

Document Title	SWS_LINTransceiverDriver: Complete Change Documentation 4.3.0 - 4.3.1
Document Owner	AUTOSAR
Document Responsibility	AUTOSAR
Document Identification No	695

Document Status	Final
Part of AUTOSAR Standard	Classic Platform
Part of Standard Release	4.3.1

Table of Contents

1	SWS_LINTransceiverDriver	3
1.1	Specification Item ECUC_LinTrcv_00005	3
1.2	Specification Item SWS_LinTrcv_00065	6
1.3	Specification Item SWS_LinTrcv_00067	7
1.4	Specification Item SWS_LinTrcv_00074	12
1.5	Specification Item SWS_LinTrcv_00075	14
1.6	Specification Item SWS_LinTrcv_00105	15
1.7	Specification Item SWS_LinTrcv_00106	18
1.8	Specification Item SWS_LinTrcv_00114	22
1.9	Specification Item SWS_LinTrcv_00115	25
1.10	Specification Item SWS_LinTrcv_00116	28
1.11	Specification Item SWS_LinTrcv_00117	32
1.12	Specification Item SWS_LinTrcv_00119	35
1.13	Specification Item SWS_LinTrcv_00123	39
1.14	Specification Item SWS_LinTrcv_00124	42
1.15	Specification Item SWS_LinTrcv_00125	45
1.16	Specification Item SWS_LinTrcv_00128	49
1.17	Specification Item SWS_LinTrcv_00129	52
1.18	Specification Item SWS_LinTrcv_00130	56
1.19	Specification Item SWS_LinTrcv_00134	59
1.20	Specification Item SWS_LinTrcv_00139	62
1.21	Specification Item SWS_LinTrcv_00140	66
1.22	Specification Item SWS_LinTrcv_00144	69
1.23	Specification Item SWS_LinTrcv_00145	73
1.24	Specification Item SWS_LinTrcv_00146	76
1.25	Specification Item SWS_LinTrcv_00148	79
1.26	Specification Item SWS_LinTrcv_00149	83
1.27	Specification Item SWS_LinTrcv_00159	86
1.28	Specification Item SWS_LinTrcv_00164	90
1.29	Specification Item SWS_LinTrcv_00167	91

1 SWS_LINTransceiverDriver

1.1 Specification Item ECUC_LinTrcv_00005

Trace References:

none

Content:

Name	LinTrcvInitStateLinTrcvChannel.LinTrcvInitState		
Parent Container	LinTrcvChannel		
Description	State of LIN transceiver after call to LinTrcv_Init. Tags: atp.Status=obsolete		
Multiplicity	1 0..1		
Type	EcucEnumerationParamDef		
Range	LINTRCV_TRCV_MODE_NORMAL TrcvChannel.LinTrcvInit State.LINTRCV_TRCV_MODE_NORMAL	Normal operation mode Tags: atp.Status=obsolete	
	LINTRCV_TRCV_MODE_SLEEP TrcvChannel.LinTrcvInit State.LINTRCV_TRCV_MODE_SLEEP	Sleep operation mode Tags: atp.Status=obsolete	
	LINTRCV_TRCV_MODE_STANDBY TrcvChannel.LinTrcvInit State.LINTRCV_TRCV_MODE_STANDBY	Standby operation mode Tags: atp.Status=obsolete	
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	All Variants
	Link time	-	
	Post-build time	-	
Scope / Dependency	scope: local		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73095: [LinSM][LinIf][Lin] Inconsistent LIN channel states upon initialization

Problem description:

As per SWS_Lin_00171, LIN channel state upon initialization shall be LIN_CH_OPERATIONAL

As per SWS_LinIf_00507, LinIf channel state upon initialization shall be either LINIF_CHANNEL_OPERATIONAL or LINIF_CHANNEL_SLEEP depending on the configuration parameter LinIfStartupState

As per SWS_LinSM_00152, LinSM state for all networks upon initialization shall be LINSM_NO_COM

This is an inconsistent state within the LIN Stack since LIN driver channel is operational but LinSM is in NO_COM and LinIf state could be either!

Tracking the history of LinIf (Bug 27547) it seems that when LinIfStartupState was introduced, then Bug 27547 comment 8 was not addressed at that time to avoid this inconsistency.

Is there a use case to start the LIN channels in OPERATIONAL?

Should the LinSM already transition the channels to SLEEP following initialization? (similar to CanSM)

Or should the Lin driver specifications be updated to allow for either state following initialization (similar to LinIf and LinTrcv specifications)

Agreed solution:

=====
 For CP R4.3.1
 =====

SRS LIN

=====
 =====

1) [SRS_Lin_01514], Description: Change
 from

<The LIN Interface shall inform an upper layer if a wake-up request was notified by the underlying LIN Driver

<A wakeup notification shall only be raised in the case a go-to-sleep-command has been issued to the bus.

to

>The LIN Interface shall inform an upper layer if a wake-up request was notified by the underlying LIN Driver.

SWS LinIf

=====
 =====

1) Sec. 4.1 Limitations: Add following description

+It's assumed that all of connected LIN Slave ECUs can receive a wakeup frame when they are already operational (as LIN Master ECU starts with LINIF_CHANNEL_SLEEP state).

2) Chap. 7, [SWS_LinIf_00507]: Change

from

<[SWS_LinIf_00507] The LIN Interface shall transit from LINIF_UNINIT to

< LINIF_CHANNEL_OPERATIONAL when the function LinIf_Init is called and the

configuration parameter LinIfStartupState is set to NORMAL.
 < LINIF_CHANNEL_SLEEP when the function LinIf_Init is called and the configuration parameter LinIfStartupState is set to SLEEP. ()
 to
 >[SWS_LinIf_00507] The LIN Interface shall transit from LINIF_UNINIT to LINIF_CHANNEL_SLEEP without sending go-to-sleep command, when the function LinIf_Init is called. ()
 >Note: it is assumed that automatically slave nodes will enter bus sleep mode earliest after 4s and latest 10s of bus inactivity (as specified in LIN 2.1).

3) Chap. 7, Figure 4 (stm LinIf Node Management): Update the figure as described below

- Remove the transition to LINIF_CHANNEL_OPERATIONAL with LinIf_Init [LinIfStartupState=NORMAL]
- Remove the transition to LINIF_CHANNEL_SLEEP with LinIf_Init [LinIfStartupState=SLEEP]
- +Add the initial transition to LINIF_CHANNEL_SLEEP inside the state LINIF_INIT

4) Chap. 10, ECUC_LinIf_00069: Set the parameter LinIfStartupState to obsolete

5) Chap. 10, Figure 20: Remove the parameter LinIfStartupState

SWS LinTrcv

Chapter 7.1

Update figure: remove transitions from NOT_ACTIVE to LINTRCV_TRCV_MODE_STANDBY and LINTRCV_TRCV_MODE_NORMAL.

Remove the following sentence:

The function LinTrcv_Init() causes a state change to either LINTRCV_TRCV_MODE_SLEEP, LINTRCV_TRCV_MODE_NORMAL or LINTRCV_TRCV_MODE_STANDBY (any of these 3 states belong to the upper state ACTIVE). This depends on the configuration and is independent configurable for each channel.

Change SWS_LinTrcv_00119 from

The function LinTrcv_Init shall set the LIN transceiver hardware to the state configured by the configuration parameter LinTrcvInitState.

This can be LINTRCV_TRCV_MODE_NORMAL, LINTRCV_TRCV_MODE_STANDBY or LINTRCV_TRCV_MODE_SLEEP.

to

The function LinTrcv_Init shall set the LIN transceiver hardware to the state LIN-

TRCV_TRCV_MODE_SLEEP.

Remove SWS_LinTrcv_00146.
 remove configurations note after SWS_LinTrcv_00146

set ECUC_LinTrcv_00005 to obsolete.

SWS Lin

- =====
- Change SWS_Lin_00171 to: "On entering the state LIN_INIT, the Lin module shall set each channel into state LIN_CH_SLEEP, enable the wake-up detection (if enabled by LinChannelWakeupSupport), and optionally set the LIN hardware unit to reduced power operation mode (if supported by HW)."
 - Change initial transition in figure 7-1 to LIN_CH_SLEEP.
 - SWS_Lin_00168 Lin_GetStatus: Change LIN_OPERATIONAL description to "Normal operation; the related LIN channel is woken up from the LIN_CH_SLEEP and no data has been sent."

SWS LinSM

=====

no changes required

TPS System Template

- =====
- 1) Appendix C: Remove the rule of the parameter LinIfStartupState
 –Last change on issue 73095 comment 46–

BW-C-Level:

Application	Specification	Bus
1	4	4

1.2 Specification Item SWS_LinTrcv_00065

Trace References:

[SRS_BSW_00346](#), [SRS_BSW_00158](#)

Content:

Module consists of listed files:

File name	Requirements	Description
LinTrcv.c	LinTrcv069	The implementation general c file. It does not contain interrupt routines.
LinTrcv.h	LinTrcv052	It contains only information relevant for other BSW modules (API). Differences in API depending on configuration are encapsulated.
LinTrcv_Cfg.h	LinTrcv083	Pre-compile time configuration parameter file. It's generated by the configuration tool.
LinTrcv_Cfg.c	LinTrcv062	Pre-compile time configuration code file. It's generated by the configuration tool.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73287: [LinTrcv] Change of requirement number format

Problem description:

The table under requirement SWS_LinTrcv_00065 has column with requirement numbers in old format.

Change of requirement numbers LinTrcv069,LinTrcv052,LinTrcv083 and LinTrcv062 to requirement number format or else remove requirements column required.

–Last change on issue 73287 comment 15–

Agreed solution:

Remove SWS_LinTrcv_00065 and add the following text instead:

For details, refer to the section 5.1.6 "Code file structure" of the SWS BSW General [6].

–Last change on issue 73287 comment 11–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.3 Specification Item SWS_LinTrcv_00067

Trace References:

SRS_BSW_00301, SRS_BSW_00409

Content:

The include file structure shall be as follows

LinTrcv.c shall include Det.h (needed to notify about development errors) if **default development** error detection for the module LinTrcv is enabled.

LinTrcv.c shall include EcuM_Cbk.h (needed to notify about wakeup of a LIN channel)

LinTrcv.c shall include Dio.h (DIO APIs needed to access Transceiver pins)

LinTrcv.c shall include LinTrcv.h (own function prototypes, defines ...)

LinTrcv.c shall include Icu.h (if ICU APIs needed to perform LIN transceiver hardware interrupts)

LinTrcv.c shall include Spi.h (if the LIN bus transceiver driver use drivers for Spi to control the LIN bus transceiver hardware)

LinTrcv.c shall include LinifLinlf_Cbk.h (needed to notify about wakeup of a LIN channel)

LinTrcv_Cfg.c shall include LinTrcv.h (own function prototypes, defines ...)

LinTrcv.h shall include LinTrcv_Cfg.h

LinTrcv_Cfg.h shall include ComStack_Types.h

LinTrcv.c shall include Tm.h (needed for wait states for changing transceiver operation modes)

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."

- "module raises the development error XXX_E_TRANSITION"

- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors

- Change "Errors which can occur at runtime in the RTE are classified as default er-

rors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AU-

TOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #77975: [LinTrcv] Minor documentation issues

Problem description:

I have the following findings against SWS LIN Transceiver Driver:

- 1) SWS_LinTrcv_00074, SWS_LinTrcv_00075: Obsolete references (LinTrcv107_Conf, LinTrcv106_Conf) to configuration parameters.
- 2) SWS_LinTrcv_00067: Typo in file name (Linif_Cbk.h).
- 3) SWS_LinTrcv_00164: Typo in type name (LinTrcv_TrcvWakeupReasonTyp).
- 4) Chapters 7.6 "Error detection", 7.8 "Debugging" contain obsolete references. Chapter 7.12 "Version checking" does not have any additional information. These chapters are not part of the template, BSW General is referred in chapter 3.3 already.
- 5) Sub-chapters in 8.2 "Type definitions" have incorrect naming.

Agreed solution:

- 1)
 - SWS_LinTrcv_00074
 - Remove "(cf. LinTrcv107_Conf)"

 - SWS_LinTrcv_00075
 - Remove "(cf. LinTrcv006_Conf)"

- 2) SWS_LinTrcv_00067
 - Correct Linif_Cbk.h to Linlf_Cbk.h

- 3) SWS_LinTrcv_00164
 - Correct LinTrcv_TrvcWakeupReasonTyp to LinTrcv_TrvcWakeupReasonType

- 4) Remove chapters 7.6 "Error detection", 7.8 "Debugging", 7.12 "Version checking"

- 5)
 - Chapter 8.2 "Type definitions"
 - Rename sub-chapters:
 - 8.2.1 TrcvConfigType -> LinTrcv_ConfigType
 - 8.2.2 TrcvModeType -> LinTrcv_TrvcModeType
 - 8.2.3 TrcvWakeupModeType -> LinTrcv_TrvcWakeupModeType
 - 8.2.4 TrcvWakeupReasonType -> LinTrcv_TrvcWakeupReasonType
 - Last change on issue 77975 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.4 Specification Item SWS_LinTrcv_00074

Trace References:

SRS_Lin_01580

Content:

Selection of wakeup mode shall be done by configuration parameter LinTrcvWakeUpSupport. (cf. [LinTrcv107_Conf](#))

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77975: [LinTrcv] Minor documentation issues

Problem description:

I have the following findings against SWS LIN Transceiver Driver:

- 1) SWS_LinTrcv_00074, SWS_LinTrcv_00075: Obsolete references (LinTrcv107_Conf, LinTrcv106_Conf) to configuration parameters.
- 2) SWS_LinTrcv_00067: Typo in file name (Linif_Cbk.h).
- 3) SWS_LinTrcv_00164: Typo in type name (LinTrcv_TrcvWakeupReasonTyp).
- 4) Chapters 7.6 "Error detection", 7.8 "Debugging" contain obsolete references. Chapter 7.12 "Version checking" does not have any additional information. These chapters are not part of the template, BSW General is referred in chapter 3.3 already.
- 5) Sub-chapters in 8.2 "Type definitions" have incorrect naming.

Agreed solution:

- 1)
 SWS_LinTrcv_00074
 Remove "(cf. LinTrcv107_Conf)"

 SWS_LinTrcv_00075
 Remove "(cf. LinTrcv006_Conf)"
- 2) SWS_LinTrcv_00067
 Correct Linif_Cbk.h to Linlf_Cbk.h
- 3) SWS_LinTrcv_00164
 Correct LinTrcv_TrcvWakeupReasonTyp to LinTrcv_TrcvWakeupReasonType
- 4) Remove chapters 7.6 "Error detection", 7.8 "Debugging", 7.12 "Version checking"
- 5)
 Chapter 8.2 "Type definitions"
 Rename sub-chapters:
 8.2.1 TrcvConfigType -> LinTrcv_ConfigType
 8.2.2 TrcvModeType -> LinTrcv_TrcvModeType
 8.2.3 TrcvWakeupModeType -> LinTrcv_TrcvWakeupModeType
 8.2.4 TrcvWakeupReasonType -> LinTrcv_TrcvWakeupReasonType
 –Last change on issue 77975 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.5 Specification Item SWS_LinTrcv_00075

Trace References:

SRS_Lin_01580

Content:

Support of wakeup shall be switched on and off for each LIN transceiver channel individually by configuration parameter LinTrcvWakeupByBusUsed. (cf. [LinTrcv006_Conf](#))

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77975: [LinTrcv] Minor documentation issues

Problem description:

I have the following findings against SWS LIN Transceiver Driver:

- 1) SWS_LinTrcv_00074, SWS_LinTrcv_00075: Obsolete references (LinTrcv107_Conf, LinTrcv106_Conf) to configuration parameters.
- 2) SWS_LinTrcv_00067: Typo in file name (Linif_Cbk.h).
- 3) SWS_LinTrcv_00164: Typo in type name (LinTrcv_TrcvWakeupReasonTyp).
- 4) Chapters 7.6 "Error detection", 7.8 "Debugging" contain obsolete references. Chapter 7.12 "Version checking" does not have any additional information. These chapters are not part of the template, BSW General is referred in chapter 3.3 already.
- 5) Sub-chapters in 8.2 "Type definitions" have incorrect naming.

Agreed solution:

- 1)
SWS_LinTrcv_00074
Remove "(cf. LinTrcv107_Conf)"

SWS_LinTrcv_00075
Remove "(cf. LinTrcv006_Conf)"
- 2) SWS_LinTrcv_00067
Correct Linif_Cbk.h to LinIf_Cbk.h
- 3) SWS_LinTrcv_00164
Correct LinTrcv_TrcvWakeupReasonTyp to LinTrcv_TrcvWakeupReasonType
- 4) Remove chapters 7.6 "Error detection", 7.8 "Debugging", 7.12 "Version checking"
- 5)

Chapter 8.2 "Type definitions"

Rename sub-chapters:

8.2.1 TrcvConfigType -> LinTrcv_ConfigType

8.2.2 TrcvModeType -> LinTrcv_TrvcModeType

8.2.3 TrcvWakeupModeType -> LinTrcv_TrvcWakeupModeType

8.2.4 TrcvWakeupReasonType -> LinTrcv_TrvcWakeupReasonType

–Last change on issue 77975 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.6 Specification Item SWS_LinTrcv_00105

Trace References:

SRS_BSW_00406

Content:

If development errors are enabled and the state of the LIN Transceiver is NOT_ACTIVE and a function is called except LinTrcv_Init or LinTrcv_GetVersionInfo the corresponding function shall **raise report** the development error code LINTRCV_E_UNINIT.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET

does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "developement error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."

- "module raises the development error XXX_E_TRANSITION"

- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors

- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

errors"

- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
 [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents":
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents":
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents":
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.7 Specification Item SWS_LinTrcv_00106

Trace References:

none

Content:

If development errors are enabled and any API that uses the parameter "LinNetwork" receives an invalid value for this parameter this function shall **raise report** the development error code LINTRCV_E_INVALID_LIN_NETWORK.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx

module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."

- "module raises the development error XXX_E_TRANSITION"

- "The DET provides services to store development errors"

Solution for SWS_RTE:

— SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors

- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

-Last change on issue 73570 comment 47-

BW-C-Level:

Application	Specification	Bus
1	1	1

1.8 Specification Item SWS_LinTrcv_00114

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If the function `LinTrcv_SetOpMode` is called with `OpMode == LINTRCV_TRCV_MODE_STANDBY` and the channel `LinNetwork` is in mode `LINTRCV_SLEEP` but the optional transition from `LINTRCV_SLEEP` to `LINTRCV_STANDBY` is not enabled, the function `LinTrcv_SetOpMode` shall **raise report** the development error `LINTRCV_E_INVALID_TRCV_OPMODE`.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters `*DevErrorDetect` are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]
- In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]
- In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
- [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
- Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.9 Specification Item SWS_LinTrcv_00115

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If optional transition from LINTRCV_STANDBY to LINTRCV_SLEEP is not enabled and the function LinTrcv_SetOpMode is called with OpMode == LINTRCV_TRCV_MODE_SLEEP and the channel LinNetwork is not in mode LINTRCV_TRCV_MODE_NORMAL, the function LinTrcv_SetOpMode shall **raise report** the development error LINTRCV_E_TRCV_NOT_NORMAL.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return

E_NOT_OK. ())"

- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
 [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.10 Specification Item SWS_LinTrcv_00116

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called before the LinTrcv module has been initialized, the function LinTrcv_SetOpMode shall **raise report** the development error LINTRCV_E_UNINIT.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "developement error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the developement error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "developement error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error

XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
 - "In case default errors are enabled,..."
 - "module raises the Default error XXX_E_TRANSITION"
 - "The DET provides services to store default errors"
 ...

The correct text would be:

- sub chapter is called "7.x Development errors"
 - "[SWS_xxx_yyyyy]
 In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
 - "[SWS_xxx_yyyyy]
 If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
 - "In case development errors are enabled,..."
 - "module raises the development error XXX_E_TRANSITION"
 - "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —
 - Change 4.8 Default errors to 4.8 Development errors
 - Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
 - Remove [SWS_Rte_07676]
 - Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
 - Change [SWS_Rte_06631]
 [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents":
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents":
Rename "AU-

TOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.11 Specification Item SWS_LinTrcv_00117

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with an invalid network number LinNetwork, the function LinTrcv_SetOpMode shall **raise report** the development error LINTRCV_E_INVALID_LIN_NETWORK.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"
- "[SWS_xxx_yyyyy]"
- In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
- "[SWS_xxx_yyyyy]"
- If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]"
- In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
- "[SWS_xxx_yyyyy]"
- If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default er-

rors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AU-

TOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

–Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.12 Specification Item SWS_LinTrcv_00119

Trace References:

none

Content:

The function LinTrcv_Init shall set the LIN transceiver hardware to the state **configured by the configuration parameter LinTrcvInitState**.

This can be LINTRCV_TRCV_MODE_NORMAL, LINTRCV_TRCV_MODE_STANDBY or LINTRCV_TRCV_MODE_SLEEP.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73095: [LinSM][LinIf][Lin] Inconsistent LIN channel states upon initialization

Problem description:

As per SWS_Lin_00171, LIN channel state upon initialization shall be LIN_CH_OPERATIONAL

As per SWS_LinIf_00507, LinIf channel state upon initialization shall be either LINIF_CHANNEL_OPERATIONAL or LINIF_CHANNEL_SLEEP depending on the configuration parameter LinIfStartupState

As per SWS_LinSM_00152, LinSM state for all networks upon initialization shall be LINSM_NO_COM

This is an inconsistent state within the LIN Stack since LIN driver channel is operational but LinSM is in NO_COM and LinIf state could be either!

Tracking the history of LinIf (Bug 27547) it seems that when LinIfStartupState was introduced, then Bug 27547 comment 8 was not addressed at that time to avoid this inconsistency.

Is there a use case to start the LIN channels in OPERATIONAL?

Should the LinSM already transition the channels to SLEEP following initialization? (similar to CanSM)

Or should the Lin driver specifications be updated to allow for either state following initialization (similar to LinIf and LinTrcv specifications)

Agreed solution:

=====
 For CP R4.3.1
 =====

SRS LIN

=====
 =====

1) [SRS_Lin_01514], Description: Change from

<The LIN Interface shall inform an upper layer if a wake-up request was notified by the underlying LIN Driver

<A wakeup notification shall only be raised in the case a go-to-sleep-command has been issued to the bus.

to

>The LIN Interface shall inform an upper layer if a wake-up request was notified by

the underlying LIN Driver.

SWS LinIf

=====

1) Sec. 4.1 Limitations: Add following description
 +It's assumed that all of connected LIN Slave ECUs can receive a wakeup frame when they are already operational (as LIN Master ECU starts with LINIF_CHANNEL_SLEEP state).

2) Chap. 7, [SWS_LinIf_00507]: Change from

<[SWS_LinIf_00507] The LIN Interface shall transit from LINIF_UNINIT to < LINIF_CHANNEL_OPERATIONAL when the function LinIf_Init is called and the configuration parameter LinIfStartupState is set to NORMAL.

< LINIF_CHANNEL_SLEEP when the function LinIf_Init is called and the configuration parameter LinIfStartupState is set to SLEEP. ()

to

>[SWS_LinIf_00507] The LIN Interface shall transit from LINIF_UNINIT to LINIF_CHANNEL_SLEEP without sending go-to-sleep command, when the function LinIf_Init is called. ()

>Note: it is assumed that automatically slave nodes will enter bus sleep mode earliest after 4s and latest 10s of bus inactivity (as specified in LIN 2.1).

3) Chap. 7, Figure 4 (stm LinIf Node Management): Update the figure as described below

-Remove the transition to LINIF_CHANNEL_OPERATIONAL with LinIf_Init [LinIfStartupState=NORMAL]

-Remove the transition to LINIF_CHANNEL_SLEEP with LinIf_Init [LinIfStartupState=SLEEP]

+Add the initial transition to LINIF_CHANNEL_SLEEP inside the state LINIF_INIT

4) Chap. 10, ECUC_LinIf_00069: Set the parameter LinIfStartupState to obsolete

5) Chap. 10, Figure 20: Remove the parameter LinIfStartupState

SWS LinTrcv

=====

Chapter 7.1

Update figure: remove transitions from NOT_ACTIVE to LIN-TRCV_TRCV_MODE_STANDBY and LINTRCV_TRCV_MODE_NORMAL.

Remove the following sentence:

The function LinTrcv_Init() causes a state change to either LIN-TRCV_TRCV_MODE_SLEEP, LINTRCV_TRCV_MODE_NORMAL or LIN-TRCV_TRCV_MODE_STANDBY (any of these 3 states belong to the upper state ACTIVE). This depends on the configuration and is independent configurable for each channel.

Change SWS_LinTrcv_00119 from

The function LinTrcv_Init shall set the LIN transceiver hardware to the state configured by the configuration parameter LinTrcvInitState.

This can be LINTRCV_TRCV_MODE_NORMAL, LIN-TRCV_TRCV_MODE_STANDBY or LINTRCV_TRCV_MODE_SLEEP.

to

The function LinTrcv_Init shall set the LIN transceiver hardware to the state LIN-TRCV_TRCV_MODE_SLEEP.

Remove SWS_LinTrcv_00146.

remove configurations note after SWS_LinTrcv_00146

set ECUC_LinTrcv_00005 to obsolete.

SWS Lin

=====

- Change SWS_Lin_00171 to: "On entering the state LIN_INIT, the Lin module shall set each channel into state LIN_CH_SLEEP, enable the wake-up detection (if enabled by LinChannelWakeupSupport), and optionally set the LIN hardware unit to reduced power operation mode (if supported by HW)."

- Change initial transition in figure 7-1 to LIN_CH_SLEEP.

- SWS_Lin_00168 Lin_GetStatus: Change LIN_OPERATIONAL description to "Normal operation; the related LIN channel is woken up from the LIN_CH_SLEEP and no data has been sent."

SWS LinSM

=====

no changes required

TPS System Template

=====

1) Appendix C: Remove the rule of the parameter LinIfStartupState

–Last change on issue 73095 comment 46–

BW-C-Level:

Application	Specification	Bus
1	4	4

1.13 Specification Item SWS_LinTrcv_00123

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called before the LinTrcv module has been initialized, the function LinTrcv_GetOpMode shall **raise report** the development error LINTRCV_E_UNINIT.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"
- "[SWS_xxx_yyyyy]
- In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]
- In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
- [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance

Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.14 Specification Item SWS_LinTrcv_00124

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with an invalid network number LinNetwork, the function LinTrcv_GetOpMode shall **raise report** the development error LINTRCV_E_INVALID_LIN_NETWORK.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return

E_NOT_OK. ())"

- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
 [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.15 Specification Item SWS_LinTrcv_00125

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with OpMode == NULL, the function LinTrcv_GetOpMode shall **raise report** the development error LINTRCV_E_PARAM_POINTER.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error

XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
 - "In case default errors are enabled,..."
 - "module raises the Default error XXX_E_TRANSITION"
 - "The DET provides services to store default errors"
 ...

The correct text would be:

- sub chapter is called "7.x Development errors"
 - "[SWS_xxx_yyyyy]
 In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
 - "[SWS_xxx_yyyyy]
 If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
 - "In case development errors are enabled,..."
 - "module raises the development error XXX_E_TRANSITION"
 - "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —
 - Change 4.8 Default errors to 4.8 Development errors
 - Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
 - Remove [SWS_Rte_07676]
 - Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
 - Change [SWS_Rte_06631]
 [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents":
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents":
Rename "AU-

TOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.16 Specification Item SWS_LinTrcv_00128

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called before the LinTrcv module has been initialized, the function LinTrcv_GetBusWuReason shall **raise report** development error LINTRCV_E_UNINIT.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"
- "[SWS_xxx_yyyyy]
- In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]
- In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default er-

rors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

TOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

–Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.17 Specification Item SWS_LinTrcv_00129

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with an invalid network number LinNetwork, the function LinTrcv_GetBusWuReason shall **raise report** development error LINTRCV_E_INVALID_LIN_NETWORK.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_XXX_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."

- "module raises the development error XXX_E_TRANSITION"

- "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors

- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to

"Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

-Last change on issue 73570 comment 47-

BW-C-Level:

Application	Specification	Bus
1	1	1

1.18 Specification Item SWS_LinTrcv_00130

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with Reason == NULL, the function LinTrcv_GetBusWuReason shall **raise report** the development error LINTRCV_E_PARAM_POINTER.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."

- "module raises the development error XXX_E_TRANSITION"

- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors

- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error

occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.19 Specification Item SWS_LinTrcv_00134

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with VersionInfo == NULL, the function LinTrcv_GetVersionInfo shall **raise report** development error LINTRCV_E_PARAM_POINTER.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "developement error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
 [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

-Last change on issue 73570 comment 47-

BW-C-Level:

Application	Specification	Bus
1	1	1

1.20 Specification Item SWS_LinTrcv_00139

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called before the LinTrcv has been initialized, the function LinTrcv_SetWakeupMode shall **raise report** development error LINTRCV_E_UNINIT.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
- [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.21 Specification Item SWS_LinTrcv_00140

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with an invalid network number LinNetwork, the function LinTrcv_SetWakeup Mode shall **raise report** development error LINTRCV_E_INVALID_LIN_NETWORK.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET

does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "developement error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"
- "[SWS_xxx_yyyyy]
- In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]
- In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents":
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents":
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents":
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.22 Specification Item SWS_LinTrcv_00144

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called before the LinTrcv module has been initialized, the function LinTrcv_Check Wakeup shall **raise report** the development error LINTRCV_E_UNINIT.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_XXX_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."

- "module raises the development error XXX_E_TRANSITION"

- "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors

- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to

"Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

-Last change on issue 73570 comment 47-

BW-C-Level:

Application	Specification	Bus
1	1	1

1.23 Specification Item SWS_LinTrcv_00145

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If called with an invalid network number LinNetwork, the function LinTrcv_CheckWakeup shall **raise report** the development error LINTRCV_E_INVALID_LIN_NETWORK.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"
- "[SWS_xxx_yyyyy]
- In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]
- In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
- "[SWS_xxx_yyyyy]
- If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
- [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error

occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.24 Specification Item SWS_LinTrcv_00146

Trace References:

none

Content:

The configuration value **LINTRCV_TRCV_MODE_STANDBY** shall be an optional value for the configuration parameter **LinTrcvInitState**.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73095: [LinSM][LinIf][Lin] Inconsistent LIN channel states upon initialization

Problem description:

As per SWS_Lin_00171, LIN channel state upon initialization shall be **LIN_CH_OPERATIONAL**

As per SWS_LinIf_00507, LinIf channel state upon initialization shall be either **LINIF_CHANNEL_OPERATIONAL** or **LINIF_CHANNEL_SLEEP** depending on the configuration parameter **LinIfStartupState**

As per SWS_LinSM_00152, LinSM state for all networks upon initialization shall be LINSM_NO_COM

This is an inconsistent state within the LIN Stack since LIN driver channel is operational but LinSM is in NO_COM and LinIf state could be either!

Tracking the history of LinIf (Bug 27547) it seems that when LinIfStartupState was introduced, then Bug 27547 comment 8 was not addressed at that time to avoid this inconsistency.

Is there a use case to start the LIN channels in OPERATIONAL?

Should the LinSM already transition the channels to SLEEP following initialization? (similar to CanSM)

Or should the Lin driver specifications be updated to allow for either state following initialization (similar to LinIf and LinTrcv specifications)

Agreed solution:

=====
For CP R4.3.1
=====

SRS LIN

=====

1) [SRS_Lin_01514], Description: Change
from

<The LIN Interface shall inform an upper layer if a wake-up request was notified by the underlying LIN Driver

<A wakeup notification shall only be raised in the case a go-to-sleep-command has been issued to the bus.

to

>The LIN Interface shall inform an upper layer if a wake-up request was notified by the underlying LIN Driver.

SWS LinIf

=====

1) Sec. 4.1 Limitations: Add following description

+It's assumed that all of connected LIN Slave ECUs can receive a wakeup frame when they are already operational (as LIN Master ECU starts with LINIF_CHANNEL_SLEEP state).

2) Chap. 7, [SWS_LinIf_00507]: Change
from

<[SWS_LinIf_00507] The LIN Interface shall transit from LINIF_UNINIT to
 < LINIF_CHANNEL_OPERATIONAL when the function LinIf_Init is called and the
 configuration parameter LinIfStartupState is set to NORMAL.
 < LINIF_CHANNEL_SLEEP when the function LinIf_Init is called and the configura-
 tion parameter LinIfStartupState is set to SLEEP. ()
 to
 >[SWS_LinIf_00507] The LIN Interface shall transit from LINIF_UNINIT to
 LINIF_CHANNEL_SLEEP without sending go-to-sleep command, when the
 function LinIf_Init is called. ()
 >Note: it is assumed that automatically slave nodes will enter bus sleep mode
 earliest after 4s and latest 10s of bus inactivity (as specified in LIN 2.1).

3) Chap. 7, Figure 4 (stm LinIf Node Management): Update the figure as de-
 scribed below

- Remove the transition to LINIF_CHANNEL_OPERATIONAL with LinIf_Init [LinIfS-
 tartupState=NORMAL]
- Remove the transition to LINIF_CHANNEL_SLEEP with LinIf_Init [LinIfStartup-
 State=SLEEP]
- +Add the initial transition to LINIF_CHANNEL_SLEEP inside the state LINIF_INIT

4) Chap. 10, ECUC_LinIf_00069: Set the parameter LinIfStartupState to ob-
 solete

5) Chap. 10, Figure 20: Remove the parameter LinIfStartupState

SWS LinTrcv

=====

Chapter 7.1

Update figure: remove transitions from NOT_ACTIVE to LIN-
 TRCV_TRCV_MODE_STANDBY and LINTRCV_TRCV_MODE_NORMAL.

Remove the following sentence:

The function LinTrcv_Init() causes a state change to either LIN-
 TRCV_TRCV_MODE_SLEEP, LINTRCV_TRCV_MODE_NORMAL or LIN-
 TRCV_TRCV_MODE_STANDBY (any of these 3 states belong to the upper
 state ACTIVE). This depends on the configuration and is independent configurable
 for each channel.

Change SWS_LinTrcv_00119 from

The function LinTrcv_Init shall set the LIN transceiver hardware to the state config-
 ured by the configuration parameter LinTrcvInitState.

This can be LINTRCV_TRCV_MODE_NORMAL, LIN-
 TRCV_TRCV_MODE_STANDBY or LINTRCV_TRCV_MODE_SLEEP.

to

The function LinTrcv_Init shall set the LIN transceiver hardware to the state LIN-TRCV_TRCV_MODE_SLEEP.

Remove SWS_LinTrcv_00146.
 remove configurations note after SWS_LinTrcv_00146

set ECUC_LinTrcv_00005 to obsolete.

SWS Lin

- =====
- Change SWS_Lin_00171 to: "On entering the state LIN_INIT, the Lin module shall set each channel into state LIN_CH_SLEEP, enable the wake-up detection (if enabled by LinChannelWakeupSupport), and optionally set the LIN hardware unit to reduced power operation mode (if supported by HW)."
 - Change initial transition in figure 7-1 to LIN_CH_SLEEP.
 - SWS_Lin_00168 Lin_GetStatus: Change LIN_OPERATIONAL description to "Normal operation; the related LIN channel is woken up from the LIN_CH_SLEEP and no data has been sent."

SWS LinSM

=====

no changes required

TPS System Template

- =====
- 1) Appendix C: Remove the rule of the parameter LinIfStartupState
 –Last change on issue 73095 comment 46–

BW-C-Level:

Application	Specification	Bus
1	4	4

1.25 Specification Item SWS_LinTrcv_00148

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If the function `LinTrcv_SetOpMode` is called with `OpMode == LIN-TRCV_TRCV_MODE_STANDBY` and the channel `LinNetwork` is in mode `LIN-TRCV_NORMAL` but the optional transition from `LIN-TRCV_NORMAL` to `LIN-TRCV_STANDBY` is not enabled, the function `LinTrcv_SetOpMode` shall **raise report** the development error `LINTRCV_E_INVALID_TRCV_OPMODE`.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters `*DevErrorDetect` are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxx module: The xxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service `xxx_Init`

was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
- ...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
- Last change on issue 73570 comment 47-

BW-C-Level:

Application	Specification	Bus
1	1	1

1.26 Specification Item SWS_LinTrcv_00149

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled:

If optional transition from LINTRCV_STANDBY to LINTRCV_NORMAL is not enabled and the function LinTrcv_SetOpMode is called with OpMode == LINTRCV_TRCV_MODE_NORMAL and the channel LinNetwork is not in mode LINTRCV_TRCV_MODE_SLEEP, the function LinTrcv_SetOpMode shall **raise report** the development error LINTRCV_E_TRCV_NOT_SLEEP.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted docu-

ment, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."

- "module raises the development error XXX_E_TRANSITION"

- "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.27 Specification Item SWS_LinTrcv_00159

Trace References:

none

Content:

If development errors are enabled and any API that uses a pointer as parameter receives a null pointer as parameter shall **raise report** the development error code LIN-TRCV_E_PARAM_POINTER.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately renamed "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!)

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxx module: The xxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

– SWS_RTE —

- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"

- Remove [SWS_Rte_07676]

- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."

- Change [SWS_Rte_06631]

[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
 –Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.28 Specification Item SWS_LinTrcv_00164

Trace References:

none

Content:

LinTrcv_TrvcWakeupModeType and LinTrcv_TrvcWakeupReasonType shall be defined in Lin_GeneralTypes.h, see also chapter "8.1 Imported types".

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77975: [LinTrcv] Minor documentation issues

Problem description:

I have the following findings against SWS LIN Transceiver Driver:

- 1) SWS_LinTrcv_00074, SWS_LinTrcv_00075: Obsolete references (LinTrcv107_Conf, LinTrcv106_Conf) to configuration parameters.
- 2) SWS_LinTrcv_00067: Typo in file name (Linif_Cbk.h).
- 3) SWS_LinTrcv_00164: Typo in type name (LinTrcv_TrvcWakeupReasonTyp).
- 4) Chapters 7.6 "Error detection", 7.8 "Debugging" contain obsolete references. Chapter 7.12 "Version checking" does not have any additional information. These chapters are not part of the template, BSW General is referred in chapter 3.3 already.
- 5) Sub-chapters in 8.2 "Type definitions" have incorrect naming.

Agreed solution:

- 1)
 SWS_LinTrcv_00074
 Remove "(cf. LinTrcv107_Conf)"

- SWS_LinTrcv_00075
 Remove "(cf. LinTrcv006_Conf)"

- 2) SWS_LinTrcv_00067
Correct Linif_Cbk.h to Linlf_Cbk.h
- 3) SWS_LinTrcv_00164
Correct LinTrcv_TrcvWakeupReasonTyp to LinTrcv_TrcvWakeupReasonType
- 4) Remove chapters 7.6 "Error detection", 7.8 "Debugging", 7.12 "Version checking"
- 5)
Chapter 8.2 "Type definitions"
Rename sub-chapters:
 8.2.1 TrcvConfigType -> LinTrcv_ConfigType
 8.2.2 TrcvModeType -> LinTrcv_TrcvModeType
 8.2.3 TrcvWakeupModeType -> LinTrcv_TrcvWakeupModeType
 8.2.4 TrcvWakeupReasonType -> LinTrcv_TrcvWakeupReasonType
 –Last change on issue 77975 comment 7–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.29 Specification Item SWS_LinTrcv_00167

Trace References:

none

Content:

If **default development** error detection for the module LinTrcv is enabled: If the addressed LIN network is not in mode LINTRCV_TRCV_MODE_SLEEP, the function LinTrcv_Check Wakeup shall **raise report** the development error LINTRCV_E_TRCV_NOT_SLEEP.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

Problem description:

The DET was renamed from development error tracer to default error tracer.

This change was most of the time done automatically and unfortunately re-named "development error" to "default error".

"default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:

"Switches the Default Error Tracer (Det) detection and notification..."

The parameter switches on/off the development error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "development error tracer"!))

Blueprint/Example:

- sub chapter is now called "7.x Default errors"

- "[SWS_xxx_yyyyy]

In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."

- "module raises the Default error XXX_E_TRANSITION"

- "The DET provides services to store default errors"

...

The correct text would be:

- sub chapter is called "7.x Development errors"

- "[SWS_xxx_yyyyy]

In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"

- "[SWS_xxx_yyyyy]

If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:

- SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
 [SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:

- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_SPALGeneral:

- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:

- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
 Rename "Development Error Tracer" to "Default Error Tracer"
 Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:

- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:

- In chapter "3.1 Input documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:

- In chapter "3.3 Related AUTOSAR documents":

Rename "Development Error Tracer" to "Default Error Tracer"

Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:

- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

–Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1