided for RMI and its maintenance is the responsibility of the VM.

— IO representatives (up to two) will participate as reviewers in the terminology definition process.

— The primary user for the agreed terminology is the individual end user of the VM RMI system.

— VMs are only required to support terminology mapping for languages for which a digital annex is in existence and if they provide this language to their ARs.

— Once a term has been agreed and mapped, this Term shall not change except in cases where there has been a fundamental misunderstanding of the engineering concept. Therefore only requests for new terms are allowed.

5.2 Scope of the agreed VM RMI terminology

The process defined in this standard is focused on terms convenient for searching automotive RMI in a VM RMI system according to use case 4.2 in ISO 18541-1.

As an implication, the granularity of the RMI terminology shall be at the level of main components or assembly parts that can be removed and re-fitted. Elementary parts, e.g. screws, seals, etc. are not referred to in the terminology. A search based on elementary parts would often deliver no results. Elementary parts usually do not appear in titles or tags of RMI documents.

It is expected, that the number of agreed terms in the digital annex will be moderate (i.e. initially this is expected to be of the order of 1 000 terms). The set of agreed terms will be the result of a balanced trade-off between level of detail and such aspects as usability and search efficiency for the user.

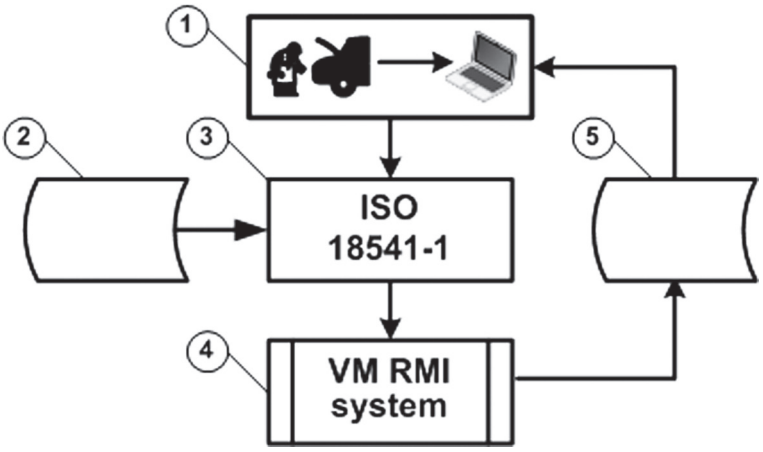
In order to maintain the integrity of the digital annex, abbreviations and acronyms will not be permitted. The main reasons for this are that abbreviations and acronyms can be misunderstood and misleading in the reference source language of US-English.

EXAMPLE AC = Air Conditioning, Air Compressor, Air Conditioner, Acceptance Criteria, Air Cooled, Active Component, Authentication Code, Adjacent Channel, Analogue Control, Alignment Check, Alternating Current, Antenna Controller, Atmospheric Correction. These are some of approximately 500 definitions for AC alone.

Their translation into all defined search languages would expand the digital annex through proliferation of Terms and lead to further misunderstandings and confusion.

5.3 Usage of the RMI terminology in the context of the RMI system

Figure 2 describes the scenario for searching in the VM RMI system with an agreed term. It is assumed that the IO end user has already followed all of the steps necessary to reach the point of searching the required information: registration, log-in, payment, etc. The IO end user enters the agreed term and gets the matching documents from the VM RMI system.



Key

1 independent operator: end user searching for information on any VM Euro 5 or later vehicle
2 term in the digital annex
3 ISO 18541 1: Request under UC 4.2: UC 5.1 – Workshop Procedures, UC 5.2 – Wiring Diagrams, UC 5.3 – Technical Service Bulletins
4 VM RMI system
5 response from VM RMI system

Figure 2 — Independent operator search showing the role of RMI terminology

5.4 Implementation aspects of the process

The process users will be supported in their work by an RMI TMS according to the process implementation requirements in ISO 18542-2.

The process by which terms are agreed and published will be mirrored in the workflow of a TMS.

Translation shall be based on relevant international standards for translation quality which ensure that all necessary information in the source language is included for unambiguous understanding of the term. The translator is required to do the necessary target language research. If it is decided not to carry out the term translation within the TMS, then it is recommended that the translation service provider use a separate translation memory in order to translate term definitions and context attributes in a consistent way.