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# 1 SWS\_PWMDriver

## 1.1 Specification Item SWS\_Pwm\_00045

### Trace References:

SRS\_BSW\_00323, SRS\_BSW\_00386

### Content:

If **default development** error detection for the Pwm module is enabled: The API

Pwm\_SetPeriodAndDuty() shall check if the given PWM channel is of the channel class type PWM\_VARIABLE\_PERIOD. If this is not the case the development error PWM\_E\_PERIOD\_UNCHANGEABLE shall be called.

### 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

## 1.2 Specification Item SWS\_Pwm\_00047

**Trace References:**

SRS\_BSW\_00323, SRS\_BSW\_00386

**Content:**

If **default development** error detection for the Pwm module is enabled: the PWM functions shall check the parameter ChannelNumber and raise development error PWM\_E\_PARAM\_CHANNEL if the parameter ChannelNumber is invalid.

**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

### 1.3 Specification Item SWS\_Pwm\_00117

**Trace References:**

SRS\_BSW\_00406, SRS\_BSW\_00323, SRS\_BSW\_00386

**Content:**

If **default development** error detection for the Pwm module is enabled: if any function (except Pwm\_Init) is called before Pwm\_Init has been called, the called function shall raise development error PWM\_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

## 1.4 Specification Item SWS\_Pwm\_00118

**Trace References:**

none

**Content:**

If **default development** error detection is enabled, calling the routine Pwm\_Init while the PWM driver and hardware are already initialized will cause a development error PWM\_E\_ALREADY\_INITIALIZED. The desired functionality shall be left without any action.

**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 "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 "AU-

TOSAR\_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 "AU-

TOSAR\_SWS\_DevelopmentErrorTracer" to "AUTOSAR\_SWS\_DefaultErrorTracer"

-Last change on issue 73570 comment 47-

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.5 Specification Item SWS\_Pwm\_00178

**Trace References:**

none

**Content:**

The API returns the power state of the HW unit.

In case **default development** error reporting is activated:

**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

## 1.6 Specification Item SWS\_Pwm\_00181

### Trace References:

none

### Content:

The API returns the requested power state of the HW unit. This shall coincide with the current power state if no transition is ongoing.

The API is considered to always succeed except in case of HW failures.

In case **default development** error reporting is activated:

### 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 "AU-

TOSAR\_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\_Pwm\_00185

**Trace References:**

none

**Content:**

In case the target power state is the same as the current one, no action is executed and the API returns immediately with an E\_OK result.

The responsibility of the preconditions is left to the environment.

In case **default development** error reporting is activated.

**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

## 1.8 Specification Item SWS\_Pwm\_00201

**Trace References:**

none

**Content:**

Type or error	Relevance	Related error code	Value [hex]
API Pwm_Init service called with wrong parameter	Development	PWM_E_INIT_FAILED	0x10
API service used without module initialization	Development	PWM_E_UNINIT	0x11
API service used with an invalid channel Identifier	Development	PWM_E_PARAM_CHANNEL	0x12
Usage of unauthorized PWM service on PWM channel configured a fixed period	Development	PWM_E_PERIOD_UNCHANGEABLE	0x13
API Pwm_Init service called while the PWM driver has already been initialised	Development	PWM_E_ALREADY_INITIALIZED	0x14
API Pwm_GetVersion Info is called with a NULL parameter.	Development	PWM_E_PARAM_POINTER	0x15
API Pwm_SetPower State is called while the PWM module is still in use.	Development	PWM_E_NOT_DISENGAGED	0x16
The requested power state is not supported by the PWM module.	Development	PWM_E_POWER_STATE_NOT_SUPPORTED	0x17
The requested power state is not reachable from the current one.	Development	PWM_E_TRANSITION_NOT_POSSIBLE	0x18
API Pwm_SetPower State has been called without having called the API Pwm_Prepere PowerState before.	Development	PWM_E_PERIPHERAL_NOT_PREPARED	0x19
-	Production	-	Assigned externally

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #78796: CP\_R4.3.1 Document finalization

**Problem description:**

- 1) The change history entry needs to be updated for CP Release 4.3.1.
- 2) For Word documents: A document shall meet formal requirements before releasing.
- 3) Hiding of internal document change history
- 4) For MOD files: Adaption of "\_readme.txt"
- 5) For documents delivered as ZIP archive: Usage of current AUTOSAR XML schema in every arxml file

**Agreed solution:**

In case that your document has not been changed since last release, please leave a short comment in your implementation task and set it to closed/invalid.

Please note: the following changes shall be done when all the changes of your document are clear (for R4.3.1)!

ad 1)

Please insert a change history entry for document finalization at the beginning of the Document Change History table in your document and use the following content:

---

Date	Release	Changed by	Change Description
2017-12-08	4.3.1	AUTOSAR Release Management	[cd]

A) In case your document has been changed since last release, the Change Description [cd] comprises up to 4 bullet points describing the major changes from Release 4.3.0 to Release 4.3.1. The description shall contain no references to Bugzilla issue numbers. This text will make up the Change History of the to-be-released document. Please state major changes with a high impact (e.g. high BWC or usage) or put this standard entry: "minor corrections / clarifications / editorial changes; For details please refer to the ChangeDocumentation"

B) In case your document will be released for the first time, please use as Change Description [cd] the entry "Initial release".

C) In case your document has been already released (in another standard), please put as first line of Change Description [cd] the following:  
–Migration of document to standard "Classic Platform"–

ad 2)

\*\*\* For Word documents \*\*\*

Please check your document once more against this checklist:

[https://svn.autosar.org/repos/work/02\\_ProjectOrganization/06\\_Templates/AUTOSAR\\_Checklist\\_F](https://svn.autosar.org/repos/work/02_ProjectOrganization/06_Templates/AUTOSAR_Checklist_F)

Please verify also the PDF file as this is the one which will be released (it is automatically generated right next to the Word source document within four hours).

ad 3)

If not already done, please hide the whole internal document change history.

Please check the PDF file and ensure that nothing of the internal document change history is shown. Especially in case of remaining bullet points, please follow this instruction to get rid of those in your Word document, as well:

[https://www.autosar.org/wiki/doku.php?id=collab\\_guide:hide\\_internal\\_changehistory\\_man](https://www.autosar.org/wiki/doku.php?id=collab_guide:hide_internal_changehistory_man)

ad 4)

\*\*\* For MOD documents only \*\*\*

Please create or adapt the folder "contents". That folder shall include all files which will be used for the release R4.3.1 (zip-archive). That folder shall also include the two files: "\_disclaimer.txt" and "\_readme.txt"

The file "\_readme.txt" shall include (besides existing information):

- Document Title: DOC LONG NAME
- Document Owner: AUTOSAR
- Document Responsibility: AUTOSAR
- Document Identification Number: UID
- Document Status: Final
- Part of AUTOSAR Standard: Classic Platform
- Part of AUTOSAR Release: 4.3.1
- Date: 2017-12-08

ad 5)

\*\*\* For documents delivered as ZIP archive \*\*\*

In case the archive contains arxml files, please check whether every arxml file references the current AUTOSAR XML schema:

xsi:schemaLocation="http://autosar.org/schema/r4.0 AUTOSAR\_00044.xsd"

If another schema location is given, please contact [technical.office@autosar.org](mailto:technical.office@autosar.org).

**BW-C-Level:**

Application	Specification	Bus
1	1	1

## 1.9 Specification Item SWS\_Pwm\_10051

**Trace References:**

SRS\_BSW\_00323, SRS\_BSW\_00386

**Content:**

If **default development** error detection for the Pwm module is enabled, and a development error occurs, then the corresponding PWM function shall report the error to the Default Error Tracer.

### 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 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

## 1.10 Specification Item SWS\_Pwm\_10120

**Trace References:**

none

**Content:**

For pre-compile and link time configuration variants, a NULL pointer shall be passed to the initialization routine.

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #77255: SWS\_Pwm\_20120 is contradicting SWS\_BSW\_00212 and SWS\_BSW\_00050

**Problem description:**

SWS\_Pwm\_20120 is contradicting SWS\_BSW\_00212 and SWS\_BSW\_00050. There's no rationale to have SWS PWM as an exception compared to other modules.

Moreover, SWS\_Pwm\_10120 and SWS\_Pwm\_20120 are now obsolete as already handled in SWS\_BSW.

SWS\_Pwm\_10120 and SWS\_Pwm\_20120 are historically issued from PWM\_120a and PWM\_120b (and basically obsolete now) before SWS\_BSW popped out.

[SWS\_Pwm\_10120] For pre-compile and link time configuration variants, a NULL

pointer shall be passed to the initialization routine. ()

[SWS\_Pwm\_20120] In this case the check for this NULL pointer has to be omitted.

()

[SWS\_BSW\_00212] NULL pointer checking If the detection of development

errors is active for this BSW Module (see SWS\_BSW\_00042), then pointer parameters shall be checked against NULL\_PTR unless NULL\_PTR is explicitly allowed as a valid pointer address value in the API parameter specification. If such a violation is detected a development error shall be raised. ()

[SWS\_BSW\_00050] Check parameters passed to Initialization functions If the parameter checking for the Initialization function is enabled (SWS\_BSW\_00049), the Configuration pointer argument shall be checked with the following conditions:

In the supportedConfigVariants VariantPreCompile and VariantLinkTime if only one configuration variant set is used, the initialization function does not need nor evaluate the passed argument. Thus the Configuration pointer shall have a NULL\_PTR value.

In the supportedConfigVariant VariantPostBuild or if multiple configuration variant sets are used, the initialization function requires the passed argument. Thus the Configuration pointer shall be different from NULL\_PTR.

If these conditions are not satisfied, a Development error with type "Invalid configuration set selection" shall be reported to Default Error Tracer (Det), see [SWS\_BSW\_00151]. (SRS\_BSW\_00414, SRS\_BSW\_00400, SRS\_BSW\_00438)

**Agreed solution:**

Remove SWS\_Pwm\_10120 and SWS\_Pwm\_20120 from PWM SWS as they are already covered in BSW General (SWS\_BSW\_00212 & SWS\_BSW\_00050)

Chapter 6, pwm.html has to be updated to remove SWS\_Pwm\_10120 and SWS\_Pwm\_10120

–Last change on issue 77255 comment 14–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

**1.11 Specification Item SWS\_Pwm\_20051**

**Trace References:**

SRS\_BSW\_00323, SRS\_BSW\_00386

**Content:**

If **default development** error detection for the Pwm module is enabled, and a development error occurs, then the corresponding PWM function shall skip the desired functionality in order to avoid any corruptions of data or hardware registers leaving the function without any actions.

### 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

## 1.12 Specification Item SWS\_Pwm\_20069

**Trace References:**

[SRS\\_BSW\\_00407](#)

**Content:**

The function `Pwm_GetVersionInfo` shall be configurable On/Off by the configuration parameter: `PwmVersionInfoApi {PWM_VERSION_INFO_API}`.

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #74966: Some reqs are still doubled since the introduction of SWS\_BSW\_General

**Problem description:**

In line with RfC 53574 and RfC 58436, some reqs are still doubled in SWS\_BSW\_General and in the SWS module, meaning there're some unnecessary reqs in the SWS module.

Example:

[SWS\_Pwm\_20069] The function `Pwm_GetVersionInfo` shall be configurable On/Off by the configuration parameter: `PwmVersionInfoApi PWM_VERSION_INFO_API`. (SRS\_BSW\_00407)

1) SWS\_Pwm\_20069 is a duplication of SWS\_BSW\_00051:

[SWS\_BSW\_00051] Configuration parameter for enabling Get Version Information service

The availability of the Get Version Information API is configurable at Pre-compile time for every single BSW Module. The configuration parameter name shall be formed in the following way:

<Ma>VersionInfoApi

(SRS\_BSW\_00411)

Example:

```
/* File: Eep_21_LDExt_Cfg.h */
# define EEP_21_LDEXT_VERSION_INFO_API STD_ON /*API is enabled */
```

By default, all SWS BSW are applicable to all modules, so SWS\_Pwm\_20069 should not be required b/c it doesn't bring any added value.

2) If it is assumed SWS\_Pwm\_20069 must be kept, SWS\_Pwm\_20069 makes reference to SRS\_BSW\_00407 but it should make reference to SRS\_BSW\_00411 too as SRS\_BSW\_00411 is a refinement of SRS\_BSW\_00407 and both are interdependent.

The search of doubled reqs could be automated and this would improve the SWS modules.

**Agreed solution:**

remove SWS\_Pwm\_20069  
 –Last change on issue 74966 comment 6–

**BW-C-Level:**

Application	Specification	Bus
1	1	1

### 1.13 Specification Item SWS\_Pwm\_20120

**Trace References:**

none

**Content:**

In this case the check for this NULL pointer has to be omitted.

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #77255: SWS\_Pwm\_20120 is contradicting SWS\_BSW\_00212 and SWS\_BSW\_00050

**Problem description:**

SWS\_Pwm\_20120 is contradicting SWS\_BSW\_00212 and SWS\_BSW\_00050.

There's no rationale to have SWS PWM as an exception compared to other modules.

Moreover, SWS\_Pwm\_10120 and SWS\_Pwm\_20120 are now obsolete as already handled in SWS BSW.

SWS\_Pwm\_10120 and SWS\_Pwm\_20120 are historically issued from PWM\_120a and PWM\_120b (and basically obsolete now) before SWS BSW popped out.

[SWS\_Pwm\_10120] For pre-compile and link time configuration variants, a NULL

pointer shall be passed to the initialization routine. ()

[SWS\_Pwm\_20120] In this case the check for this NULL pointer has to be omitted.

()

[SWS\_BSW\_00212] NULL pointer checking If the detection of development errors is active for this BSW Module (see

SWS\_BSW\_00042), then pointer parameters shall be checked against NULL\_PTR unless NULL\_PTR is explicitly allowed as a valid pointer address value in the API parameter specification. If such a violation is detected a development error shall be raised. ()

[SWS\_BSW\_00050] Check parameters passed to Initialization functions If the parameter checking for the Initialization function is enabled (SWS\_BSW\_00049), the Configuration pointer argument shall be checked with the following conditions:

In the supportedConfigVariants VariantPreCompile and VariantLinkTime if only one configuration variant set is used, the initialization function does not need nor evaluate the passed argument. Thus the Configuration pointer shall have a NULL\_PTR value.

In the supportedConfigVariant VariantPostBuild or if multiple configuration variant sets are used, the initialization function requires the passed argument. Thus the Configuration pointer shall be different from NULL\_PTR.

If these conditions are not satisfied, a Development error with type "Invalid configuration set selection" shall be reported to Default Error Tracer (Det), see [SWS\_BSW\_00151]. (SRS\_BSW\_00414, SRS\_BSW\_00400, SRS\_BSW\_00438)

**Agreed solution:**

Remove SWS\_Pwm\_10120 and SWS\_Pwm\_20120 from PWM SWS as they are already covered in BSW General (SWS\_BSW\_00212 & SWS\_BSW\_00050)

Chapter 6, pwm.html has to be updated to remove SWS\_Pwm\_10120 and SWS\_Pwm\_10120

–Last change on issue 77255 comment 14–

**BW-C-Level:**

Application	Specification	Bus
1	1	1