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1 SWS_E2ELibrary

1.1 Specification Item SWS_E2E_00021

Trace References:

SRS_E2E_08528, [SRS_E2E_08534](#)

Content:

Name:	E2E_P01CheckStateTypeE2E_P01CheckStateType
Type:	Structure

Element:	uint8	LastValidCounter E2E_P01CheckState Type.LastValidCounter	Counter value most recently received. If no data has been yet received, then the value is 0x0. After each reception, the counter is updated with the value received.
	uint8	MaxDeltaCounter E2E_P01CheckState Type.MaxDeltaCounter	MaxDeltaCounter specifies the maximum allowed difference between two counter values of consecutively received valid messages.
	boolean	WaitForFirstData E2E_P01CheckState Type.WaitForFirstData	If true means that no correct data (with correct Data ID and CRC) has been yet received after the receiver initialization or reinitialization.
	boolean	NewDataAvailable E2E_P01CheckState Type.NewDataAvailable	Indicates to E2E Library that a new data is available for Library to be checked. This attribute is set by the E2E Library caller, and not by the E2E Library.
	uint8	LostDataE2E_P01Check StateType.LostData	Number of data (messages) lost since reception of last valid one. This attribute is set only if Status equals E2E_P01STATUS_OK or E2E_P01STATUS_OKSOMELOST. For other values of Status, the value of LostData is undefined. E2E_P01Check StateType Status Result of the verification of the Data, determined by the Check function.
	E2E_P01CheckStatusType	StatusE2E_P01CheckState Type.Status	Result of the verification of the Data, determined by the Check function.
	uint8	SyncCounterE2E_P01Check StateType.SyncCounter	Number of Data required for validating the consistency of the counter that must be received with a valid counter (i.e. counter within the allowed lock-in range) after the detection of an unexpected behavior of a received counter.
	uint8	NoNewOrRepeatedData CounterE2E_P01CheckState Type.NoNewOrRepeated DataCounter	Amount of consecutive reception cycles in which either (1) there was no new data, or (2) when the data was repeated.
Description:	State of the receiver for a Data protected with E2E Profile 1.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.2 Specification Item SWS_E2E_00022

Trace References:

SRS_E2E_08534

Content:

Name:	E2E_P01CheckStatusTypeE2E_P01CheckStatusType
Type:	Enumeration

Range:	E2E_P01STATUS_OKE2E_P01 Status Type.E2E_P01STATUS_OK	Check - 0x00	OK: The new data has been received according to communication medium, the CRC is correct, the Counter is incremented by 1 with respect to the most recent Data received with Status _INITIAL, _OK, or _OKSOMELOST. This means that no Data has been lost since the last correct data reception.
	E2E_P01STATUS_NONEWDATAE2E_P01 Status Type.E2E_P01STATUS_NONEWDATA	Check - 0x01	Error: the Check function has been invoked but no new Data is not available since the last call, according to communication medium (e.g. RTE, COM). As a result, no E2E checks of Data have been consequently executed.
	E2E_P01STATUS_WRONGCRCE2E_P01 Status Type.E2E_P01STATUS_WRONGCRC	Check - 0x02	Error: The data has been received according to communication medium, but 1. the CRC is incorrect (applicable for all E2E Profile 1 configurations) or 2. the low nibble of the high byte of Data ID is incorrect (applicable only for E2E Profile 1 with E2E_P01Data IDMode = E2E_P01_DATAID_NIBBLE). The two above errors can be a result of corruption, incorrect addressing or masquerade.
	E2E_P01STATUS_SYNCCE2E_P01 Status Type.E2E_P01STATUS_SYNC	Check - 0x03	NOT VALID: The new data has been received after detection of an unexpected behavior of counter. The data has a correct CRC and a counter within the expected range with respect to the most recent Data received, but the determined continuity check for the counter is not finalized yet.
	E2E_P01STATUS_INITIALE2E_P01 Status Type.E2E_P01STATUS_INITIAL	Check - 0x04	Initial: The new data has been received according to communication medium, the CRC is correct, but this is the first Data since the receiver's initialization or reinitialization, so the Counter cannot be verified yet.
	E2E_P01STATUS_REPEATEDCE2E_P01 Status Type.E2E_P01STATUS_REPEATED	Check - 0x08	Error: The new data has been received according to communication medium, the CRC is correct, but the Counter is identical to the most recent Data received with Status _INITIAL, _OK, or _OKSOMELOST.
	E2E_P01STATUS_OKSOMELOSTE2E_P01 Status Type.E2E_P01STATUS_OKSOMELOST	Check - 0x20	OK: The new data has been received according to communication medium, the CRC is correct, the Counter

Description:	Result of the verification of the Data in E2E Profile 1, determined by the Check function.
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RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77665: [E2E_Library] Missing values for enumeration constants (E2E_P0XCheckStateType)

Problem description:

The enumeration literal values for E2E_P01CheckStatusType and E2E_P02CheckStatusType are missing in the related diagrams "Figure 8-2: E2E Profile 1 check state type" and "Figure 8-3: E2E Profile 2 check state". In case of similar enumerations of other E2E profiles (e.g. E2E_P04CheckStateType) these values are given in the related diagram (e.g. "Figure 8-5: E2E Profile 4 check state").

Agreed solution:

Update

"Figure 8-2: E2E Profile 1 check state type" and [SWS_E2E_00022]

as well as

"Figure 8-3: E2E Profile 2 check state" and [SWS_E2E_00214]

with the correct values for the enumeration literals, as they were properly defined until AUTOSAR Release 4.1.3:

E2E_P01STATUS_OK = 0x0
E2E_P01STATUS_NONEWDATA = 0x1
E2E_P01STATUS_WRONGCRC = 0x2
E2E_P01STATUS_SYNC = 0x3
E2E_P01STATUS_INITAL = 0x4
E2E_P01STATUS_REPEATED = 0x8
E2E_P01STATUS_OKSOMELOST = 0x20
E2E_P01STATUS_WRONGSEQUENCE = 0x40

E2E_P02STATUS_OK = 0x0
E2E_P02STATUS_NONEWDATA = 0x1
E2E_P02STATUS_WRONGCRC = 0x2
E2E_P02STATUS_SYNC = 0x3
E2E_P02STATUS_INITAL = 0x4
E2E_P02STATUS_REPEATED = 0x8

E2E_P02STATUS_OKSOMELOST = 0x20
E2E_P02STATUS_WRONGSEQUENCE = 0x40
–Last change on issue 77665 comment 5–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.3 Specification Item SWS_E2E_00152

Trace References:

SRS_E2E_08528

Content:

Name:	E2E_P02ConfigTypeE2E_P02ConfigType
Type:	Structure

Element:	uint16	DataLengthE2E_P02Config Type.DataLength	Length of Data, in bits. The value shall be a multiple of 8.
	uint8[16]	DataIDListE2E_P02Config Type.DataIDList	An array of appropriately chosen Data IDs for protection against masquerading.
	uint8	MaxDeltaCounterInit E2E_P02ConfigType.Max DeltaCounterInit	Initial maximum allowed gap between two counter values of two consecutively received valid Data. For example, if the receiver gets Data with counter 1 and MaxDeltaCounterInit is 1, then at the next reception the receiver can accept Counters with values 2 and 3, but not 4. Note that if the receiver does not receive new Data at a consecutive read, then the receiver increments the tolerance by 1.
	uint8	MaxNoNewOrRepeatedData E2E_P02ConfigType.MaxNo NewOrRepeatedData	The maximum amount of missing or repeated Data which the receiver does not expect to exceed under normal communication conditions.
	uint8	SyncCounterInit E2E_P02ConfigType.Sync CounterInit	Number of Data required for validating the consistency of the counter that must be received with a valid counter (i.e. counter within the allowed lock-in range) after the detection of an unexpected behavior of a received counter.
	uint16	OffsetE2E_P02Config Type.Offset	Offset of the E2E header in the Data[] array in bits. It shall be: $0 \leq \text{Offset} \leq \text{MaxDataLength} - (2 \cdot 8)$.
Description:	Non-modifiable configuration of the data element sent over an RTE port, for E2E profile 2. The position of the counter and CRC is not configurable in profile 2.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77571: [E2E] How to check the range of "Offset" in Profile2

Problem description:

In the E2E specification, the "Offset" in SWS_E2E_00152 is mentioned as follows:

Offset of the E2E header in the Data[] array in bits. It shall be: 0 Offset
MaxDataLength-(2*8).

However, there is no definition "MaxDataLength" in Profile2. Additionally, "SWS_E2E_00122" is mentioned as follows:

In E2E Profile 2, the CRC shall be Data[0].

From the above descriptions, we understand that "Offset" equals to 0 in general case. However, some users requires the range of "Offset", because of the compatibility with legacy implementations. Therefore, we suppose that we change "MaxDataLength" equals to 2048(256 bytes) described in SWS_E2E_00121. In conclusion, the range of "Offset" is from 0 to 2040(2048 8) bits, because of length of CRC is 8bits.

Could you please check and correct it?

Agreed solution:

Change the following description at SWS_E2E_00152:

"It shall be: 0 Offset DataLength - (2*8)."

–Last change on issue 77571 comment 2–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.4 Specification Item SWS_E2E_00153

Trace References:

SRS_E2E_08528

Content:

Name:	E2E_P02ProtectStateTypeE2E_P02ProtectStateType		
Type:	Structure		
Element:	uint8	CounterE2E_P02ProtectStateType.Counter	Counter to be used for protecting the Data. The initial value is 0, which means that 0. As the counter is incremented before sending, the first Data will have the counter 0. After the protection by the counter, the counter is incremented modulo 16. value 1
Description:	State of the sender for a Data protected with E2E Profile 2.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #74205: [E2E_Library] E2E_P02Protect Conflicting Counter value for first data

Problem description:

There is a conflict in the requirements for increment of counter value.

In Profile 2:

SWS_E2E_00153 says, first Data will have the counter 0.

and Figure 7-8: E2E_P02Protect() and Figure 7-9: Increment Counter together says that counter will be incremented at start of E2E_P02Protect function, which leads to initial counter value as one.

Agreed solution:

Requirement SWS_E2E_00153 needs to be updated for Counter element:

"Counter to be used for protecting the Data. The initial value is 0. As the counter is incremented before sending, the first Data will have the counter value 1."

—Last change on issue 74205 comment 4—

BW-C-Level:

Application	Specification	Bus
1	4	1

1.5 Specification Item SWS_E2E_00154

Trace References:

SRS_E2E_08528, [SRS_E2E_08534](#)

Content:

Name:	E2E_P02CheckStateTypeE2E_P02CheckStateType
Type:	Structure

Element:	uint8	LastValidCounter E2E_P02CheckState Type.LastValidCounter	Counter of last valid received message.
	uint8	MaxDeltaCounter E2E_P02CheckState Type.MaxDeltaCounter	MaxDeltaCounter specifies the maximum allowed difference between two counter values of consecutively received valid messages.
	boolean	WaitForFirstData E2E_P02CheckState Type.WaitForFirstData	If true means that no correct data (with correct Data ID and CRC) has been yet received after the receiver initialization or reinitialization.
	boolean	NewDataAvailable E2E_P02CheckState Type.NewDataAvailable	Indicates to E2E Library that a new data is available for Library to be checked. This attribute is set by the E2E Library caller, and not by the E2E Library.
	uint8	LostDataE2E_P02Check StateType.LostData	Number of data (messages) lost since reception of last valid one.
	E2E_P02CheckStatusType	StatusE2E_P02CheckState Type.Status	Result of the verification of the Data, determined by the Check function.
	uint8	SyncCounterE2E_P02Check StateType.SyncCounter	Number of Data required for validating the consistency of the counter that must be received with a valid counter (i.e. counter within the allowed lock-in range) after the detection of an unexpected behavior of a received counter.
	uint8	NoNewOrRepeatedData CounterE2E_P02CheckState Type.NoNewOrRepeated DataCounter	Amount of consecutive reception cycles in which either (1) there was no new data, or (2) when the data was repeated.
Description:	State of the sender for a Data protected with E2E Profile 2.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.6 Specification Item SWS_E2E_00158

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P01CheckE2E_P01Check
---------------	--------------------------

Syntax:	Std_ReturnType E2E_P01Check(const E2E_P01ConfigType* Config, E2E_P01CheckStateType* State, const uint8* Data)	
Service ID[hex]:	0x02	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigE2E_P01Check.Config	Pointer to static configuration.
	DataE2E_P01Check.Data	Pointer to received data.
Parameters (inout):	StateE2E_P01Check.State	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Checks the Data received using the E2E profile 1. This includes CRC calculation, handling of Counter and Data ID.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,

SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.7 Specification Item SWS_E2E_00160

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P02ProtectE2E_P02Protect	
Syntax:	Std_ReturnType E2E_P02Protect(const E2E_P02ConfigType* ConfigPtr, E2E_P02ProtectStateType* StatePtr, uint8* DataPtr)	
Service ID[hex]:	0x03	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P02Protect.ConfigPtr	Pointer to static configuration.
Parameters (inout):	StatePtrE2E_P02Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P02Protect.DataPtr	Pointer to the data to be protected.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.

Description:	Protects the array/buffer to be transmitted using the E2E profile 2. This includes checksum calculation, handling of sequence counter and Data ID.
--------------	--

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.8 Specification Item SWS_E2E_00161

Trace References:SRS_E2E_08528, [SRS_E2E_08527](#)**Content:**

Service name:	E2E_P02CheckE2E_P02Check	
Syntax:	<pre>Std_ReturnType E2E_P02Check(const E2E_P02ConfigType* ConfigPtr, E2E_P02CheckStateType* StatePtr, const uint8* DataPtr)</pre>	
Service ID[hex]:	0x04	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P02Check.ConfigPtr	Pointer to static configuration.
	DataPtrE2E_P02Check.DataPtr	—
Parameters (inout):	StatePtrE2E_P02Check.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Check the array/buffer using the E2E profile 2. This includes checksum calculation, handling of sequence counter and Data ID.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.9 Specification Item SWS_E2E_00166

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P01ProtectE2E_P01Protect
---------------	------------------------------

Syntax:	Std_ReturnType E2E_P01Protect(const E2E_P01ConfigType* ConfigPtr, E2E_P01ProtectStateType* StatePtr, uint8* DataPtr)	
Service ID[hex]:	0x01	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P01Protect.ConfigPtr	Pointer to static configuration.
Parameters (inout):	StatePtrE2E_P01Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P01Protect.DataPtr	Pointer to Data to be transmitted.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Protects the array/buffer to be transmitted using the E2E profile 1. This includes checksum calculation, handling of counter and Data ID.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527	-	SWS_E2E_00166,	SWS_E2E_00385,	SWS_E2E_00158,
SWS_E2E_00390,		SWS_E2E_00382,	SWS_E2E_00160,	SWS_E2E_00387,
SWS_E2E_00161,		SWS_E2E_00391,	SWS_E2E_00379,	SWS_E2E_00338,
SWS_E2E_00373,		SWS_E2E_00339,	SWS_E2E_00350,	SWS_E2E_00349,
SWS_E2E_00446,		SWS_E2E_00447,	SWS_E2E_00449,	SWS_E2E_00450,
SWS_E2E_00452,		SWS_E2E_00393,	SWS_E2E_00455,	SWS_E2E_00457,
SWS_E2E_00458,		SWS_E2E_00460,	SWS_E2E_00546,	SWS_E2E_00547,
SWS_E2E_00548,		SWS_E2E_00549,	SWS_E2E_00552,	SWS_E2E_00550,
SWS_E2E_00575,		SWS_E2E_00576,	SWS_E2E_00572,	SWS_E2E_00573,
SWS_E2E_00574,		SWS_E2E_00580,	SWS_E2E_00581,	SWS_E2E_00577,

SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.10 Specification Item SWS_E2E_00190

Trace References:

SRS_E2E_08528, [SRS_E2E_08531](#)

Content:

E2E Profile 1 shall use the Crc_CalculateCRC8 () function of the SWS CRC Library for calculating CRC checksums.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
 SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.11 Specification Item SWS_E2E_00214

Trace References:

SRS_E2E_08534

Content:

Name:	E2E_P02CheckStatusTypeE2E_P02CheckStatusType
Type:	Enumeration

Range:	E2E_P02STATUS_OKE2E_P02Check Status Type.E2E_P02STATUS_OK	- 0x00	OK: The new data has been received according to communication medium, the CRC is correct, the Counter is incremented by 1 with respect to the most recent Data received with Status _INITIAL, _OK, or _OKSOMELOST. This means that no Data has been lost since the last correct data reception.
	E2E_P02STATUS_NONEWDATAE2E_P02Check Status Type.E2E_P02STATUS_NONEWDATA	- 0x01	Error: the Check function has been invoked but no new Data is not available since the last call, according to communication medium (e.g. RTE, COM). As a result, no E2E checks of Data have been consequently executed.
	E2E_P02STATUS_WRONGCRCE2E_P02Check Status Type.E2E_P02STATUS_WRONGCRC	- 0x02	Error: The data has been received according to communication medium, but the CRC is incorrect.
	E2E_P02STATUS_SYNCE2E_P02Check Status Type.E2E_P02STATUS_SYNC	- 0x03	NOT VALID: The new data has been received after detection of an unexpected behavior of counter. The data has a correct CRC and a counter within the expected range with respect to the most recent Data received, but the determined continuity check for the counter is not finalized yet.
	E2E_P02STATUS_INITIALE2E_P02Check Status Type.E2E_P02STATUS_INITIAL	- 0x04	Initial: The new data has been received according to communication medium, the CRC is correct, but this is the first Data since the receiver's initialization or reinitialization, so the Counter cannot be verified yet.
	E2E_P02STATUS_REPEATEDE2E_P02Check Status Type.E2E_P02STATUS_REPEATED	- 0x05	Error: The new data has been received according to communication medium, the CRC is correct, but the Counter is identical to the most recent Data received with Status _INITIAL, _OK, or _OKSOMELOST.
	E2E_P02STATUS_OKSOMELOSTE2E_P02Check Status Type.E2E_P02STATUS_OKSOMELOST	- 0x20	OK: The new data has been received according to communication medium, the CRC is correct, the Counter is incremented by Delta Counter (1 < DeltaCounter =MaxDeltaCounter) with respect to the most recent Data received with Status _INITIAL, _OK, or _OKSOMELOST. This means that some Data in the sequence have been probably lost since the last correct/initial reception, but this is within the configured

Description:	Result of the verification of the Data in E2E Profile 2, determined by the Check function.
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RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77665: [E2E_Library] Missing values for enumeration constants (E2E_P0XCheckStateType)

Problem description:

The enumeration literal values for E2E_P01CheckStatusType and E2E_P02CheckStatusType are missing in the related diagrams "Figure 8-2: E2E Profile 1 check state type" and "Figure 8-3: E2E Profile 2 check state". In case of similar enumerations of other E2E profiles (e.g. E2E_P04CheckStateType) these values are given in the related diagram (e.g. "Figure 8-5: E2E Profile 4 check state").

Agreed solution:

Update

"Figure 8-2: E2E Profile 1 check state type" and [SWS_E2E_00022]

as well as

"Figure 8-3: E2E Profile 2 check state" and [SWS_E2E_00214]

with the correct values for the enumeration literals, as they were properly defined until AUTOSAR Release 4.1.3:

E2E_P01STATUS_OK = 0x0
E2E_P01STATUS_NONEWDATA = 0x1
E2E_P01STATUS_WRONGCRC = 0x2
E2E_P01STATUS_SYNC = 0x3
E2E_P01STATUS_INITAL = 0x4
E2E_P01STATUS_REPEATED = 0x8
E2E_P01STATUS_OKSOMELOST = 0x20
E2E_P01STATUS_WRONGSEQUENCE = 0x40

E2E_P02STATUS_OK = 0x0
E2E_P02STATUS_NONEWDATA = 0x1
E2E_P02STATUS_WRONGCRC = 0x2
E2E_P02STATUS_SYNC = 0x3
E2E_P02STATUS_INITAL = 0x4
E2E_P02STATUS_REPEATED = 0x8

E2E_P02STATUS_OKSOMELOST = 0x20

E2E_P02STATUS_WRONGSEQUENCE = 0x40

–Last change on issue 77665 comment 5–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.12 Specification Item SWS_E2E_00218

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Mechanism	Description
Counter	4bit (explicitly sent) representing numbers from 0 to 14 incremented on every send request. Both Alive Counter and Sequence Counter mechanisms are provided by E2E Profile 1, evaluating the same 4 bits.
Timeout monitoring	Timeout is determined by E2E Library by means of evaluation of the Counter, by a non-blocking read at the receiver. Timeout is reported by E2E Library to the caller by means of the status flags in E2E_P01CheckStatusType.
Data ID	16 bit, unique number, included in the CRC calculation. For dataIdMode equal to 0, 1 or 2, the Data ID is not transmitted, but included in the CRC computation (implicit transmission). For dataIdMode equal to 3: <ul style="list-style-type: none">the high nibble of high byte of DataID is not used (it is 0x0), as the DataID is limited to 12 bits,the low nibble of high byte of DataID is transmitted explicitly and covered by CRC calculation when computing the CRC over Data.the low byte is not transmitted, but it is included in the CRC computation as start value (implicit transmission, like for dataIdMode equal to 0, 1 or 2) .
CRC	CRC-8-SAE J1850 - 0x1D ($x^8 + x^4 + x^3 + x^2 + 1$), but with different start and XOR values (both start value and XOR value are 0x00). This CRC is provided by CRC library. Starting with AUTOSAR R4.0, the SAE8 CRC function of the CRC library uses 0xFF as start value and XOR value. To compensate a different behavior of the CRC library, the E2E Library applies additional XOR 0xFF operations starting with R4.0, to come up with 0x00 as start value and XOR value. Note: This CRC polynomial is different from the CRC-polynomials used by FlexRay, CAN and LIN.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.13 Specification Item SWS_E2E_00219

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Profile 2 shall provide the following mechanisms:

Mechanism	Description
Sequence Number (Counter)	4bit (explicitly sent) representing numbers from 0 to 15 incremented by 1 on every send request (Bit 0:3 of Data[1]) at sender side. The counter is incremented on every call of the E2E_P02Protect() function, i.e. on every transmission request of the SW-C
Message Key used for CRC calculation (Data ID)	8 bit (not explicitly sent) The specific Data ID used to calculate the CRC depends on the value of the Counter and is an element of a pre-defined set of Data IDs (value of the counter as index to select the particular Data ID used for the protection). For every Data element, the List of Data IDs depending on each value of the counter is unique.
Safety Code (CRC)	8 bit explicitly sent (Data[0]) Polynomial: $0x2F (x^8 + x^5 + x^3 + x^2 + x + 1)$ Start value: $0xFF$ Final XOR-value: $0xFF$ Note: This CRC polynomial is different from the CRC-polynomials used by FlexRay and CAN.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,

SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
 SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.14 Specification Item SWS_E2E_00336

Trace References:

SRS_E2E_08539, [SRS_E2E_08534](#)

Content:

Name:	E2E_P04CheckStateTypeE2E_P04CheckStateType		
Type:	Structure		
Element:	E2E_P04CheckStatusType	StatusE2E_P04CheckState Type.Status	Result of the verification of the Data in this cycle, determined by the Check function.
	uint16	CounterE2E_P04CheckState Type.Counter	Counter of the data in previous cycle.
Description:	State of the reception on one single Data protected with E2E Profile 4.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.15 Specification Item SWS_E2E_00338

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P04ProtectE2E_P04Protect	
Syntax:	Std_ReturnType E2E_P04Protect(const E2E_P04ConfigType* ConfigPtr, E2E_P04ProtectStateType* StatePtr, uint8* DataPtr, uint16 Length)	
Service ID[hex]:	0x21	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P04Protect.ConfigPtr	Pointer to static configuration.
	LengthE2E_P04Protect.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P04Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P04Protect.DataPtr	Pointer to Data to be transmitted.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Protects the array/buffer to be transmitted using the E2E profile 4. This includes checksum calculation, handling of counter and Data ID.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,

SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.16 Specification Item SWS_E2E_00339

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P04CheckE2E_P04Check
Syntax:	Std_ReturnType E2E_P04Check(const E2E_P04ConfigType* ConfigPtr, E2E_P04CheckStateType* StatePtr, const uint8* DataPtr, uint16 Length)
Service ID[hex]:	0x23

Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P04Check.ConfigPtr	Pointer to static configuration.
	DataPtrE2E_P04Check.DataPtr	Pointer to received data.
	LengthE2E_P04Check.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P04Check.StatePtr	Pointer to received data.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Checks the Data received using the E2E profile 4. This includes CRC calculation, handling of Counter and Data ID. The function checks only one single data in one cycle, it does not determine/compute the accumulated state of the communication link.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,

SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.17 Specification Item SWS_E2E_00349

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P04MapStatusToSME2E_P04MapStatusToSM	
Syntax:	E2E_PCheckStatusType E2E_P04MapStatusToSM(Std_ReturnType CheckReturn, E2E_P04CheckStatusType Status)	
Service ID[hex]:	0x25	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	CheckReturnE2E_P04MapStatusToSM.CheckReturn	Return value of the E2E_P04Check function
	StatusE2E_P04MapStatusToSM.Status	Status determined by E2E_P04Check function
Parameters (inout):	None	
Parameters (out):	None	
Return value:	E2E_PCheckStatusType	Profile-independent status of the reception on one single Data in one cycle.
Description:	The function maps the check status of Profile 4 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 4 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.18 Specification Item SWS_E2E_00350

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P04CheckInit E2E_P04CheckInit	
Syntax:	Std_ReturnType E2E_P04CheckInit(E2E_P04CheckStateType* StatePtr)	
Service ID[hex]:	0x24	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P04CheckInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,

SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".
–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.19 Specification Item SWS_E2E_00353

Trace References:

SRS_E2E_08539

Content:

Service name:	E2E_SMCheckInit	
Syntax:	Std_ReturnType E2E_SMCheckInit(E2E_SMCheckStateType* StatePtr, const E2E_SMConfigType* ConfigPtr)	
Service ID[hex]:	0x31	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtr	Pointer to configuration of the state machine
Parameters (inout):	None	
Parameters (out):	StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.20 Specification Item SWS_E2E_00372

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Profile 4 shall provide the following control fields, transmitted at runtime together with the protected data:

Control field	Description
Length	16 bits, to support dynamic-size data.
Counter	16-bits.
CRC	32 bits, polynomial in normal form 0x1F4ACFB13, provided by CRC library. Note: This CRC polynomial is different from the CRC-polynomials used by FlexRay, CAN and LIN and TCP/IP.
Data ID	32-bits, unique system-wide.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.21 Specification Item SWS_E2E_00373

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P04ProtectInit E2E_P04ProtectInit	
Syntax:	Std_ReturnType E2E_P04ProtectInit(E2E_P04ProtectStateType* StatePtr)	
Service ID[hex]:	0x22	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P04ProtectInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions
PXXProtectInit

PXXCheckInit and
SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

—Last change on issue 73487 comment 4—

BW-C-Level:

Application	Specification	Bus
1	1	1

1.22 Specification Item SWS_E2E_00379

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P02MapStatusToSME2E_P02MapStatusToSM
---------------	--

Syntax:	E2E_PCheckStatusType E2E_P02MapStatusToSM(Std_ReturnType CheckReturn, E2E_P02CheckStatusType Status, boolean profileBehavior)	
Service ID[hex]:	0x20	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	CheckReturnE2E_P02MapStatusToSM.CheckReturn	Return value of the E2E_P02Check function
	StatusE2E_P02MapStatusToSM.Status	Status determined by E2E_P02Check function
	profileBehaviorE2E_P02MapStatusToSM.profileBehavior	FALSE: check has the legacy behavior, before R4.2 TRUE: check behaves like new P4/P5/P6 profiles introduced in R4.2
Parameters (inout):	None	
Parameters (out):	None	
Return value:	E2E_PCheckStatusType	Profile-independent status of the reception on one single Data in one cycle.
Description:	The function maps the check status of Profile 2 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 2 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,

SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.23 Specification Item SWS_E2E_00382

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P01MapStatusToSME2E_P01MapStatusToSM
Syntax:	E2E_PCheckStatusType E2E_P01MapStatusToSM(Std_ReturnType CheckReturn, E2E_P01CheckStatusType Status, boolean profileBehavior)
Service ID[hex]:	0x1d
Sync/Async:	Synchronous
Reentrancy:	Reentrant

Parameters (in):	CheckReturnE2E_P01MapStatusToSM.CheckReturn	Return value of the E2E_P01Check function
	StatusE2E_P01MapStatusToSM.Status	Status determined by E2E_P01Check function
	profileBehaviorE2E_P01MapStatusToSM.profileBehavior	FALSE: check has the legacy behavior, before R4.2 TRUE: check behaves like new P4/P5/P6 profiles introduced in R4.2
Parameters (inout):	None	
Parameters (out):	None	
Return value:	E2E_PCheckStatusType	Profile-independent status of the reception on one single Data in one cycle.
Description:	The function maps the check status of Profile 1 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 1 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,

SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569
–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.24 Specification Item SWS_E2E_00385

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P01ProtectInit E2E_P01ProtectInit	
Syntax:	Std_ReturnType E2E_P01ProtectInit(E2E_P01ProtectStateType* StatePtr)	
Service ID[hex]:	0x1b	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P01ProtectInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions
PXXProtectInit

PXXCheckInit and
SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

—Last change on issue 73487 comment 4—

BW-C-Level:

Application	Specification	Bus
1	1	1

1.25 Specification Item SWS_E2E_00387

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P02ProtectInit E2E_P02ProtectInit
Syntax:	Std_ReturnType E2E_P02ProtectInit(E2E_P02ProtectStateType* StatePtr)

Service ID[hex]:	0x1e	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtrE2E_P02ProtectInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

- the structure and contents of SRS E2E needs to be ameliorated
- the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372, SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503, SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022, SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440, SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.26 Specification Item SWS_E2E_00390

Trace References:

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P01CheckInit E2E_P01CheckInit	
Syntax:	Std_ReturnType E2E_P01CheckInit(E2E_P01CheckStateType* StatePtr)	
Service ID[hex]:	0x1c	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P01CheckInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".
 [SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".
 –Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.27 Specification Item SWS_E2E_00391**Trace References:**

SRS_E2E_08528, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P02CheckInit E2E_P02CheckInit	
Syntax:	Std_ReturnType E2E_P02CheckInit(E2E_P02CheckStateType* StatePtr)	
Service ID[hex]:	0x1f	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P02CheckInit.StatePtr	Pointer to port/data communication state.

Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,

SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.28 Specification Item SWS_E2E_00393

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P06ProtectE2E_P06Protect	
Syntax:	Std_ReturnType E2E_P06Protect(const E2E_P06ConfigType* ConfigPtr, E2E_P06ProtectStateType* StatePtr, uint8* DataPtr, uint16 Length)	
Service ID[hex]:	0x2b	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P06Protect.ConfigPtr	Pointer to static configuration.
	LengthE2E_P06Protect.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P06Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P06Protect.DataPtr	Pointer to Data to be transmitted.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Protects the array/buffer to be transmitted using the E2E profile 6. This includes checksum calculation, handling of counter.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,

SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
 SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.29 Specification Item SWS_E2E_00394

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Profile 5 shall provide the following control fields, transmitted at runtime together with the protected data:

Control field	Description
Counter	8-bits. (explicitly sent)
CRC	16 bits, polynomial in normal form 0x1021 (Autosar notation), provided by CRC library. (explicitly sent)

Control field	Description
Data ID	16-bits, unique system-wide. (implicitly sent)

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.30 Specification Item SWS_E2E_00439

Trace References:

SRS_E2E_08539, [SRS_E2E_08534](#)

Content:

Name:	E2E_P05CheckStateTypeE2E_P05CheckStateType		
Type:	Structure		
Element:	E2E_P05CheckStatusType	StatusE2E_P05CheckState Type.Status	Result of the verification of the Data in this cycle, determined by the Check function.
	uint8	CounterE2E_P05CheckState Type.Counter	Counter of the data in previous cycle.
Description:	Description: State of the reception on one single Data protected with E2E Profile 5.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,

SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.31 Specification Item SWS_E2E_00444

Trace References:

SRS_E2E_08539, [SRS_E2E_08534](#)

Content:

Name:	E2E_P06CheckStateTypeE2E_P06CheckStateType		
Type:	Structure		
Element:	E2E_P06CheckStatusType	StatusE2E_P06CheckState Type.Status	Result of the verification of the Data in this cycle, determined by the Check function.
	uint8	CounterE2E_P06CheckState Type.Counter	Counter of the data in previous cycle.
Description:	State of the reception on one single Data protected with E2E Profile 6.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.32 Specification Item SWS_E2E_00446

Trace References:

SRS_E2E_08539, SRS_E2E_08527

Content:

Service name:	E2E_P05ProtectE2E_P05Protect	
Syntax:	<pre>Std_ReturnType E2E_P05Protect(const E2E_P05ConfigType* ConfigPtr, E2E_P05ProtectStateType* StatePtr, uint8* DataPtr, uint16 Length)</pre>	
Service ID[hex]:	0x26	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P05Protect.ConfigPtr	Pointer to static configuration.
	LengthE2E_P05Protect.Length	Length of the data in bytes
Parameters (inout):	StatePtrE2E_P05Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P05Protect.DataPtr	Pointer to Data to be transmitted.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Protects the array/buffer to be transmitted using the E2E profile 5. This includes checksum calculation, handling of counter.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,

SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.33 Specification Item SWS_E2E_00447

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P05ProtectInit E2E_P05ProtectInit	
Syntax:	Std_ReturnType E2E_P05ProtectInit(E2E_P05ProtectStateType* StatePtr)	
Service ID[hex]:	0x27	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P05ProtectInit.StatePtr	Pointer to port/data communication state.

Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,

SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.34 Specification Item SWS_E2E_00449

Trace References:

SRS_E2E_08539, SRS_E2E_08527

Content:

Service name:	E2E_P05CheckE2E_P05Check	
Syntax:	Std_ReturnType E2E_P05Check(const E2E_P05ConfigType* ConfigPtr, E2E_P05CheckStateType* StatePtr, const uint8* DataPtr, uint16 Length)	
Service ID[hex]:	0x28	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P05Check.ConfigPtr	Pointer to static configuration.
	DataPtrE2E_P05Check.DataPtr	Pointer to received data.
	LengthE2E_P05Check.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P05Check.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Checks the Data received using the E2E profile 5. This includes CRC calculation, handling of Counter. The function checks only one single data in one cycle, it does not determine/compute the accumulated state of the communication link.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,

SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.35 Specification Item SWS_E2E_00450

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P05CheckInit E2E_P05CheckInit
Syntax:	Std_ReturnType E2E_P05CheckInit(E2E_P05CheckStateType* StatePtr)
Service ID[hex]:	0x29
Sync/Async:	Synchronous
Reentrancy:	Reentrant

Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtrE2E_P05CheckInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.36 Specification Item SWS_E2E_00452

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P05MapStatusToSME2E_P05MapStatusToSM	
Syntax:	E2E_PCheckStatusType E2E_P05MapStatusToSM(Std_ReturnType CheckReturn, E2E_P05CheckStatusType Status)	
Service ID[hex]:	0x2a	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	CheckReturnE2E_P05MapStatusToSM.CheckReturn	Return value of the E2E_P05Check function
	StatusE2E_P05MapStatusToSM.Status	Status determined by E2E_P05Check function
Parameters (inout):	None	
Parameters (out):	None	
Return value:	E2E_PCheckStatusType	Profile-independent status of the reception on one single Data in one cycle.
Description:	The function maps the check status of Profile 5 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 5 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
 SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.37 Specification Item SWS_E2E_00455

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P06ProtectInit E2E_P06ProtectInit
Syntax:	Std_ReturnType E2E_P06ProtectInit(E2E_P06ProtectStateType* StatePtr)
Service ID[hex]:	0x2c

Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtrE2E_P06ProtectInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,

SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.38 Specification Item SWS_E2E_00457**Trace References:**SRS_E2E_08539, [SRS_E2E_08527](#)**Content:**

Service name:	E2E_P06CheckE2E_P06Check	
Syntax:	Std_ReturnType E2E_P06Check(const E2E_P06ConfigType* ConfigPtr, E2E_P06CheckStateType* StatePtr, const uint8* DataPtr, uint16 Length)	
Service ID[hex]:	0x2d	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P06Check.ConfigPtr	Pointer to static configuration.
	DataPtrE2E_P06Check.DataPtr	Pointer to received data.
	LengthE2E_P06Check.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P06Check.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Checks the Data received using the E2E profile 6. This includes CRC calculation, handling of Counter. The function checks only one single data in one cycle, it does not determine/compute the accumulated state of the communication link.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.39 Specification Item SWS_E2E_00458

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P06CheckInit E2E_P06CheckInit
---------------	---

Syntax:	Std_ReturnType E2E_P06CheckInit(E2E_P06CheckStateType* StatePtr)	
Service ID[hex]:	0x2e	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtrE2E_P06CheckInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL - null pointer passed E2E_E_OK
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,

SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.40 Specification Item SWS_E2E_00460

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P06MapStatusToSME2E_P06MapStatusToSM	
Syntax:	E2E_PCheckStatusType E2E_P06MapStatusToSM(Std_ReturnType CheckReturn, E2E_P06CheckStatusType Status)	
Service ID[hex]:	0x2f	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	CheckReturnE2E_P06MapStatusToSM.CheckReturn	Return value of the E2E_P06Check function
	StatusE2E_P06MapStatusToSM.Status	Status determined by E2E_P06Check function
Parameters (inout):	None	
Parameters (out):	None	
Return value:	E2E_PCheckStatusType	Profile-independent status of the reception on one single Data in one cycle.
Description:	The function maps the check status of Profile 6 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 6 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated

2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.41 Specification Item SWS_E2E_00479

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Profile 6 shall provide the following control fields, transmitted at runtime together with the protected data:

Control field	Description
Length	16 bits, to support dynamic-size data. (explicitly sent)
Counter	8-bits. (explicitly sent)
CRC	16-bits, polynomial in normal form 0x1021 (Autosar notation), provided by CRC library. (explicitly sent)
Data ID	16-bits, unique system-wide. (implicitly sent)

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,

SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.42 Specification Item SWS_E2E_00480

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Profile 7 shall provide the following control fields, transmitted at runtime together with the protected data:

Control field	Description
Length	32 bits, to support dynamic-size data.
Counter	32-bits.
CRC	64 bits, polynomial in normal form 0x42F0E1EBA9EA3693, provided by CRC library. Note: This CRC polynomial is also known as "CRC-64 (ECMA)".
Data ID	32-bits, unique system-wide.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.43 Specification Item SWS_E2E_00503

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Profile 11 shall provide the following control fields, transmitted at runtime together with the protected data:

Control field	Description
Counter	4-bits. (explicitly sent)
CRC	8 bits, CRC-8-SAE J1850, provided by CRC library. (explicitly sent)
Data ID	16-bits or 12-bits, unique system-wide. (either implicitly sent (16-bits) or partly explicitly sent (12-bits; 4 bits explicitly and 8 bits implicitly sent))

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,

SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.44 Specification Item SWS_E2E_00522

Trace References:

SRS_E2E_08529, SRS_E2E_08530, SRS_E2E_08533

Content:

Profile 22 shall provide the following control fields, transmitted at runtime together with the protected data:

Control field	Description
Counter	4 bits. (explicitly sent)
CRC	8 bits, polynomial in normal form 0x2F (Autosar notation), provided by CRC library. (explicitly sent)
Data ID List	16 8-bit values, linked to Counter value. Effectively 16 different values, one for each counter value. The Data ID List must be unique system-wide.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,

SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.45 Specification Item SWS_E2E_00542

Trace References:

SRS_E2E_08539, [SRS_E2E_08534](#)

Content:

Name:	E2E_P07CheckStateTypeE2E_P07CheckStateType		
Type:	Structure		
Element:	E2E_P07CheckStatusType	StatusE2E_P07CheckState Type.Status	Result of the verification of the Data in this cycle, determined by the Check function.
	uint32	CounterE2E_P07CheckState Type.Counter	Counter of the data in previous cycle.
Description:	State of the reception on one single Data protected with E2E Profile 7.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.46 Specification Item SWS_E2E_00544

Trace References:

SRS_E2E_08539

Content:

Name:	E2E_P07ConfigTypeE2E_P07ConfigType		
Type:	Structure		
Element:	uint32	DataID E2E_P07ConfigType.DataID	A system-unique identifier of the Data.
	uint32	Offset E2E_P07ConfigType.Offset	Bit offset of the first bit of the E2E header from the beginning of the Data (bit numbering: bit 0 is the least important). The offset shall be a multiple of 8 and $0 \leq \text{Offset} \leq \text{MaxDataLength} - (18 \cdot 8 + 20 \cdot 8)$. Example: If Offset equals 8, then the first byte of the E2E Length (32 bit) is written to byte 1, the next byte is written to byte 2 and so on.
	uint32	MinDataLength E2E_P07ConfigType.MinDataLength	Minimal length of Data, in bits. E2E checks that Length is $\geq \text{MinDataLength}$. The value shall be $\geq 18 \cdot 8 + 20 \cdot 8$ and $\leq \text{MaxDataLength}$.
	uint32	MaxDataLength E2E_P07ConfigType.MaxDataLength	Maximal length of Data, in bits. E2E checks that Data Length is $\leq \text{MinDataLength}$. The value shall be $\geq \text{MinDataLength}$.
	uint32	MaxDeltaCounter E2E_P07ConfigType.MaxDeltaCounter	Maximum allowed gap between two counter values of two consecutively received valid Data. For example, if the receiver gets Data with counter 1 and MaxDeltaCounter is 3, then at the next reception the receiver can accept Counters with values 2, 3 or 4.
Description:	Configuration of transmitted Data (Data Element or I-PDU), for E2E Profile 7. For each transmitted Data, there is an instance of this typedef.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #76738: [E2E] : Discrepancy for minimal data length in Profile 7

Problem description:

In requirement SWS_E2E_00544 the member MinDataLength of E2E_P07ConfigType is described as:

Minimal length of Data, in bits. E2E checks that Length is MinDataLength.

The value shall be 18*8 and MaxDataLength.

The value 18*8 refers to 18 bytes provided by the header as a minimum value.

In contrast, the fixed header layout, as presented by Figure 7-16: E2E Profile 7 header, shows 20 bytes.

So, there is a discrepancy of the value 18 used in the description of member Offset as well as MinDataLength of E2E_P07ConfigType and those provided with 20 bytes for the header layout.

Agreed solution:

–Update requirement SWS_E2E_00544:

–Offset: Replace MaxDataLength-(18*8) by MaxDataLength-(20*8)

–MinDataLength: Replace shall be 18*8 and MaxDataLength by shall be 20*8 and MaxDataLength.

BW-C-Level:

Application	Specification	Bus
1	1	1

1.47 Specification Item SWS_E2E_00546

Trace References:

SRS_E2E_08539

Content:

Service name:	E2E_P07ProtectE2E_P07Protect	
Syntax:	<pre>void Std_ReturnType E2E_P07Protect(const E2E_P07ConfigType* ConfigPtr, E2E_P07ProtectStateType* StatePtr, uint8* DataPtr, uint32 Length)</pre>	
Service ID[hex]:	0x21	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P07Protect.ConfigPtr	Pointer to static configuration.
	LengthE2E_P07Protect.Length	Length of the data in bytes.

Parameters (inout):	StatePtrE2E_P07Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P07Protect.DataPtr	Pointer to Data to be transmitted.
Parameters (out):	None	

None

Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Protects the array/buffer to be transmitted using the E2E profile 7. This includes checksum calculation, handling of counter and Data ID.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #76739: [E2E] Return type of Profile07 API shall be updated.

Problem description:

There are conflicts in profile 07 requirements which are as follows:

1. E2E_P07Protect() - Conflicts in the requirements [SWS_E2E_00546] and [SWS_E2E_00486]
 - i. [SWS_E2E_00546] : Return value of the E2E_P07Protect() is void
 - ii. [SWS_E2E_00486] : In diagram, function E2E_P07Protect() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK or E2E_E_INPUTERR_WRONG
2. E2E_P07Check () - Conflicts in the requirement of [SWS_E2E_00548] and [SWS_E2E_00495]
 - i. [SWS_E2E_00548] : Return value of the E2E_P07Check() is void
 - ii. [SWS_E2E_00495] : In diagram, the function E2E_P07Check() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK, E2E_E_INPUTERR_WRONG
3. E2E_P07ProtectInit() - Conflicts in the requirement of [SWS_E2E_00547] and [SWS_E2E_00551] function return value
 - i. [SWS_E2E_00547] : Return value of the E2E_P07ProtectInit() is void
 - ii. [SWS_E2E_00551] : In case State is NULL, E2E_P07ProtectInit shall return immediately with E2E_E_INPUTERR_NULL
4. E2E_P07CheckInit() - Conflicts in the requirement of [SWS_E2E_00549] and [SWS_E2E_00552]
 - i. [SWS_E2E_00549] : Return value of the E2E_P07CheckInit() is void.
 - ii. [SWS_E2E_00552] : In case State is NULL, E2E_P07CheckInit shall return immediately with E2E_E_INPUTERR_NULL.

5. E2E_P07MapStatusToSM() - Conflicts in the requirement of [SWS_E2E_00550] and [SWS_E2E_00553]

i. [SWS_E2E_00550] : Return value of the E2E_P07MapStatusToSM() is void.

ii. [SWS_E2E_00553] : If CheckReturn = E2E_E_OK, then the function E2E_P07MapStatusToSM shall return the values depending on the value of Status.

Agreed solution:

=== AUTOSAR_SWS_E2ELibrary / BSW UML ===

Following functions shall have return type as Std_ReturnType

- E2E_P07Protect,
- E2E_P07Check,
- E2E_P07ProtectInit,
- E2E_P07ProtectInit

E2E_P07MapStatusToSM function shall have return the E2E_PCheckStatusType.

BW-C-Level:

Application	Specification	Bus
1	4	1

1.48 Specification Item SWS_E2E_00547

Trace References:

SRS_E2E_08539

Content:

Service name:	E2E_P07ProtectInitE2E_P07ProtectInit	
Syntax:	<pre>void Std_ReturnType E2E_P07ProtectInit(E2E_P07ProtectStateType* StatePtr)</pre>	
Service ID[hex]:	0x22	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtrE2E_P07ProtectInit.StatePtr	Pointer to port/data communication state.
Parameters (out)Return value:	None	

None

Return value: Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.	
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #76739: [E2E] Return type of Profile07 API shall be updated.

Problem description:

There are conflicts in profile 07 requirements which are as follows:

1. E2E_P07Protect() - Conflicts in the requirements [SWS_E2E_00546] and [SWS_E2E_00486]
 - i. [SWS_E2E_00546] : Return value of the E2E_P07Protect() is void
 - ii. [SWS_E2E_00486] : In diagram, function E2E_P07Protect() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK or E2E_E_INPUTERR_WRONG
2. E2E_P07Check () - Conflicts in the requirement of [SWS_E2E_00548] and [SWS_E2E_00495]
 - i. [SWS_E2E_00548] : Return value of the E2E_P07Check() is void
 - ii. [SWS_E2E_00495] : In diagram, the function E2E_P07Check() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK, E2E_E_INPUTERR_WRONG
3. E2E_P07ProtectInit() - Conflicts in the requirement of [SWS_E2E_00547] and [SWS_E2E_00551] function return value
 - i. [SWS_E2E_00547] : Return value of the E2E_P07ProtectInit() is void
 - ii. [SWS_E2E_00551] : In case State is NULL, E2E_P07ProtectInit shall return immediately with E2E_E_INPUTERR_NULL
4. E2E_P07CheckInit() - Conflicts in the requirement of [SWS_E2E_00549] and [SWS_E2E_00552]
 - i. [SWS_E2E_00549] : Return value of the E2E_P07CheckInit() is void.
 - ii. [SWS_E2E_00552] : In case State is NULL, E2E_P07CheckInit shall return immediately with E2E_E_INPUTERR_NULL.
5. E2E_P07MapStatusToSM() - Conflicts in the requirement of [SWS_E2E_00550] and [SWS_E2E_00553]
 - i. [SWS_E2E_00550] : Return value of the E2E_P07MapStatusToSM() is void.
 - ii. [SWS_E2E_00553] : If CheckReturn = E2E_E_OK, then the function E2E_P07MapStatusToSM shall return the values depending on the value of Status.

Agreed solution:

=== AUTOSAR_SWS_E2ELibrary / BSW UML ===

Following functions shall have return type as Std_ReturnType

- E2E_P07Protect,

- E2E_P07Check,
- E2E_P07ProtectInit,
- E2E_P07ProtectInit

E2E_P07MapStatusToSM function shall have return the E2E_PCCheckStatusType.

BW-C-Level:

Application	Specification	Bus
1	4	1

1.49 Specification Item SWS_E2E_00548

Trace References:

SRS_E2E_08539

Content:

Service name:	E2E_P07CheckE2E_P07Check	
Syntax:	<pre>void Std_ReturnType E2E_P07Check(const E2E_P07ConfigType* ConfigPtr, E2E_P07CheckStateType* StatePtr, const uint8* DataPtr, uint32 Length)</pre>	
Service ID[hex]:	0x23	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P07Check.ConfigPtr	Pointer to static configuration.
	DataPtrE2E_P07Check.DataPtr	Pointer to received data.
	LengthE2E_P07Check.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P07Check.StatePtr	Pointer to received data.
Parameters (out):	None	

None

Return value:	Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.
Description:	Checks the Data received using the E2E profile 7. This includes CRC calculation, handling of Counter and Data ID. The function checks only one single data in one cycle, it does not determine/compute the accumulated state of the communication link.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #76739: [E2E] Return type of Profile07 API shall be updated.

Problem description:

There are conflicts in profile 07 requirements which are as follows:

1. E2E_P07Protect() - Conflicts in the requirements [SWS_E2E_00546] and [SWS_E2E_00486]
 - i. [SWS_E2E_00546] : Return value of the E2E_P07Protect() is void
 - ii. [SWS_E2E_00486] : In diagram, function E2E_P07Protect() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK or E2E_E_INPUTERR_WRONG
2. E2E_P07Check () - Conflicts in the requirement of [SWS_E2E_00548] and [SWS_E2E_00495]
 - i. [SWS_E2E_00548] : Return value of the E2E_P07Check() is void
 - ii. [SWS_E2E_00495] : In diagram, the function E2E_P07Check() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK, E2E_E_INPUTERR_WRONG
3. E2E_P07ProtectInit() - Conflicts in the requirement of [SWS_E2E_00547] and [SWS_E2E_00551] function return value
 - i. [SWS_E2E_00547] : Return value of the E2E_P07ProtectInit() is void
 - ii. [SWS_E2E_00551] : In case State is NULL, E2E_P07ProtectInit shall return immediately with E2E_E_INPUTERR_NULL
4. E2E_P07CheckInit() - Conflicts in the requirement of [SWS_E2E_00549] and [SWS_E2E_00552]
 - i. [SWS_E2E_00549] : Return value of the E2E_P07CheckInit() is void.
 - ii. [SWS_E2E_00552] : In case State is NULL, E2E_P07CheckInit shall return immediately with E2E_E_INPUTERR_NULL.
5. E2E_P07MapStatusToSM() - Conflicts in the requirement of [SWS_E2E_00550] and [SWS_E2E_00553]
 - i. [SWS_E2E_00550] : Return value of the E2E_P07MapStatusToSM() is void.
 - ii. [SWS_E2E_00553] : If CheckReturn = E2E_E_OK, then the function E2E_P07MapStatusToSM shall return the values depending on the value of Status.

Agreed solution:

=== AUTOSAR_SWS_E2ELibrary / BSW UML ===

Following functions shall have return type as Std_ReturnType

- E2E_P07Protect,
- E2E_P07Check,
- E2E_P07ProtectInit,
- E2E_P07ProtectInit

E2E_P07MapStatusToSM function shall have return the E2E_PCCheckStatusType.

BW-C-Level:

Application	Specification	Bus
1	4	1

1.50 Specification Item SWS_E2E_00549

Trace References:

SRS_E2E_08539

Content:

Service name:	E2E_P07CheckInitE2E_P07CheckInit	
Syntax:	<pre>void Std_ReturnType E2E_P07CheckInit(E2E_P07CheckStateType* StatePtr)</pre>	
Service ID[hex]:	0x24	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtrE2E_P07CheckInit.StatePtr	Pointer to port/data communication state.
Parameters (out)Return value:	None	

None

Return value: Std_ReturnType	E2E_E_INPUTERR_NULL E2E_E_INPUTERR_WRONG E2E_E_INTERR E2E_E_OK For definitions for return values, see SWS_E2E_00047.	
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions
PXXProtectInit
PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #76739: [E2E] Return type of Profile07 API shall be updated.

Problem description:

There are conflicts in profile 07 requirements which are as follows:

1. E2E_P07Protect() - Conflicts in the requirements [SWS_E2E_00546] and [SWS_E2E_00486]

i. [SWS_E2E_00546] : Return value of the E2E_P07Protect() is void

ii. [SWS_E2E_00486] : In diagram, function E2E_P07Protect() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK or E2E_E_INPUTERR_WRONG

2. E2E_P07Check () - Conflicts in the requirement of [SWS_E2E_00548] and [SWS_E2E_00495]

- i. [SWS_E2E_00548] : Return value of the E2E_P07Check() is void
 - ii. [SWS_E2E_00495] : In diagram, the function E2E_P07Check() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK, E2E_E_INPUTERR_WRONG
3. E2E_P07ProtectInit() - Conflicts in the requirement of [SWS_E2E_00547] and [SWS_E2E_00551] function return value
- i. [SWS_E2E_00547] : Return value of the E2E_P07ProtectInit() is void
 - ii. [SWS_E2E_00551] : In case State is NULL, E2E_P07ProtectInit shall return immediately with E2E_E_INPUTERR_NULL
4. E2E_P07CheckInit() - Conflicts in the requirement of [SWS_E2E_00549] and [SWS_E2E_00552]
- i. [SWS_E2E_00549] : Return value of the E2E_P07CheckInit() is void.
 - ii. [SWS_E2E_00552] : In case State is NULL, E2E_P07CheckInit shall return immediately with E2E_E_INPUTERR_NULL.
5. E2E_P07MapStatusToSM() - Conflicts in the requirement of [SWS_E2E_00550] and [SWS_E2E_00553]
- i. [SWS_E2E_00550] : Return value of the E2E_P07MapStatusToSM() is void.
 - ii. [SWS_E2E_00553] : If CheckReturn = E2E_E_OK, then the function E2E_P07MapStatusToSM shall return the values depending on the value of Status.

Agreed solution:

=== AUTOSAR_SWS_E2ELibrary / BSW UML ===

Following functions shall have return type as Std_ReturnType

- E2E_P07Protect,
- E2E_P07Check,
- E2E_P07ProtectInit,
- E2E_P07ProtectInit

E2E_P07MapStatusToSM function shall have return the E2E_PCheckStatusType.

BW-C-Level:

Application	Specification	Bus
1	4	1

1.51 Specification Item SWS_E2E_00550

Trace References:

SRS_E2E_08539

Content:

Service name:	E2E_P07MapStatusToSME2E_P07MapStatusToSM	
Syntax:	<pre>void E2E_PCheckStatusType E2E_P07MapStatusToSM(Std_ReturnType CheckReturnE2E_PCheckStatusType return, E2E_P07CheckStatusType Status)</pre>	
Service ID[hex]:	0x25	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	CheckReturnreturnE2E_P07MapStatusToSM.CheckReturn return	Return value of the E2E_P04Check function Profile-independent status of the reception on one single Data in one cycle.
	StatusE2E_P07MapStatusToSM.Status	Status determined by E2E_P04Check P07Check function
Parameters (inout):	None	
Parameters (out):	None	

None

Return value:	E2E_PCheckStatusType	Profile-independent status of the reception on one single Data in one cycle.
Description:	The function maps the check status of Profile 7 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 7 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #76737: [E2E] Typo error in requirement SWS_E2E_00550.

Problem description:

In requirement SWS_E2E_00550, in the description of status parameter. It is mentioned as "Status determined by E2E_P04Check function"

But this "in parameter Status" is for Profile 07.

Agreed solution:

–Update requirement SWS_E2E_00550:

– In Parameter status: Replace "Status determined by E2E_P04Check function" by "Status determined by E2E_P07Check function"

– replace "E2E_P04Check" with "E2E_P07Check" in description for in-parameter CheckReturn

–Last change on issue 76737 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #76739: [E2E] Return type of Profile07 API shall be updated.

Problem description:

There are conflicts in profile 07 requirements which are as follows:

1. E2E_P07Protect() - Conflicts in the requirements [SWS_E2E_00546] and [SWS_E2E_00486]
 - i. [SWS_E2E_00546] : Return value of the E2E_P07Protect() is void
 - ii. [SWS_E2E_00486] : In diagram, function E2E_P07Protect() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK or E2E_E_INPUTERR_WRONG
2. E2E_P07Check () - Conflicts in the requirement of [SWS_E2E_00548] and [SWS_E2E_00495]
 - i. [SWS_E2E_00548] : Return value of the E2E_P07Check() is void
 - ii. [SWS_E2E_00495] : In diagram, the function E2E_P07Check() is returning with a value of E2E_E_INPUTERR_NULL, E2E_E_OK, E2E_E_INPUTERR_WRONG
3. E2E_P07ProtectInit() - Conflicts in the requirement of [SWS_E2E_00547] and [SWS_E2E_00551] function return value
 - i. [SWS_E2E_00547] : Return value of the E2E_P07ProtectInit() is void
 - ii. [SWS_E2E_00551] : In case State is NULL, E2E_P07ProtectInit shall return immediately with E2E_E_INPUTERR_NULL
4. E2E_P07CheckInit() - Conflicts in the requirement of [SWS_E2E_00549] and [SWS_E2E_00552]
 - i. [SWS_E2E_00549] : Return value of the E2E_P07CheckInit() is void.
 - ii. [SWS_E2E_00552] : In case State is NULL, E2E_P07CheckInit shall return immediately with E2E_E_INPUTERR_NULL.
5. E2E_P07MapStatusToSM() - Conflicts in the requirement of [SWS_E2E_00550] and [SWS_E2E_00553]
 - i. [SWS_E2E_00550] : Return value of the E2E_P07MapStatusToSM() is void.
 - ii. [SWS_E2E_00553] : If CheckReturn = E2E_E_OK, then the function E2E_P07MapStatusToSM shall return the values depending on the value of Status.

Agreed solution:

=== AUTOSAR_SWS_E2ELibrary / BSW UML ===

Following functions shall have return type as Std_ReturnType

- E2E_P07Protect,

- E2E_P07Check,
- E2E_P07ProtectInit,
- E2E_P07ProtectInit

E2E_P07MapStatusToSM function shall have return the E2E_PCCheckStatusType.

BW-C-Level:

Application	Specification	Bus
1	4	1

1.52 Specification Item SWS_E2E_00563

Trace References:

SRS_E2E_08539, [SRS_E2E_08534](#)

Content:

Name:	E2E_P11CheckStateTypeE2E_P11CheckStateType		
Type:	Structure		
Element:	E2E_P11CheckStatusType	StatusE2E_P11CheckState Type.Status	Result of the verification of the Data in this cycle, determined by the Check function.
	uint8	CounterE2E_P11CheckState Type.Counter	Counter of the data in previous cycle.
Description:	Description: State of the reception on one single Data protected with E2E Profile 11.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,

SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.53 Specification Item SWS_E2E_00568

Trace References:

SRS_E2E_08528, [SRS_E2E_08534](#)

Content:

Name:	E2E_P22CheckStateTypeE2E_P22CheckStateType		
Type:	Structure		
Element:	uint8	CounterE2E_P22CheckStateType.Counter	Counter of last valid received message.
	E2E_P22CheckStatusType	StatusE2E_P22CheckStateType.Status	Result of the verification of the Data, determined by the Check function.
Description:	State of the sender for a Data protected with E2E Profile 22.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.54 Specification Item SWS_E2E_00572

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P11CheckE2E_P11Check	
Syntax:	<pre>void E2E_P11Check(const E2E_P11ConfigType* ConfigPtr, E2E_P11CheckStateType StatePtr, const uint8* DataPtr, uint16 Length)</pre>	
Service ID[hex]:	0x38	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P11Check.ConfigPtr	Pointer to static configuration.
	DataPtrE2E_P11Check.DataPtr	Pointer to received data.
	LengthE2E_P11Check.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P11Check.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	None	
Description:	Checks the Data received using the E2E profile 11. This includes CRC calculation, handling of Counter. The function checks only one single data in one cycle, it does not determine/compute the accumulated state of the communication link.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,

SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.55 Specification Item SWS_E2E_00573

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P11CheckInit E2E_P11CheckInit
Syntax:	void E2E_P11CheckInit(E2E_P11CheckStateType* StatePtr)
Service ID[hex]:	0x39
Sync/Async:	Synchronous
Reentrancy:	Reentrant
Parameters (in):	None
Parameters (inout):	None

Parameters (out):	StatePtrE2E_P11CheckInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	None	
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,

SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.56 Specification Item SWS_E2E_00574

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P11MapStatusToSME2E_P11MapStatusToSM	
Syntax:	<pre>void E2E_P11MapStatusToSM(Std_ReturnType CheckReturn, E2E_P11CheckStatusType Status)</pre>	
Service ID[hex]:	0x3a	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	CheckReturnE2E_P11MapStatusToSM.CheckReturn	Return value of the E2E_P11Check function
	StatusE2E_P11MapStatusToSM.Status	Status determined by E2E_P11Check function
Parameters (inout):	None	
Parameters (out):	None	
Return value:	None	
Description:	The function maps the check status of Profile 11 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 11 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,

SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
 SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
 SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
 SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
 SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.57 Specification Item SWS_E2E_00575

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P11ProtectE2E_P11Protect	
Syntax:	<pre>void E2E_P11Protect(const E2E_P11ConfigType* ConfigPtr, E2E_P11ProtectStateType StatePtr, uint8 DataPtr, uint16 Length)</pre>	
Service ID[hex]:	0x3b	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P11Protect.ConfigPtr	Pointer to static configuration.
	LengthE2E_P11Protect.Length	Length of the data in bytes

Parameters (inout):	StatePtrE2E_P11Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P11Protect.DataPtr	Pointer to Data to be transmitted.
Parameters (out):	None	
Return value:	None	
Description:	Protects the array/buffer to be transmitted using the E2E profile 11. This includes checksum calculation, handling of counter.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022, SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440, SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.58 Specification Item SWS_E2E_00576

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P11ProtectInit E2E_P11ProtectInit	
Syntax:	void E2E_P11ProtectInit(E2E_P11ProtectStateType* StatePtr)	
Service ID[hex]:	0x3c	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P11ProtectInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	None	
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".
—Last change on issue 73487 comment 4—

BW-C-Level:

Application	Specification	Bus
1	1	1

1.59 Specification Item SWS_E2E_00577

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P22CheckE2E_P22Check
Syntax:	<pre>void E2E_P22Check(const E2E_P22ConfigType* ConfigPtr, E2E_P22CheckStateType StatePtr, const uint8* DataPtr, uint16 Length)</pre>
Service ID[hex]:	0x3d
Sync/Async:	Synchronous
Reentrancy:	Reentrant

Parameters (in):	ConfigPtrE2E_P22Check.ConfigPtr	Pointer to static configuration.
	DataPtrE2E_P22Check.DataPtr	Pointer to received data.
	LengthE2E_P22Check.Length	Length of the data in bytes.
Parameters (inout):	StatePtrE2E_P22Check.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	None	
Description:	Checks the Data received using the E2E profile 22. This includes CRC calculation, handling of Counter. The function checks only one single data in one cycle, it does not determine/compute the accumulated state of the communication link.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
 SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
 SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
 SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
 SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
 SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
 SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
 SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
 SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
 SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
 SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
 SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
 SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,

SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.60 Specification Item SWS_E2E_00578

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P22CheckInit E2E_P22CheckInit	
Syntax:	void E2E_P22CheckInit(E2E_P22CheckStateType* StatePtr)	
Service ID[hex]:	0x3e	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtr E2E_P22CheckInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	None	
Description:	Initializes the check state	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated

2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions
PXXProtectInit
PXXCheckInit and
SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".

–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.61 Specification Item SWS_E2E_00579

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P22MapStatusToSME2E_P22MapStatusToSM
Syntax:	void E2E_P22MapStatusToSM(Std_ReturnType CheckReturn, E2E_P22CheckStatusType Status)
Service ID[hex]:	0x3f
Sync/Async:	Synchronous

Reentrancy:	Reentrant	
Parameters (in):	CheckReturnE2E_P22MapStatusToSM.CheckReturn	Return value of the E2E_P22Check function
	StatusE2E_P22MapStatusToSM.Status	Status determined by E2E_P22Check function
Parameters (inout):	None	
Parameters (out):	None	
Return value:	None	
Description:	The function maps the check status of Profile 22 to a generic check status, which can be used by E2E state machine check function. The E2E Profile 22 delivers a more fine-granular status, but this is not relevant for the E2E state machine.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,

SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.62 Specification Item SWS_E2E_00580

Trace References:

SRS_E2E_08539, [SRS_E2E_08527](#)

Content:

Service name:	E2E_P22ProtectE2E_P22Protect	
Syntax:	void E2E_P22Protect(const E2E_P22ConfigType* ConfigPtr, E2E_P22ProtectStateType StatePtr, uint8 DataPtr, uint16 Length)	
Service ID[hex]:	0x40	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	ConfigPtrE2E_P22Protect.ConfigPtr	Pointer to static configuration.
	LengthE2E_P22Protect.Length	Length of the data in bytes
Parameters (inout):	StatePtrE2E_P22Protect.StatePtr	Pointer to port/data communication state.
	DataPtrE2E_P22Protect.DataPtr	Pointer to Data to be transmitted.
Parameters (out):	None	
Return value:	None	
Description:	Protects the array/buffer to be transmitted using the E2E profile 22. This includes checksum calculation, handling of counter.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.63 Specification Item SWS_E2E_00581

Trace References:

SRS_E2E_08539, SRS_E2E_08527

Content:

Service name:	E2E_P22ProtectInitE2E_P22ProtectInit	
Syntax:	void E2E_P22ProtectInit(E2E_P22ProtectStateType* StatePtr)	
Service ID[hex]:	0x41	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	None	
Parameters (inout):	None	
Parameters (out):	StatePtrE2E_P22ProtectInit.StatePtr	Pointer to port/data communication state.
Parameters (out):	None	
Return value:	None	
Description:	Initializes the protection state.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #69471: Fix SRS E2E and traceability from SWS E2E, SWS E2EXF

Problem description:

As decided in E2E telco:

1. the structure and contents of SRS E2E needs to be ameliorated
2. the traceability from SWS E2E as well as from SWS E2EXf need to be fixed (to the modified SRS E2E).

Agreed solution:

After analyzing the E2E library specifications we found that Below are some E2E SRS requirements which needs to be traced with correct E2E SWS requirements.

SRS_E2E_08527 - SWS_E2E_00166, SWS_E2E_00385, SWS_E2E_00158,
SWS_E2E_00390, SWS_E2E_00382, SWS_E2E_00160, SWS_E2E_00387,
SWS_E2E_00161, SWS_E2E_00391, SWS_E2E_00379, SWS_E2E_00338,
SWS_E2E_00373, SWS_E2E_00339, SWS_E2E_00350, SWS_E2E_00349,
SWS_E2E_00446, SWS_E2E_00447, SWS_E2E_00449, SWS_E2E_00450,
SWS_E2E_00452, SWS_E2E_00393, SWS_E2E_00455, SWS_E2E_00457,
SWS_E2E_00458, SWS_E2E_00460, SWS_E2E_00546, SWS_E2E_00547,
SWS_E2E_00548, SWS_E2E_00549, SWS_E2E_00552, SWS_E2E_00550,
SWS_E2E_00575, SWS_E2E_00576, SWS_E2E_00572, SWS_E2E_00573,
SWS_E2E_00574, SWS_E2E_00580, SWS_E2E_00581, SWS_E2E_00577,
SWS_E2E_00578, SWS_E2E_00579

SRS_E2E_08531 - SWS_E2E_00070, SWS_E2E_00117, SWS_E2E_00221,
SWS_E2E_00190, SWS_E2E_00329, SWS_E2E_00400, SWS_E2E_00420,
SWS_E2E_00484, SWS_E2E_00508, SWS_E2E_00526

SRS_E2E_08530 - SWS_E2E_00218, SWS_E2E_00219, SWS_E2E_00372,
SWS_E2E_00394, SWS_E2E_00479, SWS_E2E_00480, SWS_E2E_00503,
SWS_E2E_00522

SRS_E2E_08534 - SWS_E2E_00047, SWS_E2E_00021, SWS_E2E_00022,
SWS_E2E_00154, SWS_E2E_00214, SWS_E2E_00337, SWS_E2E_00440,
SWS_E2E_00445, SWS_E2E_00543, SWS_E2E_00564, SWS_E2E_00569

–Last change on issue 69471 comment 12–

BW-C-Level:

Application	Specification	Bus
1	1	1

- RfC #73487: Incorrectly used inout for init functions of E2E library

Problem description:

The functions

PXXProtectInit

PXXCheckInit and

SMCheckInit

use inout parameters for the State. However, it shall be an out parameter (even if the init is executed e.g. after an error, so i.e. if a value already exists, then the value is ignored by the init function).

Agreed solution:

[SWS_E2E_00385]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00390]: Rename parameter "State" to "StatePtr". Change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00387]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00391]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00373]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00350]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00447]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00450]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00455]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00458]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00547]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00549]: change parameter "StatePtr" from "inout" to "out".

[SWS_E2E_00353]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00576]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00573]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00578]: change parameter "StatePtr" from "inout" to "out".
[SWS_E2E_00581]: change parameter "StatePtr" from "inout" to "out".
–Last change on issue 73487 comment 4–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.64 Specification Item UC_E2E_00315

Trace References:

SRS_E2E_08528

Content:

In case of inter-ECU, the length of the complete Data (including application data and E2E header) protected by E2E Profile 4, 5 or 6 shall not exceed 4kB.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #74120: Adding information Max applicable length for Profile 5/6

Problem description:

Currently in chapter 11.3) there is information for max applicalbe length for profile 1, 2 and 4, but no Information for profile 5/6.

Agreed solution:

By the figure 11-1 ("Max applicable length including control fields for inter-ECU communication"), the following information needs to be added into the table:

E2E Profile 5/6: 4 kB

The "UC_E2E_00315" shall be extended with profile 5/6:

In case of inter-ECU, the length of the complete Data (including application data and E2E header) protected by E2E Profile 4, 5 or 6 shall not exceed 4kB.

BW-C-Level:

Application	Specification	Bus
1	1	1