



## Road vehicles — Standardized access to automotive repair and maintenance information (RMI) —

### Part 3: Functional user interface requirements

*Véhicules routiers — Normalisation de l'accès aux informations relatives à la réparation et à la maintenance pour l'automobile (RMI) —*

*Partie 3: Exigences d'interface fonctionelles pour l'utilisateur*

ICS 43.040.15; 43.180

#### ISO/CEN PARALLEL PROCESSING

This draft has been developed within the European Committee for Standardization (CEN), and processed under the **CEN-lead** mode of collaboration as defined in the Vienna Agreement.

This draft is hereby submitted to the ISO member bodies and to the CEN member bodies for a parallel five-month enquiry.

Should this draft be accepted, a final draft, established on the basis of comments received, will be submitted to a parallel two-month approval vote in ISO and formal vote in CEN.

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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.

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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.

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ISO 18541-3 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, and by Technical Committee CEN/CENELEC/TC 301, *Road vehicles* in collaboration.

ISO 18541 consists of the following parts, under the general title *Road vehicles — Standardized access to automotive repair and maintenance information (RMI)*:

- Part 1: General information and use case definition
- Part 2: Technical requirements
- Part 3: Functional user interface requirements
- Part 4: Conformance test

## Introduction

This set of standards 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 70/156/EEC [1], 2002/24/EC [2] and 2003/37/EC [3] and, in particular, to requirements for access to vehicle repair and maintenance information by independent operators.

This standard only covers the access to automotive repair and maintenance information<sup>1)</sup> based on Directive 70/156/EEC [1]. The Directive 70/156/EEC [1] is replaced by 2007/46/EC [4].

The purpose of the EC Mandate M/421 [1] 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 the standard derives from the legislative requirements on European level in the field of repair and maintenance information and related security requirements.

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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 [5] 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 [6] and amending COMMISSION REGULATION (EU) No 566/2011 of 8 June 2011 [7] amending Regulation (EC) No 715/2007 of the European Parliament [5] and of the Council and Commission Regulation (EC) No 692/2008 [6] as regards access to vehicle repair and maintenance information.

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# Road vehicles — Standardized access to automotive repair and maintenance information (RMI) — Part 3: Functional user interface requirements

## 1 Scope

This part of the standard includes "functional user interface requirements" which are related to automotive repair and maintenance information (RMI) systems in order to standardize the access to RMI for independent operators.

This part specifies all functional user interface requirements related to a vehicle manufacturer's RMI system. These requirements will reflect the deriving needs from the use cases as specified in ISO 18541-1.

The vehicle manufacturer (VM) RMI website is accessible for independent operators (IO's) by complying with the European CEN and ISO standards for accessing RMI. "These standards have been defined in co-operation between the VMs and IOs within the automotive industry.

This means practically that the user will be guided to the information he is searching for by, for example, entering the Vehicle Identification Number (VIN) of the vehicle and the type of information required.

The navigation has been constructed in such a way that users will find the information in a simplified way.

After logging in (requires registration) the user will be presented with options for accessing the RMI. The standardized access will be presented in the form of types of information which will guide the user to the information, at certain stages the user is requested to enter further data in order for the RMI system to correctly identify the information the user is searching for.

It is recommended that the user follows the guidance precisely in order to guarantee that the user will find the correct information the user requires.

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

ISO 18541-2, *Road vehicles — Standardized access to automotive RMI — Part 2: Technical requirements*

ISO 18541-4, *Road vehicles — Standardized access to automotive RMI — Part 4: Conformance test*

ISO 18542 (all parts), *Road vehicles — Standardized RMI terminology*

ISO 20828, *Road vehicles — Security certificate management*

ISO 22900-2, *Road vehicles — Modular vehicle communication interface (MVCI) — Part 2: D-PDU API*

### 3 Terms, definitions, symbols and abbreviated terms

#### 3.1 Terms and definitions

For the purposes of this document, the terms and definitions of ISO 18541-1 and the following apply.

##### 3.1.1

###### **artefact**

artefact (software development), one of many kinds of tangible by-products produced during the development of software.

#### 3.2 Abbreviated terms

AR	authorized repairer
FUIREQ-	functional user interface requirement
IO	independent operator
RMI	repair and maintenance information
VCI	vehicle communication interface
VM	vehicle manufacturer

### 4 Conventions

This part of ISO 18541 is based on the conventions discussed in the OSI Service Conventions (ISO/IEC 10731:1994).

### 5 Requirements overview and principles

#### 5.1 Basic principles for requirements definition

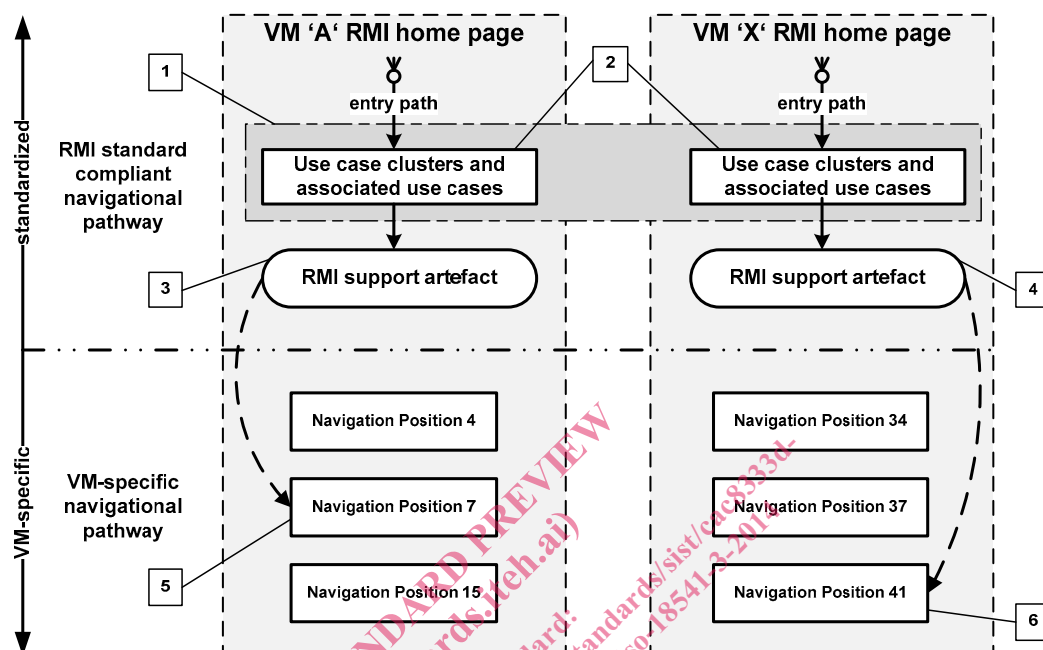
Basic principles have been established as a guideline to define the requirements.

- The requirements stated in this part of the standard shall not specify any implementation details.
- Requirements shall be expressed in terms of performance rather than design or descriptive characteristics. This approach leaves maximum freedom to technical development.
- The requirements shall allow for flexible navigational pathways for practical and state of the art access to RMI in the VM web sites.
- The requirements shall allow for concepts to be able to implement navigational principles to minimize the impact to the existing VM RMI systems.



## 5.2 Navigational pathway from standardized use cases to VM-specific navigation position

Figure 1 illustrates the navigational pathway from use cases to VM-specific navigation position. Each VM RMI system starts with the RMI home page. If the user selects the "standardized navigation" (see Figure 3 key 2) the RMI system navigates to the VM-specific use cases implementation (see Figure 1 key 2) as defined in ISO 18541-1. Figure 1 keys 3 and 4 illustrate the VM-specific RMI support artefact.



### Key

- 1 Common part for all VM RMI systems
- 2 VM-specific implementation of use cases as defined in ISO 18541-3
- 3 VM 'A' specific implementation of RMI support artefact guiding the IO from the standardized use cases map to the VM-specific entry points
- 4 VM 'X' specific implementation of RMI support artefact guiding the IO from the standardized use cases map to the VM-specific entry points
- 5 VM 'A' specific implementation to navigation position 7 (see key 5)
- 6 VM 'X' specific implementation to navigation position 41 (see key 6)

**Figure 1 — Navigational pathway from standardized use cases to VM-specific navigation position**

## 5.3 Requirements clusters

Figure 2 illustrates the functional user interface requirements clusters. The figure shall provide an overview about all functional user interface requirements clusters and the specific functional user interface requirements. Each functional user interface requirement is identified by the mnemonic "FUIREQ-" and an alpha-numeric number. The name of the functional user interface requirement is descriptive for the area the requirement is related to.