Document Title	Release 3.0 Overview and Revision History
Document Owner	AUTOSAR
Document Responsibility	Release Management
Document Identification No	000
Document Classification	Auxiliary

Document Version	1.6.1
Document Status	Final
Part of Release	3.0
Revision	7
Release Validity Status	Obsolete

Document Change History

Date	Version	Changed by	Change Description
27.01.2011	1.6.1	Release Management	Corrected Release Status to Obsolete
30.09.2010	1.6.0	Release Management	Update for Revision 7
02.02.2010	1.5.0	Release Management	Update for Revision 6
24.07.2009	1.4.0	Release Management	Released files added, cluster-wise and as Rev 0005 snapshot
04.02.2009	1.3.0	Release Management	Released files added, cluster-wise and as Rev 0004 snapshot
09.06.2008	1.2.0	Release Management	Released files added, cluster-wise and as Rev 0003 snapshot
01.02.2008	1.1.0	Release Management	Released files added, cluster-wise and as Rev 0002 snapshot
21.12.2007	1.0.0	Release Management	Released files added, cluster-wise and as Rev 0001 snapshot

Table of Contents

1 Scope of this Document

This document provides an overview of the complement of AUTOSAR deliverables comprising the Release 3.0 in its latest Revision 7. Further a history is provided aimed to identify the changes between the individual revisions within Release 3.0. This document also contains a compilation of known technical deficiencies and their relation to specific documents.

1.1 Technical Overview

A technical overview on the technical concepts behind the AUTOSAR Standard is provided in [2].

1.2 Document Overview

This document is structured as follows:

Chapter 2 provides a list of documentation references.

Chapter 3 provides a set of definitions aimed to increase the understanding of the content of this document and the Release 3.0.

Chapter 4 provides a summary of changes that were implemented since the preceding Release 2.1.

Chapter 5 states the Release's 3.0 validity status and contains the overview of deliverables comprising the Release 3.0 in its latest Revision 7. This chapter is structured according to the clusters being in use in AUTOSAR Release 3.0.

Chapter 6 contains a compilation of known technical deficiencies and their relation to specific documents.

Chapter 7 contains the detailed Revision History.

2 Related Documentation

[1] AUTOSAR Glossary
AUTOSAR_Glossary.pdf

[2] AUTOSAR Technical Overview
AUTOSAR_TechnicalOverview.pdf

[3] Requirements on Standard Maintenance
AUTOSAR_RS_StandardMaintenance.pdf

[4] Definition of Release Management Process
AUTOSAR_DS_ReleaseManagement.pdf

[5] Definition of Change Management Process
AUTOSAR_DS_ChangeManagementProcess.pdf

3 Definitions

As far as not explained in this chapter, a collection of AUTOSAR definitions is provided in the Glossary [1].

3.1 Release Number

AUTOSAR applies a two-digit numbering scheme Rx.y to identify releases. Refering to [4], its primary purpose is to identify a release as a major (upgrade) or as minor (update) release. Refering to previous releases (e.g. R2.0), incrementing the first digit “x” does identify a release as major, whereas incrementing “y” will mark a release as only minor by nature.

3.2 Revision Number

The Revision Number was first time introduced with Release 2.1 and extends the Release Numbering scheme as explained in section 3.1. Combined with the Release Number, the Revision Number shall:

1) Precisely identify the actual content (set of deliverables) of a given release,
2) As depicted in every deliverable, precisely identify a given deliverable (with its unique name and three-digit version ID) as being part of the release (here: Release 3.0)

Item 1) addresses the fact that the set of deliverables comprising a release (in the meaning of a baseline) is rarely established once at a certain point in time (“Big Bang”), but rather evolves and/or varies over a certain timeframe the maximum duration of which is limited by the timeframe a release is declared as “valid” by the AUTOSAR Partnership (see section 3.3).

Hence with Item 1), a major prerequisite will be put in place to enable the Standard Maintenance as planned by the AUTOSAR Partnership. In general, the primary objective is to avoid the provision of an additional – previously not planned – release in case only one or a few deliverables were to be modified as part of the Standard Maintenance. Conversely, without the application of a Revision Number, if the AUTOSAR partnership wants to avoid the provision of (an) additional intermediate release(s), one would have to defer the introduction of any changes until the next planned release.– even in case of changes urgently needed by the applicants of the AUTOSAR Standard.

Item 2) is complementary to Item 1) in that for every deliverable a unique identifier is provided upon which revision a) a deliverable was either 1st time added to/removed from a release or b) a deliverable was modified as being part of one and the same release, as long the latter is valid and therefore subject to Standard Maintenance.

Hence with item 2), the combination of Release and Revision Number in a document can be interpreted either as a) “deliverable was (1st time) added to the Release x.y Rev n” or b) as “deliverable was modified as part of Release x.y Rev m”, with m > n.

Conversely, the revision number will only change for deliverables subject to addition or modification of a valid release (baseline). After their 1st time addition to the release (baseline), it will not change for deliverables which are not modified.

In the light of the above provided background, as an additional remark, the Revision Number will only be applied for each deliverable's release version, i.e. it will not be applied to working versions.

3.3 Release Validity Status

According to the Release Management Process Definition [4], each release (baseline) can enter one of the three consecutive steps within its lifecycle:

1. CURRENT: The latest release. A CURRENT release is by default VALID.
2. VALID: a release preceding the CURRENT release. A VALID release is subject to Standard Maintenance, the procedures of which are defined by a Change Management Process Definition [5].
3. OBSOLETE: a release preceding the VALID and/or CURRENT release for which, however, no Standard Maintenance is provided anymore.

3.4 Standard Specifications

Standard Specifications are documents, models or formats which comprise the main result of the AUTOSAR Partnership. It includes the standardized results which have to be fulfilled to achieve AUTOSAR conformance. Standard Specifications are the base for AUTOSAR conformance tests.

In Release 3.0, Standard Specifications are stored at the following URLs:
https://svn3.autosar.org/repos2/work/22_Releases/30_Release3.0/01_Standard

3.5 Auxiliary Material

Auxiliary Material is a supporting document, model or format meant to further explain and/or improve the usability of standard specifications of the AUTOSAR partnership. Auxiliary material is recommended to read and/or use for a better understanding or harmonized usage of the AUTOSAR standard but is not mandatory to follow for AUTOSAR conformance.

In Release 3.0, Auxiliary Material is stored at the following URLs:
https://svn3.autosar.org/repos2/work/22_Releases/30_Release3.0/02_Auxiliary

3.6 Main Documents

"Main Documents" are general AUTOSAR documents facilitating a global view on requirements, concepts and terms.

3.7 Basic Software Architecture and Runtime Environment

Documents belonging to this release cluster provide descriptions, requirements and specifications of the AUTOSAR Software Architecture and the Runtime Environment.

3.8 Methodology and Templates

Documents belonging to this release cluster provide requirements, specifications, templates and guidelines on the AUTOSAR methodology and tool chain.

3.9 Application Interfaces

Documents belonging to this release cluster provide specifications of interfaces between applications and related explanatory material.

3.10 Other Documents

This cluster contains documents which do not belong to any of the previous release clusters.

3.11 Document status "Final"

Deliverables to which the status "final" was assigned underwent both the planned amount of modifications (either as part of the current or a preceding release) and received the related approvals by the AUTOSAR Core Partners.

3.12 Document status "Draft"

For deliverables to which the status "draft" was assigned either only parts of the planned modifications were undertaken and/or the necessary steps to finalize a document are not yet in place.

In case one has to expect limitations resulting from the application of draft documents, explanations of technical deficiencies are provided in chapter 6.

4 Release 3.0 – Summary of Changes

This chapter contains a summary of changes which were implemented since the previous Release 2.1.

4.1 Cluster: Basic Software Architecture and Runtime Environment

For the Basic Software Modules, the concept for Wake-up of ECUs and Start-up of networks was harmonized.

Three new modules were introduced into the Basic Software Architecture:
- CAN State Manager,
- FlexRay State Manager
- LIN State Manager.

The module Generic Network Management Interface was enhanced by a Network Management Gateway feature.

Most of the Basic Software Module specifications were modified such that they are now linked to the Basic Software UML Model and the Meta Model, respectively.

The Specification of CAN Generic Network Management was removed from the set of deliverables for this Release 3.0 due to obsolescence: This specification was merged with the Specification of CAN Network Management.

4.2 Cluster: Methodology and Templates

The Specification of a Basic Software Module Description Template was introduced as a new deliverable.

The Meta Model and the related template specifications were continuously improved.

The Specification of the System Template was aligned with the Specification of the ECU Configuration Parameters. Initial steps were made to harmonize the System Template with the FIBEX 2.0 Standard.

The UML 2.0 profile document was removed from the set of deliverables for this specific Release 3.0 due to obsolescence.

The Specification of ECU Configuration Parameters was removed from the set of deliverables for this Release 3.0: The content of this specification is now part of the following deliverables:
- Specification of ECU Configuration
- Specification of ECU Configuration Parameters (XML)

4.3 Cluster: Application Interfaces

The Integrated Master Table is released for the first time containing a dictionary of data types and units.

Explanatory documents are first time released for the domains:

- Body and Comfort,
- Powertrain,
- Chassis

As a preparatory step for future releases, a Modeling Guide for Application Interfaces and a related requirements document are first time released.

The standardized Application Interfaces are available as three XML specifications with each of it referring to the XML Schemas of Release 2.0, Release 2.1 and Release 3.0, respectively.

4.4 Cluster: Other Documents

Process documents related to the maintenance of the Standard (see [3] to [5]) were removed from this Release R3.0:

- Definition of Release Management Process
- Requirements on Standard Maintenance
- Definition of Change Management Process

The set of process documents which is related to the accreditation of Conformance Test Agencies was enhanced by the following documents:

- Requirements for CTA Accreditation Bodies
- AUTOSAR CTA Accreditation - application rules for ISO Guide 65
- AUTOSAR CTA Accreditation - application rules for ISO 17025

5 Release 3.0 – Document Overview

5.1 Release Validity Information

According to the Release Management Process Definition [4], this Release 3.0 in its latest Revision 7 has the validity status “Valid”.

5.2 Cluster: Main Documents

As of the latest Revision 7, the following Main Documents are part of Release 3.0:

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Main Requirements	std	2.1.0	Final	AUTOSAR_MainRequirements
Glossary	std	2.1.2	Final	AUTOSAR_Glossary
Technical Overview	std	2.2.0	Final	AUTOSAR_TechnicalOverview
Methodology	std	1.2.0	Final	AUTOSAR_Methodology

5.3 Cluster: Basic Software Architecture and Runtime Environment

As of the latest Revision 7, the following Basic Software and Runtime Environment documents are part of Release 3.0:

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Specification of the Virtual Functional Bus	std	1.1.0	Final	AUTOSAR_SWS_VirtualFunctionBus
Layered Software Architecture	aux	2.2.0	Final	AUTOSAR_LayeredSoftwareArchitecture
List of Basic Software Modules	std	1.3.0	Final	AUTOSAR_BasicSoftwareModules
General Requirements on Basic Software Modules	std	2.3.0	Final	AUTOSAR_SRS_General
Requirements on a Free Running Timer	aux	1.0.2	Final	AUTOSAR_SRS_SWFreeRunningTimer
Specification of Development Error Tracer	std	2.2.0	Final	AUTOSAR_SWS_DET
Specification of Platform Types	std	2.3.0	Final	AUTOSAR_SWS_PlatformTypes
Specification of Standard Types	std	1.3.0	Final	AUTOSAR_SWS_StandardTypes
Specification of C Implementation Rules	aux	1.0.3	Final	AUTOSAR_SWS_C_ImplementationRules
Specification of Communication Stack Types	std	2.3.0	Final	AUTOSAR_SWS_ComStackTypes
Specification of Memory Mapping	std	1.2.0	Final	AUTOSAR_SWS_MemoryMapping
Specification of Compiler Abstraction	std	2.0.0	Final	AUTOSAR_SWS_CompilerAbstraction
Specification of BSW Scheduler	std	1.1.0	Final	AUTOSAR_SWS_BSW_Scheduler
Modeling Guidelines of Basic Software EA UML Model	aux	1.2.0	Final	AUTOSAR_BSW_EA_UML_ModelingGuideline

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Basic Software UML Model	aux	2.4.0	Final	AUTOSAR_BSW_UML_Model
Requirements on RTE Software	aux	1.2.0	Final	AUTOSAR_SRS_RTE
Specification of RTE Software	std	2.3.0	Final	AUTOSAR_SWS_RTE
Requirements on LIN	aux	1.1.2	Final	AUTOSAR_SRS_LIN
Specification of LIN Interface	std	2.1.0	Final	AUTOSAR_SWS_LIN_Interface
Specification of LIN Driver	std	1.3.0	Final	AUTOSAR_SWS_LIN_Driver
Requirements on CAN	aux	2.3.0	Final	AUTOSAR_SRS_CAN
Specification of CAN Transport Layer	std	2.3.0	Final	AUTOSAR_SWS_CAN_TP
Specification of CAN Interface	std	3.2.0	Final	AUTOSAR_SWS_CAN_Interface
Specification of CAN Driver	std	2.4.0	Final	AUTOSAR_SWS_CAN_Driver
Specification of CAN Transceiver Driver	std	1.3.0	Final	AUTOSAR_SWS_CAN_TransceiverDriver
Requirements on Communication	aux	2.2.0	Final	AUTOSAR_SRS_COM
Specification of Communication	std	3.2.0	Final	AUTOSAR_SWS_COM
Requirements on I-PDU Multiplexer	aux	1.0.3	Final	AUTOSAR_SRS_IPDUM
Specification of I-PDU Multiplexer	std	1.3.0	Final	AUTOSAR_SWS_IPDUM
Requirements on Network Management	aux	2.0.2	Final	AUTOSAR_SRS_NM
Specification of Generic Network Management Interface	std	1.1.0	Final	AUTOSAR_SWS_NMInterface
Specification of FlexRay Network Management	std	3.1.0	Final	AUTOSAR_SWS_FlexRay_NM
Specification of CAN Network Management	std	3.2.0	Final	AUTOSAR_SWS_CAN_NM
Requirements on Function Inhibition Manager	aux	1.0.3	Final	AUTOSAR_SRS_FIM
Specification of Function Inhibition Manager	std	1.2.0	Final	AUTOSAR_SWS_FIM
Requirements on Diagnostic	aux	2.0.3	Final	AUTOSAR_SRS_Diagnostic
Specification of Diagnostic Communication Manager	std	3.0.0	Final	AUTOSAR_SWS_DCM
Specification of Diagnostics Event Manager	std	2.2.1	Final	AUTOSAR_SWS_DEM
Requirements on FlexRay	aux	2.0.3	Final	AUTOSAR_SRS_FlexRay
Specification of FlexRay Transport Layer	std	2.3.0	Final	AUTOSAR_SWS_FlexRay_TP
Specification of FlexRay Interface	std	3.1.0	Final	AUTOSAR_SWS_FlexRay_Interface
Specification of FlexRay Driver	std	2.2.0	Final	AUTOSAR_SWS_FlexRay_Driver
Specification of FlexRay Transceiver Driver	std	1.3.0	Final	AUTOSAR_SWS_FlexRayTransceiver
Requirements on Gateway	aux	2.0.3	Final	AUTOSAR_SRS_Gateway
Specification of PDU Router	std	2.3.0	Final	AUTOSAR_SWS_PDU_Router
Requirements on Memory Services	aux	2.2.0	Final	AUTOSAR_SRS_MemoryServices
Specification of NVRAM Manager	std	2.3.0	Final	AUTOSAR_SWS_NVRAM_Manager
Specification of CRC Routines	std	3.1.0	Final	AUTOSAR_SWS_CRC_Routines
Requirements on Mode	aux	1.2.0	Final	AUTOSAR_SRS_ModeManage

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Management				ment
Specification of ECU State Manager	std	1.3.0	Final	AUTOSAR_SWS_ECU_StateManager
Specification of Communication Manager	std	2.1.0	Final	AUTOSAR_SWS_ComManager
Specification of Watchdog Manager	std	1.2.0	Final	AUTOSAR_SWS_WatchdogManager
Requirements on Operating System	aux	2.0.3	Final	AUTOSAR_SRS_OS
Specification of Operating System	std	3.1.0	Final	AUTOSAR_SWS_OS
General Requirements on SPAL	aux	2.1.1	Final	AUTOSAR_SRS_SPAL_General
Requirements on SPI Handler/Driver	aux	2.0.3	Final	AUTOSAR_SRS_SPI_HandlerDriver
Specification of SPI Handler/Driver	std	2.2.0	Final	AUTOSAR_SWS_SPI_HandlerDriver
Requirements on ICU Driver	aux	2.0.3	Final	AUTOSAR_SRS_ICU_Driver
Specification of ICU driver	std	3.0.0	Final	AUTOSAR_SWS_ICU_Driver
Requirements on ADC Driver	aux	2.2.0	Final	AUTOSAR_SRS_ADC_Driver
Specification of ADC Driver	std	3.0.1	Final	AUTOSAR_SWS_ADC_Driver
Requirements on I/O Hardware Abstraction	aux	1.0.3	Final	AUTOSAR_SRS_IOHW_Abstraction
Specification of I/O Hardware Abstraction	aux	2.0.0	Final	AUTOSAR_SWS_IOHWAbstraction
Requirements on RAM Test	aux	1.1.2	Final	AUTOSAR_SRS_RAM_Test
Specification of RAM Test	std	1.2.1	Final	AUTOSAR_SWS_RAM_Test
Requirements on PWM Driver	aux	2.1.1	Final	AUTOSAR_SRS_PWM_Driver
Specification of PWM Driver	std	2.2.0	Final	AUTOSAR_SWS_PWM_Driver
Requirements on GPT Driver	aux	2.0.2	Final	AUTOSAR_SRS_GPT_Driver
Specification of GPT Driver	std	2.2.0	Final	AUTOSAR_SWS_GPT_Driver
Requirements on DIO Driver	aux	2.0.3	Final	AUTOSAR_SRS_DIO_Driver
Specification of DIO Driver	std	2.2.0	Final	AUTOSAR_SWS_DIO_Driver
Requirements on Watchdog Driver	aux	2.0.3	Final	AUTOSAR_SRS_Watchdog_Driver
Specification of Watchdog Driver	std	2.2.0	Final	AUTOSAR_SWS_WatchdogDriver
Specification of Watchdog Interface	std	2.2.0	Final	AUTOSAR_SWS_WatchdogInterface
Requirements on PORT Driver	aux	2.0.3	Final	AUTOSAR_SRS_PORT_Driver
Specification of PORT Driver	std	3.1.0	Final	AUTOSAR_SWS_Port_Driver
Requirements on MCU Driver	aux	2.0.3	Final	AUTOSAR_SRS_MCU_Driver
Specification of MCU Driver	std	2.3.0	Final	AUTOSAR_SWS_MCU_Driver
Requirements on EEPROM Driver	aux	2.0.3	Final	AUTOSAR_SRS_EEPROM_Driver
Specification of EEPROM Driver	std	2.2.0	Final	AUTOSAR_SWS_EEPROM_Driver
Requirements on Flash Driver	aux	2.0.3	Final	AUTOSAR_SRS_Flash_Driver
Specification of Flash Driver	std	2.2.1	Final	AUTOSAR_SWS_FlashDriver
Requirements on Memory Hardware Abstraction Layer	aux	1.0.3	Final	AUTOSAR_SRS_MemHw_AbstractionLayer
Specification of Memory Abstraction Interface	std	1.2.0	Final	AUTOSAR_SWS_Mem_AbstractionInterface
Specification of Flash EEPROM Emulation	std	1.2.0	Final	AUTOSAR_SWS_Flash_EEPROM_Emulation

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Specification of EEPROM Abstraction	std	1.2.0	Final	AUTOSAR_SWS_EEPROM_Abstraction
Specification of CAN State Manager	std	1.2.0	Final	AUTOSAR_SWS_CAN_StateManager
Specification of FlexRay State Manager	std	1.1.0	Final	AUTOSAR_SWS_FlexRay_StateManager
Specification of LIN State Manager	std	1.1.0	Final	AUTOSAR_SWS_LIN_StateManager
Explanation of Interrupt Handling within AUTOSAR	aux	1.0.0	Final	AUTOSAR_InterruptHandling_Explanation
Requirements on CRC Routines	aux	1.0.0	Final	AUTOSAR_SRS_CRC_Routines

5.4 Cluster: Methodology and Templates

As of the latest Revision 7, the following Methodology and Template documents are part of Release 3.0:

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Requirements on Graphical Notation	aux	1.0.3	Final	AUTOSAR_RS_GraphicalNotation
Specification of Graphical Notation	aux	1.0.4	Final	AUTOSAR_GraphicalNotation
Requirements on Interaction with Behavioral Models	aux	1.0.3	Final	AUTOSAR_RS_InteractionBehavioralModels
Specification of Interaction with Behavioral Models	aux	1.0.4	Final	AUTOSAR_InteractionBehavioralModels
Requirements on Interoperability of Authoring Tools	aux	1.0.3	Final	AUTOSAR_RS_InteroperabilityAuthoringTools
Specification of Interoperability of Authoring Tools	aux	1.3.0	Final	AUTOSAR_InteroperabilityAuthoringTools
Requirements on Feature Definition of Authoring Tools	aux	1.0.3	Final	AUTOSAR_RS_FeatureDefinition
Specification of Feature Definition of Authoring Tools	aux	1.0.3	Final	AUTOSAR_FeatureDefinition
Applying Simulink to AUTOSAR	aux	1.0.4	Final	AUTOSAR_SimulinkStyleguide
Applying ASCET to AUTOSAR	aux	1.0.2	Final	AUTOSAR_AscetStyleguide
Specification of ECU Resource Template	std	1.0.3	Final	AUTOSAR_ECU_ResourceTemplate
Requirements on Software Component Template	aux	1.0.3	Final	AUTOSAR_RS_SoftwareComponentTemplate
Software Component Template	std	3.2.0	Final	AUTOSAR_SoftwareComponentTemplate
System Template	std	3.3.0	Final	AUTOSAR_SystemTemplate
Model Persistence Rules for XML	std	2.2.0	Final	AUTOSAR_ModelPersistenceRulesforXML
Template Modeling Patterns	aux	2.1.0	Final	AUTOSAR_TemplateModelingPatterns
Meta Model	aux	3.3.0	Final	AUTOSAR_MetaModel
Meta Model-generated XML Schema	std	3.3.0	Final	autosar.xsd
Template UML Profile and Modeling Guide	aux	2.2.0	Final	AUTOSAR_TemplateModelingGuide

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Requirements on ECU Configuration	aux	1.1.2	Final	AUTOSAR_RS_ECU_Configuration
Specification of ECU Configuration	std	2.2.0	Final	AUTOSAR_ECU_Configuration
Requirements on Basic Software Module Description	aux	1.0.0	Final	AUTOSAR_RS_BSW_ModuleDescription
Basic Software Module Description Template	std	1.1.0	Final	AUTOSAR_BSW_ModuleDescription
Requirements on System Template	aux	2.1.0	Final	AUTOSAR_RS_SystemTemplate
Specification of ECU Configuration Parameters (XML)	std	2.3.0	Final	AUTOSAR_EcucParamDef.xml

5.5 Cluster: Application Interfaces

As of the latest Revision 7, the following Application Interfaces documents are part of Release 3.0:

Deliverable	*Classification*	*Version*	*Status*	*File Name*
SW-C and System Modeling Guide and Naming Conventions	aux	1.0.0	Final	AUTOSAR_SWC_System_Modeling.doc
Integrated Master Table of Application Interfaces	aux	1.0.0	Final	AUTOSAR_AI_IntegratedMasterTable
Requirements on SW-C and System Modeling	aux	1.0.0	Final	AUTOSAR_RS_SWC_System_Modeling.doc
Explanation of Application Interfaces of the Body and Comfort Domain	aux	1.0.0	Final	AUTOSAR_ApplicationInterfaces_Explanation_BodyComfort
Explanation of Application Interfaces of the Powertrain Domain	aux	1.0.0	Final	AUTOSAR_ApplicationInterfaces_Explanation_Powertrain
Explanation of Application Interfaces of the Chassis Domain	aux	1.0.0	Final	AUTOSAR_ApplicationInterfaces_Explanation_Chassis
Integrated Master Table of Application Interfaces (XML Schema R3.0)	std	1.0.4	Final	AUTOSAR_ApplicationInterfaces_ForXMLSchema_R3.0.arxml
Integrated Master Table of Application Interfaces (XML Schema R2.0)	std	1.0.0	Final	AUTOSAR_ApplicationInterfaces_ForXMLSchema_R2.0.arxml
Integrated Master Table of Application Interfaces (XML Schema R2.1)	std	1.0.0	Final	AUTOSAR_ApplicationInterfaces_ForXMLSchema_R2.1.arxml

5.6 Cluster: Other Documents

As of the latest Revision 7, the following other documents are part of Release 3.0:

Deliverable	*Classification*	*Version*	*Status*	*File Name*
Conformance Test Process Definition Path D	std	1.0.1	Final	AUTOSAR_DS_CT Path D
Conformance Test Process Definition Path A-C	std	1.0.1	Final	AUTOSAR_DS_CT Path A-C

Deliverable	*Classifi-cation*	*Version*	*Status*	*File Name*
Conformance Test Agency Accreditation	std	1.0.1	Final	AUTOSAR_DS_Accreditation
Requirements for CTA Accreditation Bodies	aux	1.0.1	Final	AUTOSAR_DS_AccreditationBodyRequirements
AUTOSAR CTA Accreditation - application rules for ISO Guide 65	std	1.0.0	Final	AUTOSAR_DS_Accreditation_application_of_ISO_Guide_65
AUTOSAR CTA Accreditation - application rules for ISO 17025	std	1.0.0	Final	AUTOSAR_DS_Accreditation_application_of_ISO_17025
AUTOSAR BSW & RTE Conformance Test Specification Part 1: Background	aux	1.0.0	Final	AUTOSAR_CTSpec_Background
AUTOSAR BSW & RTE Conformance Test Specification Part 2: Process Overview	aux	1.0.0	Final	AUTOSAR_CTSpec_Process_Overview
AUTOSAR BSW & RTE Conformance Test Specification Part 3: Creation & Validation	aux	1.0.0	Final	AUTOSAR_CTSpec_Creation_Validation
AUTOSAR BSW & RTE Conformance Test Specification Part 4: Execution Constraints	aux	1.0.0	Final	AUTOSAR_CTSpec_Execution_Constraint
Template for Conformance Test Specification Documents	aux	1.0.0	Final	AUTOSAR_CTSpec_Template

6 Remarks to Known Technical Deficiencies

6.1 Deliverable: General Requirements on Basic Software Modules

The BSW Scheduler starts calling the cyclically scheduled Main Functions right after it has been initialized. The initialization takes place block-wise (as specified in the ECU State Manager) right after the OS has been started and before Initialization Block II, RTE and Initialization Block III are started and executed. This can lead to the situation that a Main Function of a scheduled BSW module gets called before the initialization of the respective module. To let this occur, depends primarily on the following factors:

1. Configuration of the schedule tables:
   - The lower the initial offset, the more likely the miss-behavior will be.

2. Number and identity of modules in Init Block II and Init Block III (integrator dependent):
   - The more modules in Init Block II and III, the more time the initialization will consume and the more likely the miss-behavior will be
   - Certain modules need more initialization time than other modules

3. Speed of NVRAM, amount of NVRAM data:
   - The slower the NVRAM or the more NVRAM data is to be read during startup, the more time initialization it will take, so the more likely the miss-behavior will be.

6.2 Deliverables: Specifications of FlexRay Interface, MCU Driver and PDU Router

According to the AUTOSAR Architecture, Complex Device Drivers can interface to all architectural layers. However, for the following BSW modules this has not been taken into account:

- Flexray Interface
- PDU Router
- MCU driver

The writer of a Complex Device Driver needs to implement a module extension for the above mentioned BSWs.

6.3 Deliverable: Specification of FlexRay Interface

1. The FlexRay interface does not suppport the AUTOSAR COM communication mode "NONE", i.e., the FlexRay interface does not support independant pull of data from COM for transmission.
2. If the message transmission task is pre-empted while transmitting in the dynamic segment, there is a risk for overrun in the Transmission Confirmation Counter.

6.4 Deliverable: Specification of Operating System

The synchronization of the AUTOSAR OS to the FlexRay Global Time using the FlexRay Interface is not completely defined and standardized.

6.5 Deliverable: Specification of Generic Network Management Interface

This release mainly supports synchronization between two or more AUTOSAR CAN subnets. When time-triggered (or cyclical) bus protocol need to be coordinated on subnets, this release has conceptual shortcomings for one such subnet, and unresolved issues in case of more than one such subnet. This is due to missing mechanisms for synchronizing event oriented NM protocols with cyclical or time triggered oriented protocols.

Hence, the coordination of one FlexRay subnet with CAN subnets managed by AUTOSAR NM are within this release possible only either with limited accuracy, or by evaluating information passed between FlexRay NM and Communication Manager. Coordination of more than one such subnet (i.e. time-triggered or cyclic bus protocols) is not possible.

6.6 Deliverable: Specification of LIN State Manager

The AUTOSAR LIN modules are currently using the term “channel” do describe a connection to the LIN bus. The correct term is “controller”.

Currently no complete error concept is implemented in the AUTOSAR LIN modules. The LIN modules will detect errors on the bus but cannot detect failing/missing slave nodes.

There is no standardized means in place to switch LIN Schedule Tables. Hence, there is no user of the function LinSM_ScheduleRequest.

The LIN State Manager module can only be used as a LIN master in a LIN cluster. There at most one instance of the LIN State Manager in each ECU. If the underlying LIN Driver 0 supports multiple channels, the LIN State Manager may be master on more than one cluster.

6.7 Deliverable: Specification of Diagnostic Communication Manager

The configuration has not been updated according to the changes made on the DCM specification between the Release 2.1 and Release 3.0. For that reason it is not possible to configure the newly added functionality. That impacts the configuration of the interfaces between DCM and RTE, and all resulting configuration parameters.

6.8 Deliverable: Specification of Watchdog Manager

The current concepts of the Watchdog Manager cannot reliably handle windowed watchdogs. The timing of watchdog triggering is controlled by the Basic Software Scheduler. Since it does not allow to control jitter, the current Watchdog Manager cannot guarantee that the triggering takes place within a certain window of time.

6.9 Deliverable: Specification of I/O Hardware Abstraction

The assumption to base the I/O Hardware Abstraction on the SW Component Template is only partially true, since the latter is only allowed to specify communication to be routed through the Runtime Environment (RTE).

In general the handling of I/O Hardware Abstraction and especially the concept of ECU Signals by AUTOSAR Methodology and the required support by AUTOSAR Templates is not defined yet and might be refined and changed.

Further, in the current AUTOSAR Release 3.0 it is not defined how far standardized parameters are applicable for non-standardized Basic Software. However, I/O Hardware Abstraction is implemented as firmware and might not require such configurability.

Especially it is not defined:

- how a single set of parameter shall be applied to a modular I/O Hardware Abstraction.
- how parameters having impact on the AUTOSAR interface which is not configurable shall be applied.

6.10 Deliverable: ECU Resource Template

The current AUTOSAR Methodology does not sufficiently describe the use cases for the ECU Resource Template, i.e. which artifacts can be built with the template and for which specific activities the information is used as an input.

It is currently not possible to verify the content of the template in order to determine specific deficiencies and possible improvements.

6.11 Deliverable: SW-C and System Modeling Guide and Naming Conventions

The XML code which is shown in the document is compliant to the AUTOSAR XML Schema as of Release 2.0.

For the following physical units, no key words were defined in this Release 3.0:

> Gram, Volt, Ampere, Ohm, Watt, Liter, Gallone, Siemens, Farad, Kelvin, Joule, Hertz, Promille, Radiant, Minute, Hour, Day, Month, Bar, Pascal,

The current naming convention assumes that physical units are made of a base unit and an exponent (e.g. “10^{-3}” for “milli”). However, the prefix used for multiples of base

units is not defined as part of the naming convention. Hence, there are limitations in defining domain specific units (e.g. air mass flow: mg per stroke).

Chapters 6.4.3 and 6.4.8
The created names for DataElementPrototypes and PortPortotypes do not consider requirements of Field and Test engineers concerning "search ability" and it is not defined how a human readable and understandable link to displayed names in Measurement & Calibration tooling shall be provided. Therefore the naming rules for these model elements might be changed

6.12 Deliverable: Integrated Master Table of Application Interfaces

The definition of “core / conditional / optional” shall not be considered as part of the Release 3.0. This definition is not consistently applied between the Powertrain and Chassis domain. That is, that information concerning “core / conditional / optional” attributes in the Integrated Master Table shall be ignored in the Release 3.0.

7 Revision History of the Release 3.0

Date	Revision	Deliverable Name	Version	Description State	
30-Sep-10	7	Virtual Functional Bus	1.1.0	modified	• Last-is-best N:1 S/R communication allowed
		General Requirements on Basic Software Modules	2.3.0	modified	• [BSW00414] adapted for clarification regarding the configuration parameter of the Init functions in case of pre-compile variants • [BSW00406]: Relax module initialization checks for MainFunctions (no DET error) • [BSW00408] Relaxing the requirement to allow different configuration names
		Specification of Platform Types	2.3.0	modified	• Replaced generic <Module> by "PLATFORM" in chapter 10
		Specification of Standard Types	1.3.0	modified	• Changed <Module> to STD_TYPES in default parameters
		Specification of Communication Stack Types	2.3.0	modified	• Published information of the document is updated
		Specification of Memory Mapping	1.2.0	modified	• MEMMAP003 changed: Application hint added for the handling of INLINE code implementation.
		Basic Software UML Model	2.4.0	modified	Changes according to changes in AUTOSAR specifications
		Specification of RTE Software	2.3.0	modified	• Generation of the indirect API decoupled from multiple instantiation: changed rte sws 1355, rte sws 2613, rte sws 2615. • Behavior in name clashes of AUTOSAR types PIM types: added rte sws 5195, changed rte sws 3789, rte sws 3782.
		Specification of LIN Interface	2.1.0	modified	• Updated LINIF226 • Use PduInfoType for RxIndication, TriggerTransmit and Transmit APIs • Clarification of time parameters specified as float
		Specification of LIN Driver	1.3.0	modified	• Add LIN184
		Requirements on CAN	2.3.0	modified	• BSW01017 requirement for CAN polling/interrupt mode removed
		Specification of CAN Transport Layer	2.3.0	modified	• Removed CanTp228 • Updated CanTp246, CanTp248
		Specification of CAN Interface	3.2.0	modified	• Removed appearance of CANIF733_Conf in the document. Links to CANIF733_Conf replaced by links to CANIF246 which is the global configuration container of

Date	Revision	Deliverable Name	Version	Description State	
					• Entered function CanIf_GetTxConfirmationState • Entered description and SWSItemIds CANIF739 and CANIF740
		Specification of CAN Driver	2.4.0	modified	• Updated CAN271 and CAN234
		Specification of CAN Transceiver Driver	1.3.0	modified	• Explanation added to chapter 7.4 • Updated CanTrcv150
		Requirements on Communication	2.2.0	modified	• Updated BSW02043, allowing to receive I-PDUs partially
		Specification of Communication	3.2.0	modified	• Added COM572, COM573, COM568, COM569, COM570, COM571, COM574, COM575 • Updated COM001, COM314, COM391, COM501, COM100, COM287, COM123, COM001, COM187, COM184
		Specification of I-PDU Multiplexer	1.3.0	modified	• Added a pre-compile configuration variant • Added IPDUM162 in configuration container IpduMTxRequest and IpduMRxIndication • Updated IPDUM032, IPDUM060, IPDUM040, IPDUM043, IPDUM060 • Added IPDUM163
		Specification of Generic Network Management Interface	1.1.0	modified	• Fix of description of Nm_State_Notification
		Specification of FlexRay Network Management	3.1.0	modified	• Updated FRNM021, FRNM305, FRNM316, FRNM317, FRNM256, FRNM257 • Added FRNM340, FRNM376, FRNM393, FRNM338, FRNM342, FRNM378, FRNM379, FRNM380, FRNM383, FRNM384, FRNM385, FRNM386, FRNM318, FRNM315 • Deleted FRNM318, FRNM306
		Specification of CAN Network Management	3.2.0	modified	• Harmonization of CanNm_RxIndication signature
		Specification of FlexRay Transport Layer	2.3.0	modified	• Added FRTP222, FRTP223 • Modified FRTP195 • Use parameter PduInfoType in callback RxIndication
		Specification of FlexRay Interface	3.1.0	modified	• Update sequence chart 9-6 • Extension of FrIf05063 (behavior in case of return value E_NOT_OK for API TriggerTransmit()
		Specification of FlexRay Transceiver Driver	1.3.0	modified	• Clarification of transitions – added FrTrcv474
		Specification of PDU Router	2.3.0	modified	• Added support for Gatewaying longer I-PDUs that configured • Added return type to TriggerTransmit APIs • Changed to PduInfoType in RxIndication
		Specification of NVRAM Manager	2.3.0	modified	• Behavior specified to prevent possible loss of data during shutdown

Date	Revision	Deliverable Name	Version	Description State	
					• Typo corrected in chapter 7.1.2.1 • Behavior specified: handling of single-block callbacks during asynchronous multi-block requests • Behavior specified when NVRAM block ID 1 shall be written • Include of Crc.h is not optional
		Specification of CRC Routines	3.1.0	modified	• Check value for J1850 CRC8 changed from F4h to 4Bh
		Specification of ECU State Manager	1.3.0	modified	• Added EcuM3020 • Fixed description in EcuM2904 • Update description ErrorHook • Change of AppMode • Update ErrorHook with note • Added note for exit from GO SLEEP • Reformulated EcuM2863 and added rationale • Added a note to EcuM_AL_SwitchOff
		Specification of Communication Manager	2.1.0	modified	• Parameter name inconsistency (InhibitionStatusType <> ComM_InhibitionStatusType) • A type InhibitionStatusType is defined for the RTE interface, whilst the corresponding "module internal" type is named ComM_InhibitionStatusType. • In order to be consistent with other types like ComM_ModeType, which are named equally as "module internal" and "RTE interface" types, the RTE interface type InhibitionStatusType should be renamed to ComM_InhibitionStatusType.
		Main Requirements	2.1.0	modified	• Updated Main270
		Software Component Template	3.2.0	modified	• Fixed usage of Categories in XML examples • Signal invalidation mechanism becomes optional
		System Template	3.3.0	modified	• Clarified semantics of Transfer Property for signal groups • Clarified semantics of ByteOrder attributes • Updated upstream template mapping of GdMaxMicrotick • Added the new transfer property TriggeredOnChange to ComTransferProperty • Added missing FlexRayNm and CanNm parameters • Clarified the usage of EcuPorts in Ecu Extract • Made Flexray channel specific attributes optional
		Model Persistence Rules for XML	2.2.0	modified	• Updated default configuration of tagged values • Updated default configuration of multiplicities
		Meta Model	3.3.0	modified	Changes according to changes in Templates

Date	Revision	Deliverable Name	Version	Description State	
		Meta Model-generated XML Schema	3.3.0	modified	Changes according to changes in Templates
		Basic Software Module Description Template	1.1.0	modified	• Added option to MemorySection
		Specification of CAN State Manager	1.2.0	modified	• Add CANSM341, CANSM340, CANSM242, CANSM243 • Updated CANSM340, CANSM219, CANSM045, CANSM219, CANSM231
		Specification of FlexRay State Manager	1.1.0	modified	• Added notification for FrNm in case of a long term synchronization loss • StartupRepetitions made optional to allow for unlimited repetition of startup • Introduction of CANSM_RX_PDU_INIT and CANSM_TX_PDU_INIT, update of Com_IpduGroupStart
		Specification of LIN State Manager	1.1.0	modified	• Chapter 10 updated to have configurable “initialize” in call to Com_IpduGroupStart
		Specification of ECU Configuration Parameters (XML)	2.3.0	modified	Changes according to changes in AUTOSAR specifications
		Integrated Master Table of Application Interfaces (XML Schema R3.0)	1.0.4	modified	Adapted namespace
02-Feb-10	6	Meta Model-generated XML Schema	3.2.0	modified	Two string attributes shall be added to the System class: System Version (mandatory) - Version number of the System Description. Ecu Extract (optional) - Version number of the Ecu Extract. Allow the optional description of CAN Communication timing attributes as a range.
		Basic Software UML Model	2.3.0	modified	In Figure 15 of the CanIf SWS Activities of SLEEP transition” on page 57 the part “+ do/CanIf_SetWakeupEvent(Controller, WakeupSource)” in state CANIf_CS_STOPPED has to be removed. Create new CAN artefacts with updated BSW UML Model
		Specification of ECU Configuration	2.2.0	modified	Updated definition how symbolic names are generated from the EcuC
		Specification of ECU Configuration Parameters (XML)	2.2.0	modified	The multiplicity of parameter McuClockSettingConfig has been changed to 1..* Improve configuration and interoperation of CanNm and CanIf Added: CANIF300, CANIF301, CANIF_HRHRANGE_CANIDTYPE In chapter 10.2.4 of the CanIf, the parameter CanIfWakeupEventApi has to be removed from the configuration container CanIfPublicConfiguration CanDrv: Added missing literal specification for CanBusoffProcessing,

Date	Revision	Deliverable Name	Version	Description State	
					CanRxProcessing, CanTxProcessing, CanWakeupProcessing Com: Added missing literal specification for ComSignalEndianess, ComSignalType in the ComGwSource and ComGwDestination description. PortDrv: Added missing literal specification for PortPinInitialMode The parameters CanSMBorCounterL1ToL2, CanSMBorCounterL2Err, CanSMBorTimeL1, CanSMBorTimeL2, CanSMBorDisableRxDlMonitoring, CanSMBorTimeTxEnsured shall be shifted from CanStateManagerConfiguration to CanStateManagerNetworks Use the float data type consistently in all documents (update SWS CanNm)
		Specification of Interoperability of Authoring Tools	1.3.0	modified	Updated semantics of identifier wrt lower/upper case
		Meta Model	3.2.0	modified	Clarify description of the ”EventControlledTiming” Make the NPdu a subclass of IPdu in order to allow the specification of Pdu-routing for NPdus. Add constraints to the existing references to IPdus (in the SystemTemplate TP sections) in order to exclude NPdus from the ""tpSdu"" references.NPdus. Allow for providing initial values for calibration parameters Add the literals definitions to the EnumerationParamDef for ComSignalType, ComSignalEndianess.
		Software Component Template	3.1.0	modified	Allow for communication attributes in compositionTypes; Allow for providing initial values for calibration parameters
		Specification of CAN Driver	2.3.0	modified	Description of Multiplexed Transmit Functionality improved. Reference to CanIf_SetWakeupEvent replaced by EcuM_CheckWakeup. Added missing literal specification for CanBusoffProcessing, CanRxProcessing, CanTxProcessing, CanWakeupProcessing SchM_Can.h included in File Structure Create new CAN artefacts with updated BSW UML Model
		Specification of CAN Interface	3.1.0	modified	Added: CANIF300, CANIF301, CANIF_HRHRANGE_CANIDTYPE Changed description of function parameter of <User_RxIndication> (CanNm) Changed CANIF038, 3rd and 4th

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					paragraph of chapter 7.19.1, Figure 13, Figure 15. Deleted: CANIF_WAKEUP_EVENT_API, CANIF270, bullet point 4 of 2nd paragraph of chapter 7.24, bullet point 4 of CANIF126
		Specification of CAN State Manager	1.1.0	modified	Independant parameters for CAN networks. Update of document with generated artifacts.
		Specification of CAN Network Management	3.1.0	modified	Improved configuration and interoperation of CanNm and CanIf
		Specification of MCU Driver	2.3.0	modified	Allow multiplicity of sub-container Mcu Clock Setting
		Specification of PORT Driver	3.1.0	modified	Range insertion for the parameter PortPinInitialMode (PortPin Container) in chapter 10
		Specification of RTE	2.2.0	modified	Allow Communication Attributes on Compositions (RfC#31872): changed rte sws in 0055, rte sws in 0062, rte sws in 5023, rte sws in 5050, rte sws in 0067, rte sws in 0029, rte sws in 2701, rte sws in 2693 Support for initial calibration data values (RfC#38085): added rte sws 7186, rte sws 7185, rte sws 2750. Reverted implementation of RfC#27188 (RfC#41929): changed rte sws 1017, rte sws 1018, rte sws 1019, rte sws 1020, rte sws 5107, rte sws 5108, rte sws 5109, rte sws 1254, rte sws 3930, rte sws 3593, rte sws 5512; added rte sws 5195, rte sws 5196, rte sws 5197, rte sws 5198, rte sws 5199, rte sws 5200, rte sws 5201, rte sws 5202, rte sws 5203, rte sws 5204, rte sws 5205, rte sws 5206, rte sws 5207, rte sws 5208, rte sws 5209; removed rte sws 3743; Fixed typo in rte sws 6129, rte sws 3750 (CalPrm vs. Calprm).
		Specification of the System Template	3.2.0	modified	Clarified semantics of references to ”ComIPduGroup” Added TransferProperty attribute to ISignalToIPduMapping element. Added extension that allows the specification of ranges for CAN Communication Controller Timing attributes Adapted IPdu Multiplexer model to allow the segmentation of the static and dynamic part. Added LinErrorResponse settings Added version number attributes to the System class Added relationships between ISignalTriggering, IPduTriggering,

Date	Revision	Deliverable Name	Version	Description State	
					FrameTriggering Added support for low-level routing of NPdu's Updated description and model of the "EventControlledTiming" Modeling of Priorities in Lin Substitution Frames Added CanNm Id Range attributes to CanCluster
		Specification of Communication	3.1.0	modified	Added COM558, COM559. Updated configuration container, due to missing literals in ComGwSourceDescrip-tion and ComGwDestinationDescription. Turned COM385 into a note. COM_NETWORK_SIGNAL_NAME removed from COM401 Tables were wrongly stating that Com_ReceiveShadowSignal should re-turn COM_SERVICE_NOT_AVAILABLE. Updated all configuration containers with correctly generated artefacts.
24-Jul-09	0005	Meta Model-generated XML Schema	3.1.1	modified	Removed errors introduced into XML Schema with R3.0 Rev0004 (e.g. the "REF" definition is available again)
		Specification of ECU Configuration Parameters (XML)	2.1.1	modified	Adaptation of namespace to new schema
		Integrated Master Table of Application Interfaces (XML Schema R3.0)	1.0.3	modified	Adaptation of namespace to new schema
4-Feb-09	0004	List of Basic Software Modules	1.3.0	modified	Correction of LinNM classification
		Basic Software UML Model	2.2.0	modified	see SWS FlexRay NM
		Requirements on RTE Software	1.2.0	modified	Changed RTE00005 (Bug#26607); Removed RTE00044 (Bug#26607)
		Specification of RTE Software	2.1.0	modified	Updated VFB-Tracing (RfC#24177): changes rte sws 1327, rte sws 1328; Unconnected R-Ports are supported (RfC#23898): changed rte sws 1329, rte sws 3019; added rte sws 1330, rte sws 1331, rte sws 1333, rte sws 1334, rte sws 1336, rte sws 1337, rte sws 1346, rte sws 2621, rte sws 2638, rte sws 2639, rte sws 2640, rte sws 3785, rte sws 5099, rte sws 5100, rte sws 5101, rte sws 5102; Incompatible function declarations (RfC#27188): changed rte sws 1018, rte sws 1019, rte sws 1020; added rte sws 5107, rte sws 5108, rte sws 5109; removed rte sws 6030; Insufficient RTE server mapping requirement (RfC#25712): changed rte sws 2204.
		Specification of FlexRay	3.0.2	modified	Incorporation of core partner change

Date	Revision	Deliverable Name	Version	Description State	
		Network Management			requests for R3.0
		Specification of Operating System	3.1.0	modified	Changes in OS configuration: - removed "OsAppModeId" Parameter from OsAppModeContainer - added optional references from OsAppModeContainer to OsAlarm, OsTask and OsScheduleTable
		System Template	3.1.0	modified	Clarified semantics of Data Mappings Added inheritance from Identifiable to PduToFrameMapping Added ”FlexRayChannelName” attribute to FlexRayPhysicalChannel element.
		Meta Model	3.1.0	modified	See SWS OS, SWS FlexRay NM, System Template
		Meta Model-generated XML Schema	3.1.0	modified	See changes in template documents
		Specification of ECU Configuration	2.1.0	modified	Fixed foreign reference to PduToFrameMapping
		Specification of ECU Configuration Parameters (XML)	2.1.0	modified	See SWS OS
		Integrated Master Table of Application Interfaces (XML Schema R3.0)	1.0.2	modified	Adaptation of namespace to new schema
09-Jun-08	0003	Specification of Operating System	3.0.1	modified	Parameter added
		System Template	3.0.3	modified	Allow Assignments of I-PDU Groups to ECUs
		Meta Model	3.0.2	modified	see System Template
		Meta Model-generated XML Schema	3.0.2	modified	Namespace updated see also System Template
		Specification of ECU Configuration Parameters (XML)	2.0.2	modified	Namespace updated
		Integrated Master Table of Application Interfaces (XML Schema R3.0)	1.0.1	modified	Namespace updated
01-Feb-08	0002	Basic Software UML Model	2.1.0	modified	Alignment with SWS CAN Interface and SWS FlexRay NM improved
		Specification of Interaction with Behavioral Models	1.0.4	modified	Figures added
		Specification of ECU Resource Template	1.0.3	modified	Correction of references
		Specification of CAN Interface	3.0.1	modified	Chapter 10 replaced by tables generated from MetaModel
		Specification of CAN Driver	2.2.1	modified	Table formatting corrected
		Specification of Communication	3.0.1	modified	layout of figures improved
		Specification of I-PDU Multiplexer	1.2.1	modified	layout of figures improved
		Specification of FlexRay Network Management	3.0.1	modified	Chapter 9 figures regenerated
		Specification of Diagnostics Event Manager	2.1.1	modified	Table formatting corrected
		Specification of FlexRay	3.0.1	modified	Table formatting corrected

Date	Revision	Deliverable Name	Version	Description State	
		Interface			
		Specification of FlexRay Transceiver Driver	1.2.1	modified	Chapter 9 figures regenerated
		Specification of PDU Router	2.2.1	modified	Misaligned figures corrected
		Specification of CRC Routines	3.0.0	modified	Major restructure and addition of CRC8
		Specification of ADC Driver	3.0.1	modified	Formal corrections
		Specification of RAM Test	1.2.1	modified	Correction of figures
		Specification of PORT Driver	3.0.1	modified	Table formatting corrected
		Specification of MCU Driver	2.2.1	modified	Table formatting corrected
		Specification of Flash Driver	2.2.1	modified	Table formatting corrected
		Requirements on Conformance Tests	1.0.0	removed	Removed from baseline in favour of CTA Accredidation Body Requirements
		Requirements for CTA Accreditation Bodies	1.0.1	added	added, replacing CT Requirements
		System Template	3.0.1	modified	Alignment with SWS CAN Interface improved
		Meta Model	3.0.1	modified	Alignment with SWS CAN Interface and SWS FlexRay NM improved
		Meta Model-generated XML Schema	3.0.1	modified	regenerated, see Meta Model. Also, see special note.
		Specification of ECU Configuration	2.0.1	modified	Invalid reference removed
		Specification of FlexRay State Manager	1.0.1	modified	Chapter 8 API spelling harmonized
		Specification of ECU Configuration Parameters (XML)	2.0.1	modified	regenerated, see Meta Model
21-Dec-07	0001	General Requirements on Basic Software Modules	2.2.0	added	
		Requirements on a Free Running Timer	1.0.2	added	
		Specification of Development Error Tracer	2.2.0	added	
		Specification of Platform Types	2.2.0	added	
		Specification of Standard Types	1.2.0	added	
		Specification of C Implementation Rules	1.0.3	added	
		Specification of Communication Stack Types	2.2.0	added	
		Specification of Memory Mapping	1.1.0	added	
		Specification of Compiler Abstraction	2.0.0	added	
		Specification of BSW Scheduler	1.1.0	added	
		Modeling Guidelines of Basic Software EA UML Model	1.2.0	added	

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		Basic Software UML Model	2.0.0	added	
		Requirements on Graphical Notation	1.0.3	added	
		Specification of Graphical Notation	1.0.4	added	
		Requirements on Interaction with Behavioral Models	1.0.3	added	
		Specification of Interaction with Behavioral Models	1.0.3	added	
		Requirements on Interoperability of Authoring Tools	1.0.3	added	
		Specification of Interoperability of Authoring Tools	1.2.0	added	
		Requirements on Feature Definition of Authoring Tools	1.0.3	added	
		Specification of Feature Definition of Authoring Tools	1.0.3	added	
		Applying Simulink to AUTOSAR	1.0.4	added	
		Applying ASCET to AUTOSAR	1.0.2	added	
		Specification of ECU Resource Template	1.0.2	added	
		Requirements on RTE Software	1.1.2	added	
		Specification of RTE Software	2.0.0	added	
		Requirements on LIN	1.1.2	added	
		Specification of LIN Interface	2.0.0	added	
		Specification of LIN Driver	1.2.0	added	
		Requirements on CAN	2.2.0	added	
		Specification of CAN Transport Layer	2.2.0	added	
		Specification of CAN Interface	3.0.0	added	
		Specification of CAN Driver	2.2.0	added	
		Specification of CAN Transceiver Driver	1.2.0	added	
		Requirements on Communication	2.1.1	added	
		Specification of Communication	3.0.0	added	
		Requirements on I-PDU Multiplexer	1.0.3	added	
		Specification of I-PDU Multiplexer	1.2.0	added	
		Requirements on Network Management	2.0.2	added	

Date	Revision	Deliverable		Description	
		Name	Version	State	
		Specification of Generic Network Management Interface	1.0.0	added	
		Specification of FlexRay Network Management	3.0.0	added	
		Specification of CAN Network Management	3.0.0	added	
		Requirements on Function Inhibition Manager	1.0.3	added	
		Specification of Function Inhibition Manager	1.2.0	added	
		Requirements on Diagnostic	2.0.3	added	
		Specification of Diagnostic Communication Manager	3.0.0	added	
		Specification of Diagnostics Event Manager	2.2.1	added	
		Requirements on FlexRay	2.0.3	added	
		Specification of FlexRay Transport Layer	2.2.0	added	
		Specification of FlexRay Interface	3.0.0	added	
		Specification of FlexRay Driver	2.2.0	added	
		Specification of FlexRay Transceiver Driver	1.2.0	added	
		Requirements on Gateway	2.0.3	added	
		Specification of PDU Router	2.2.0	added	
		Requirements on Memory Services	2.2.0	added	
		Specification of NVRAM Manager	2.2.0	added	
		Specification of CRC Routines	2.1.2	added	
		Requirements on Mode Management	1.2.0	added	
		Specification of ECU State Manager	1.2.0	added	
		Specification of Communication Manager	2.0.0	added	
		Specification of Watchdog Manager	1.2.0	added	
		Requirements on Operating System	2.0.3	added	
		Specification of Operating System	3.0.0	added	
		General Requirements on SPAL	2.1.1	added	
		Requirements on SPI Handler/Driver	2.0.3	added	
		Specification of SPI Handler/Driver	2.2.0	added	
		Requirements on ICU Driver	2.0.3	added	

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		Specification of ICU driver	3.0.0	added	
		Requirements on ADC Driver	2.2.0	added	
		Specification of ADC Driver	3.0.0	added	
		Requirements on I/O Hardware Abstraction	1.0.3	added	
		Specification of I/O Hardware Abstraction	2.0.0	added	
		Requirements on RAM Test	1.1.2	added	
		Specification of RAM Test	1.2.0	added	
		Requirements on PWM Driver	2.1.1	added	
		Specification of PWM Driver	2.2.0	added	
		Requirements on GPT Driver	2.0.2	added	
		Specification of GPT Driver	2.2.0	added	
		Requirements on DIO Driver	2.0.3	added	
		Specification of DIO Driver	2.2.0	added	
		Requirements on Watchdog Driver	2.0.3	added	
		Specification of Watchdog Driver	2.2.0	added	
		Specification of Watchdog Interface	2.2.0	added	
		Requirements on PORT Driver	2.0.3	added	
		Specification of PORT Driver	3.0.0	added	
		Requirements on MCU Driver	2.0.3	added	
		Specification of MCU Driver	2.2.0	added	
		Requirements on EEPROM Driver	2.0.3	added	
		Specification of EEPROM Driver	2.2.0	added	
		Requirements on Flash Driver	2.0.3	added	
		Specification of Flash Driver	2.2.0	added	
		Requirements on Memory Hardware Abstraction Layer	1.0.3	added	
		Specification of Memory Abstraction Interface	1.2.0	added	
		Specification of Flash EEPROM Emulation	1.2.0	added	
		Specification of EEPROM Abstraction	1.2.0	added	
		Requirements on Conformance Tests	1.0.0	added	
		Conformance Test	1.0.1	added	

Date	Revision	Deliverable Name	Version	Description State	
		Process Definition Path D			
		Conformance Test Process Definition Path A-C	1.0.1	added	
		Conformance Test Agency Accreditation	1.0.1	added	
		AUTOSAR CTA Accreditation - application rules for ISO Guide 65	1.0.0	added	
		AUTOSAR CTA Accreditation - application rules for ISO 17025	1.0.0	added	
		Main Requirements	2.0.3	added	
		Glossary	2.1.2	added	
		Technical Overview	2.2.0	added	
		SW-C and System Modeling Guide and Naming Conventions	1.0.0	added	
		Integrated Master Table of Application Interfaces	1.0.0	added	
		Requirements on Software Component Template	1.0.3	added	
		Software Component Template	3.0.0	added	
		System Template	3.0.0	added	
		Model Persistence Rules for XML	2.1.2	added	
		Template Modeling Patterns	2.1.0	added	
		Meta Model	3.0.0	added	
		Meta Model-generated XML Schema	3.0.0	added	
		Template UML Profile and Modeling Guide	2.2.0	added	
		Requirements on ECU Configuration	1.1.2	added	
		Specification of ECU Configuration	2.0.0	added	
		Requirements on Basic Software Module Description	1.0.0	added	
		Basic Software Module Description Template	1.0.0	added	
		Methodology	1.2.0	added	
		Requirements on System Template	2.1.0	added	
		Specification of CAN State Manager	1.0.0	added	
		Specification of FlexRay State Manager	1.0.0	added	
		Specification of LIN State Manager	1.0.0	added	
		AUTOSAR BSW & RTE Conformance Test Specification Part 1: Background	1.0.0	added	

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		Name	Version	State	
		AUTOSAR BSW & RTE Conformance Test Specification Part 2: Process Overview	1.0.0	added	
		AUTOSAR BSW & RTE Conformance Test Specification Part 3: Creation & Validation	1.0.0	added	
		AUTOSAR BSW & RTE Conformance Test Specification Part 4: Execution Constraints	1.0.0	added	
		Requirements on SW-C and System Modeling	1.0.0	added	
		Explanation of Application Interfaces of the Body and Comfort Domain	1.0.0	added	
		Explanation of Application Interfaces of the Powertrain Domain	1.0.0	added	
		Explanation of Application Interfaces of the Chassis Domain	1.0.0	added	
		Specification of ECU Configuration Parameters (XML)	2.0.0	added	
		Template for Conformance Test Specification Documents	1.0.0	added	
		Explanation of Interrupt Handling within AUTOSAR	1.0.0	added	
		Integrated Master Table of Application Interfaces (XML Schema R3.0)	1.0.0	added	
		Requirements on CRC Routines	1.0.0	added	
		Integrated Master Table of Application Interfaces (XML Schema R2.0)	1.0.0	added	
		Integrated Master Table of Application Interfaces (XML Schema R2.1)	1.0.0	added	