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Document Change History

Date	Release	Changed by	Description
2016-11-30	4.3.0	AUTOSAR Release Management	Editorial changes
2015-07-31	4.2.2	AUTOSAR Release Management	Editorial changes
2014-10-31	4.2.1	AUTOSAR Release Management	Support variant rich Special Data
2013-10-31	4.1.2	AUTOSAR Release Management	Editorial changes
2013-03-15	4.1.1	AUTOSAR Administration	Initial release

Disclaimer

Advice for users

AUTOSAR specifications may contain exemplary items (exemplary reference models, "use cases", and/or references to exemplary technical solutions, devices, processes or software).

Any such exemplary items are contained in the specifications for illustration purposes only, and they themselves are not part of the AUTOSAR Standard. Neither their presence in such specifications, nor any later documentation of AUTOSAR conformance of products actually implementing such exemplary items, imply that intellectual property rights covering such exemplary items are licensed under the same rules as applicable to the AUTOSAR Standard.

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Bibliography

[1] Standardization Template
AUTOSAR_TPS_StandardizationTemplate

[2] Requirements on Standardization Template
AUTOSAR_RS_StandardizationTemplate

[3] Main Requirements
AUTOSAR_RS_Main

1 Introduction

1.1 Scope of this document

This document has the purpose to collect requirements on Methodology and Templates which are

- unspecific to single documents

  OR

- specific to parts of the AUTOSAR meta-model relevant for almost all AUTOSAR templates

1.2 Document Conventions

The representation of requirements in AUTOSAR documents follows the table specified in [TPS_STDT_00078], see Standardization Template, chapter Support for Traceability ([1]).

The verbal forms for the expression of obligation specified in [TPS_STDT_00053] shall be used to indicate requirements, see Standardization Template, chapter Support for Traceability ([1]).

1.3 Guidelines

Existing specifications shall be referenced (in form of a single requirement). Differences to these specifications are specified as additional requirements. All Requirements shall have the following properties:

- Redundancy
  Requirements shall not be repeated within one requirement or in other requirements.
- Clearness
  All requirements shall allow one possibility of interpretation only. Used technical terms that are not in the glossary must be defined.
- Atomicity
  Each Requirement shall only contain one requirement. A Requirement is atomic if it cannot be split up in further requirements.
- Testability
  Requirements shall be testable by analysis, review or test.
- Traceability
  The source and status of a requirement shall be visible at all times.

1.4 Requirements Tracing

The following table references the requirements specified in [2] and links to the fulfillment of these.

Requirement	Description	Satisfied by
[RS_Main_00080]	AUTOSAR shall provide means to describe a component model for Application Software	[RS_MTG_00001]
[RS_Main_00190]	AUTOSAR shall support interoperability with non-AUTOSAR software on the same ECU	[RS_MTG_00003]

2 Requirements

2.1 Category: AUTOSAR Main Requirements

This section re-defines requirements from relevant requirements defined in `Main Requirements` [3].

2.1.1 Re-usability

[RS_MTG_00001] AUTOSAR shall ease the re-usability of software and its concepts and implementations ⌈

Type:	valid
Description:	AUTOSAR shall ease the re-usability of software and its concepts and implementations
Rationale:	See requirement [RS_Main_00080].
Use Case:	See requirement [RS_Main_00080].
Dependencies:	–
Supporting Material:	–

⌋*(RS_Main_00080)*

2.1.2 Different functional domains

[RS_MTG_00002] AUTOSAR shall provide a software architecture that is applicable across different functional domains ⌈

Type:	valid
Description:	AUTOSAR shall provide a software architecture that is applicable across different functional domains
Rationale:	–
Use Case:	–
Dependencies:	–
Supporting Material:	–

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2.1.3 Interoperability with legacy software

[RS_MTG_00003] AUTOSAR shall provide interoperability with legacy software ⌈

Type:	valid

Description:	AUTOSAR shall provide interoperability with legacy software
Rationale:	See requirement [RS_Main_00190].
Use Case:	See requirement [RS_Main_00190].
Dependencies:	–
Supporting Material:	–

⌋(*RS_Main_00190*)

2.2 Category: Variant Handling

This section defines requirements on AUTOSAR Variant Handling.

2.2.1 Supported combinations of System Constant Value

[RS_MTG_00005] Describe supported combinations of System Constant Value of an Software Component Type ⌈

Type:	valid
Description:	The Generic Structure Template shall support the description of the allowed combinations of System Constant Values of a Software Component Type.
Rationale:	Avoid illegal configuration of a software components, Enable selection of an appropriate Software Component Type.
Use Case:	–
Dependencies:	–
Supporting Material:	[RS_SWCT_03100]

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[RS_MTG_00006] Describe supported combinations of System Constant Value of an `InternalBehavior` ⌈

Type:	valid
Description:	The Generic Structure Template shall support the description of the allowed combinations of System Constant Values of an `InternalBehavior`.
Rationale:	Avoid illegal configuration of a Software Components Enable selection of an appropriate `InternalBehavior`.
Use Case:	–
Dependencies:	–
Supporting Material:	[RS_SWCT_03100]

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[RS_MTG_00007] Describe supported combinations of System Constant Value of an Implementation ⌈

Type:	valid
Description:	The Generic Structure Template shall support the description of the allowed combinations of System Constant Values of an Implementation.
Rationale:	Avoid illegal configuration of a Software Components Enable selection of an appropriate Implementation.
Use Case:	–
Dependencies:	–
Supporting Material:	[RS_SWCT_03100]

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[RS_MTG_00008] Describe Special Data which only applies for specific variants ⌈

Type:	valid
Description:	The Generic Structure Template shall support the description of Special Data (used to store arbitrary data for which no other element exists of the AUTOSAR data model) being subject of variability. Thereby values of special data can be subject of variability and / or the existence of parts of the Special Data can be subject of variability
Rationale:	Describe proprietary non-AUTOSAR information which relates to variant rich AUTOSAR models.
Use Case:	–
Dependencies:	–
Supporting Material:	

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3 Change History

3.1 Change History for AUTOSAR 4.1.1 against 4.0.3

3.1.1 Removed RS Items

N/A

3.1.2 Changed RS Items

N/A

3.1.3 Added RS Items

Number	Heading
[RS_MTG_00001]	AUTOSAR shall ease the re-usability of software and its concepts and implementations (former RS_SWCT_0040)
[RS_MTG_00002]	AUTOSAR shall provide a software architecture that is applicable across different functional domains (former RS_SWCT_0050)
[RS_MTG_00003]	AUTOSAR shall provide interoperability with legacy software (former RS_SWCT_0130)
[RS_MTG_00005]	Describe supported combinations of System Constant Value of an Software Component Type (former RS_SWCT_3145)
[RS_MTG_00006]	Describe supported combinations of System Constant Value of an InternalBehavior (former RS_SWCT_3146)
[RS_MTG_00007]	Describe supported combinations of System Constant Value of an Implementation (former RS_SWCT_3147)

Table 3.1: Added Specification Items in 4.1.1

3.2 Change History for AUTOSAR 4.2.1 against 4.1.1

3.2.1 Removed RS Items

N/A

3.2.2 Changed RS Items

N/A

3.2.3 Added RS Items

Number	Heading
[RS_MTG_00008]	Describe Special Data which only applies for specific variants

Table 3.2: Added Specification Items in 4.2.1