



COVER DOCUMENT

System Pillar / EULYNX

Baseline Set 4 Release 3

Version: 3.4
Date: 30-06-2025



Revision History

Revision #	Revision Date	Description of Change	Author
1	20230630	Mirror Group approval of Release 2	Nico Hurman, Mirko Blazic
2	20231004	Error corrections Release 2	Nico Hurman
3	20240621	Mirror Group approval of Release 3	Nico Hurman, Mirko Blazic
3.1	20240822	Versions of Eu.Doc.38 and Eu.Doc.46 corrected	Nico Hurman
3.2	20241017	Error corrections Release 3	Nico Hurman
3.3	20241213	Additional error corrections Release 3	Nico Hurman
3.4	20250630	Additional error corrections Release 3	Nico Hurman

Introduction

Europe's Rail Joint Undertaking (EU-Rail) is established by Council Regulation (EU) 2021/2085 of 19 November 2021. It is the new European partnership on rail research and innovation established under the Horizon Europe programme (2020-2027) and the universal successor of the Shift2Rail Joint Undertaking. The vision of EU-Rail is to deliver, via an integrated system approach, a high capacity, flexible, multi-modal and reliable integrated European railway network by eliminating barriers to interoperability and providing solutions for full integration, for European citizens and cargo.

The EULYNX Consortium (EULYNX) is an initiative of 15 European infrastructure managers, started in 2014 with a common goal for standardisation of signalling systems. Aiming for defining and standardising CCS interfaces, the goal is a significant reduction of the lifecycle cost for signalling systems. EULYNX regularly publishes specification documents as Baseline Sets.

EU-Rail and EULYNX have published a common documentation release EULYNX Baseline Set 4 Release 3. This release has been prepared in close collaboration with the European rail control-command and signalling (CCS) sector under the organisation of EU-Rail System Pillar, bringing a part of the EULYNX development under technical authority of the EU-Rail System Pillar.

The EULYNX Baseline Set 4 Release 3 is a documentation update release within the EULYNX Baseline Set 4, continuing the development based on previous releases. The primary focus of this release is to incorporate remaining feedback from the industry and reach a stable maturity level, fully integrated into the EU-Rail System Pillar. All specifications related to trackside assets and transversal functions are applicable for both the current EULYNX architecture and the future rail target architecture, agreed in the framework of the EU-Rail System Pillar, therefore published as a single set of specifications under a common publication by EULYNX and EU-Rail, delivering in total 25 specification documents. The EU-Rail System Pillar takes the role of the technical authority for the documents of the common publication and will ensure their maintenance.

In addition to the common documentation release, EULYNX published also additional specifications and supporting documents for the current EULYNX architecture, which are integrated in the EULYNX part of Baseline Set 4 Release 3, delivering additional 29 documents.

All deliverables are available in PDF format. In addition to the PDF documents, the following supporting artefacts are delivered:

- For all deliverables originating from DOORS, the requirements interchange format ReqIF is available.
- For all model-based deliverables, the underlying models are available as an export from the EULYNX model.

- For all EULYNX field element subsystem specifications, the simulators developed by EULYNX for verification and validation of requirements are available.

Security specifications

This release does not provide an update of the specifications related to security. The EULYNX BL4R2 security specifications remain applicable. In future phases, the EULYNX security specifications will be integrated and replaced by harmonised specifications published by the EU-Rail System Pillar Security domain. Publication of the first set of harmonised specifications by the EU-Rail System Pillar Cyber Security domain is currently foreseen for January 2025. This first set will contain 4 specification documents:

- Security Program Requirements
- Secure Component Specification
- Secure Communication Specification
- Shared Security Services Specification

Planning next releases

With this release, the specification documents of Baseline Set 4 have reached a stable maturity level. The current baseline set is closed for changes in functionality or new functions. Individual specifications may receive further updates due to error corrections or change requests.

Further developments in EULYNX and EU-Rail System Pillar will be introduced as part of Baseline Set 5. A concrete timeline for the next baseline set has not yet been defined, its publication will not be earlier than June 2026.

Documents

The System Pillar / EULYNX Baseline Set 4 Release 3 includes the following documents:

Document ID	Document Name	Document Version	CENELEC Phase	Release
Eu.Doc.18	Maintenance and data management specification	4.0 (2.A)	4	06/2023
Eu.Doc.20	Generic interface and subsystem requirements	4.0 (6.A)	4	06/2024
Eu.Doc.119	Generic interface and subsystem requirements for SCI	1.1 (0.A)	4	06/2024
Eu.Doc.120	Generic interface and subsystem requirements for SMI	1.1 (0.A)	4	06/2024
Eu.Doc.92	Interface definition SCI	4.3 (0.A)	5	06/2024
Eu.Doc.93	Interface specification SCI Generic	3.3 (0.A)	5	06/2024
Eu.Doc.77	Interface definition SDI	3.2 (0.A)	5	06/2024
Eu.Doc.94	Interface specification SDI Generic	4.2 (0.A)	5	06/2024
Eu.Doc.100	Specification of Point of Service - Signalling	2.2 (0.A)	4	06/2024
Eu.Doc.76	Interface definition and specification SMI	2.2 (0.A)	5	06/2024
Eu.Doc.32	Requirements specification for subsystem Light Signal	4.3 (0.A)	4	06/2024
Eu.Doc.33	Interface specification SCI-LS	4.3 (0.A)	5	06/2024
Eu.Doc.78	Interface specification SDI-LS	4.2 (0.A)	5	06/2024
Eu.Doc.36	Requirements specification for subsystem Point	4.4 (0.A)	4	06/2024
Eu.Doc.38	Interface specification SCI-P	4.2 (1.A)	5	06/2024
Eu.Doc.80	Interface specification SDI-P	4.2 (0.A)	5	06/2024
Eu.Doc.45	Requirements specification for subsystem Generic IO	4.3 (0.A)	4	06/2024
Eu.Doc.46	Interface specification SCI-IO	4.0 (3.A)	5	06/2024
Eu.Doc.82	Interface specification SDI-IO	4.2 (0.A)	5	06/2024
Eu.Doc.43	Requirements specification for subsystem TDS	4.2 (0.A)	4	06/2024
Eu.Doc.44	Interface specification SCI-TDS	4.1 (0.A)	5	06/2024
Eu.Doc.81	Interface specification SDI-TDS	4.2 (0.A)	5	06/2024
Eu.Doc.108	Requirements specification for subsystem Level Crossing	2.3 (0.A)	4	06/2024
Eu.Doc.109	Interface specification SCI-LC	2.2 (0.A)	5	06/2024
Eu.Doc.110	Interface specification SDI-LC	3.2 (0.A)	5	06/2024

Error corrections

The following table will list Change Requests that describe error corrections that shall be considered when applying the documents of EULYNX Baseline Set 4 Release 3.

CR ID	CR Description	IDs of impacted documents	CR date
EUP-576	Wrong transition condition in STM diagram F_Control_And_Observe_4W_PM	Eu.Doc.36	09/2024
EUIO-439	SDI-IO, correction of multiplicities for PhysicalChannelConnection	Eu.Doc.82	09/2024
EUAR-690	Alignment between RJ45 and SPF cage requirement	Eu.Doc.100	09/2024
EUAR-763	Correct missing Operation_State when leaving Data_Update	Eu.Doc.120	11/2024
EULX-644	Correct missing package marking	Eu.Doc.108	04/2025
EUP-577	Missing condition for degraded point position at startup	Eu.Doc.36	06/2025
EUP-584	Correct package marking for crucial point machine configuration	Eu.Doc.36	06/2025
EUAR-720	Removal of redundancy PreloadItemStarted and PreloadItemFinished	Eu.Doc.76 Eu.Doc.120	06/2025
EUAR-731	SDI-XX, diagnostics for SSI	Eu.Doc.94	06/2025
EUAR-739	SDI-XX, express source and target of Interface classes	Eu.Doc.94	06/2025
EUAR-760	Add SDI-XX attribute for expiration of Con_tmax_DataInstallation in SMI	Eu.Doc.94	06/2025
EUAR-763	Correct missing Operation_State when leaving Data_Update	Eu.Doc.120	06/2025
EUAR-765	Add SDI-XX attribute for reporting PDI repetition	Eu.Doc.94	06/2025
EUAR-771	Refine diagnostic attributes for connections status	Eu.Doc.94	06/2025
EUAR-772	Remove enumeration ReplaceableRevalidation	Eu.Doc.94	06/2025
EUAR-774	Version handling of SDI and SMI models in namespaceURI	Eu.Doc.76 Eu.Doc.77	06/2025
EUAR-778	Update reference to security permissions in SDI, SMI	Eu.Doc.76 Eu.Doc.77	06/2025
EUAR-780	Missing general OPC UA requirement for SMI	Eu.Doc.76	06/2025
EUAR-790	Refine version handling of SDI and SMI models in namespaceURI	Eu.Doc.76 Eu.Doc.77	06/2025

		Eu.Doc.94	
EULS-492	LS - Refine version handling of SDI and SMI models in namespaceURI	Eu.Doc.78	06/2025
EUP-588	P - Refine version handling of SDI and SMI models in namespaceURI	Eu.Doc.80	06/2025
EUIO-444	IO - Refine version handling of SDI and SMI models in namespaceURI	Eu.Doc.82	06/2025
EUTDS-537	TDS - Refine version handling of SDI and SMI models in namespaceURI	Eu.Doc.81	06/2025
EULX-651	LC - Refine version handling of SDI and SMI models in namespaceURI	Eu.Doc.110	06/2025
EULX-643	SDI-LC, Is MotorTurnData mandatory for BarrierTurnEvent?	Eu.Doc.110	06/2025
EULS-463	SDI-LS, errors related to balise cabling	Eu.Doc.78	06/2025

Functional packages

Documents related to the EULYNX field element subsystems (Light Signal, Generic IO, Point, TDS, Level Crossing) are divided into functional packages. These packages define coherent blocks of capabilities that can be implemented in a product. The packages can be used to delimit the required scope of the functionality of a product, either in the context of tenders for specific implementation projects or in the context of generic product testing and/or certification.

There are two types of packages related to the product capabilities:

- 'Basic packages': One or more packages, at least one of them must be implemented. It is optionally allowed to combine and implement more than one 'basic package' in a product.
- Optional package': One or more packages that can be optionally implemented in addition to (one of) the basic package(s).

Backwards compatibility

The specifications documents of Baseline Set 4 do not include automatic backwards compatibility. Products developed according to the EULYNX specifications of BL4 can't communicate with products developed according to earlier baselines of the EULYNX specifications. Products that must support communication with other products of both BL4 and the previous EULYNX baseline, e.g. because of migration scenarios, must be developed according to a superset of specification documents from different baselines.

The specification documents of Baseline Set 4 are structured in such a way that in a future release it is possible to release a new version of the specification documents related to SCI, SDI, SMI or SSI without the need to publish a new version of the specification document related to the other interfaces. In this way, compatibility of different versions of the four EULYNX interfaces can be managed independent from each other.

Even when the specifications for the interfaces SCI, SDI, SMI and SSI are managed independently in separate documents, there can be technical reasons that create interdependencies between them. This can e.g. be the introduction of a new functionality that requires an update on both SCI and SMI. The new functionality can only be used if a EULYNX product implements the newer version of both SCI and SMI.

To manage this, EULYNX will maintain a compatibility matrix for every subsystem/interface. Every time a new version is released of the defining specification document of one of the 4 interfaces, the compatibility matrix will list all defined versions of the other interfaces with which this new interface version can be combined. The compatibility matrices are listed in the document EULYNX BL4 R3 Compatibility matrices.

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Further information

Further information is available from EU-Rail System Pillar unit or the EULYNX Consortium Office.

EU-Rail System Pillar can be contacted through <https://rail-research.europa.eu/about-europes-rail/contact>

EULYNX Consortium office can be contacted through eulynx.eu and consortium@eulynx.eu

[EUP-576] [Wrong transition condition in STM diagram](#)**[F Control And Observe 4W PM](#)**

Created: 16.07.2024 Updated: 16.07.2024

Status: Open**Project:** [EULYNX CP SCI-P](#)**Component/s:** None**Type:** Error**Priority:** None**Reporter:** [Nico Huurman](#)**Assignee:** Unassigned**Resolution:** Unresolved**Remaining Estimate:** Not Specified**Time Spent:** Not Specified**Original Estimate:** Not Specified**Attachments:**  20240710 Point STMs which were basis for BL4R2.pdf  [EUP-576] Correct STM diagram.png**Description****Current state**

BL4R3

Problem

The STM diagram F_Control_And_Observe_4W_PM (Eu.P.5823) contains an error.

The 2nd transitions from MOVING_LEFT_PM / MOVING_RIGHT_PM to DETECTION contain d12in_Required_PM_Position = "LEFT_REACHED" /

d12in_Required_PM_Position = "RIGHT_REACHED"

This condition can never be true, because the values "LEFT_REACHED" /

"RIGHT_REACHED" are not used for the port d12in_Required_PM_Position.

Intended state

The correct transition must be d27in_4W_PM_Position = "LEFT_REACHED" / d27in_4W_PM_Position = "RIGHT_REACHED".

The correct transitions are shown in the attached figure.

The latest version of the SubS Point simulator is correct, as it was based on a copied PTC model. See attached .pdf.

Impact

ReqSpec SubS P

Backwards compatibility analysis

Error correction for the following releases:

- BL4 R2

- BL4 R3

<Provide an answer to the following questions:

Question 1: Can an EfeS implementing the change (new EfeS) operate with an EIL NOT implementing the change (old EIL)?

Question 2: Can an EfeS NOT implementing the change (old EfeS) operate with an EIL implementing the change (new EIL)?

Question 3: Must the PDI version be increased because of this change?>

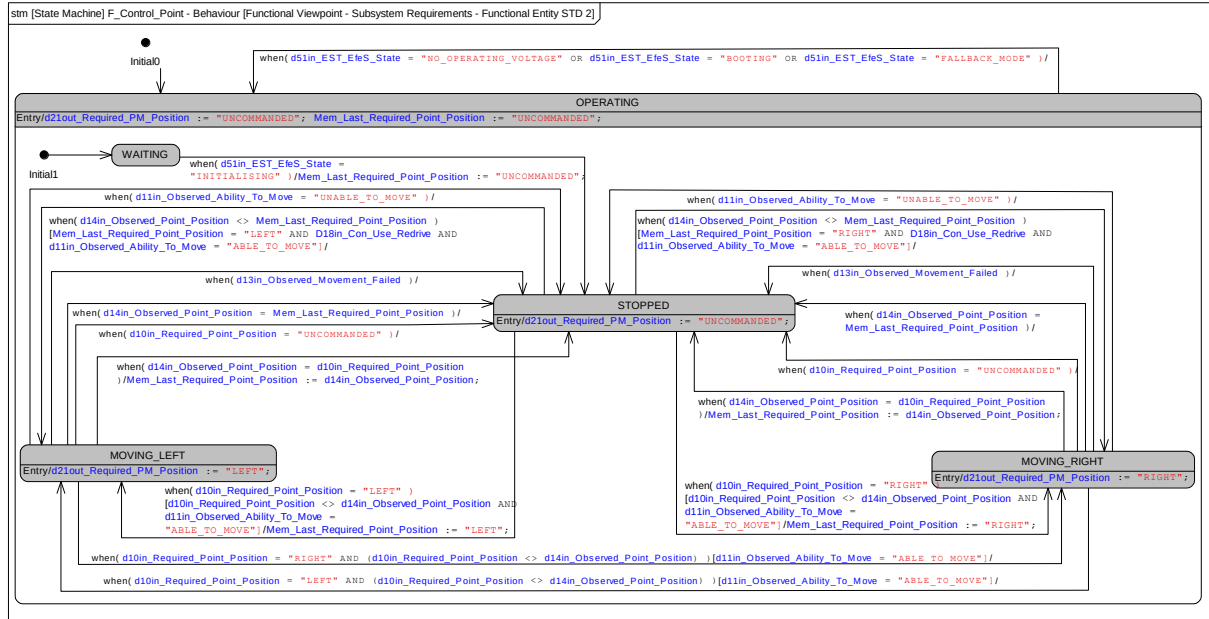
Generated at Tue Jul 16 10:04:45 CEST 2024 by Nico Huurman using Jira 9.4.23#940023-sha1:042081f26695d2c2012dd9251033ab6e5ed712b1.

F_Control_4W_PM

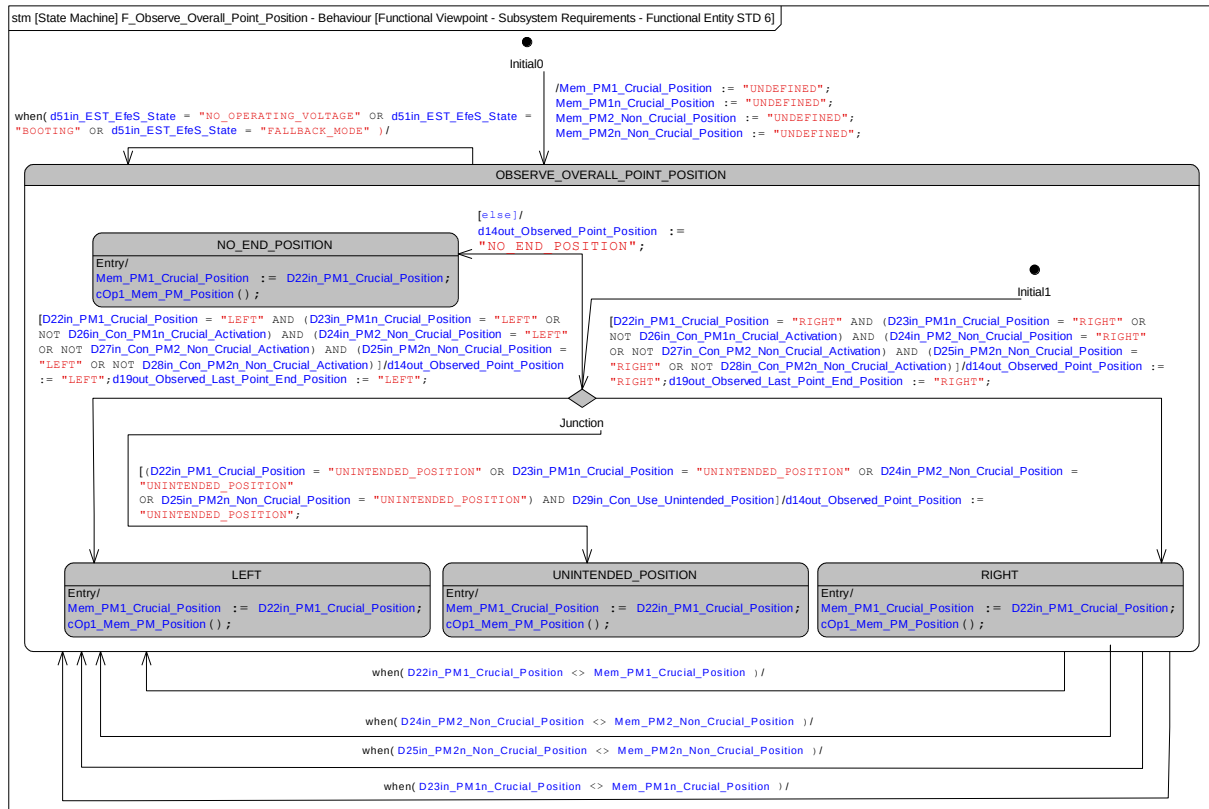


Point STMs which were basis for BL4R2/3 simulation

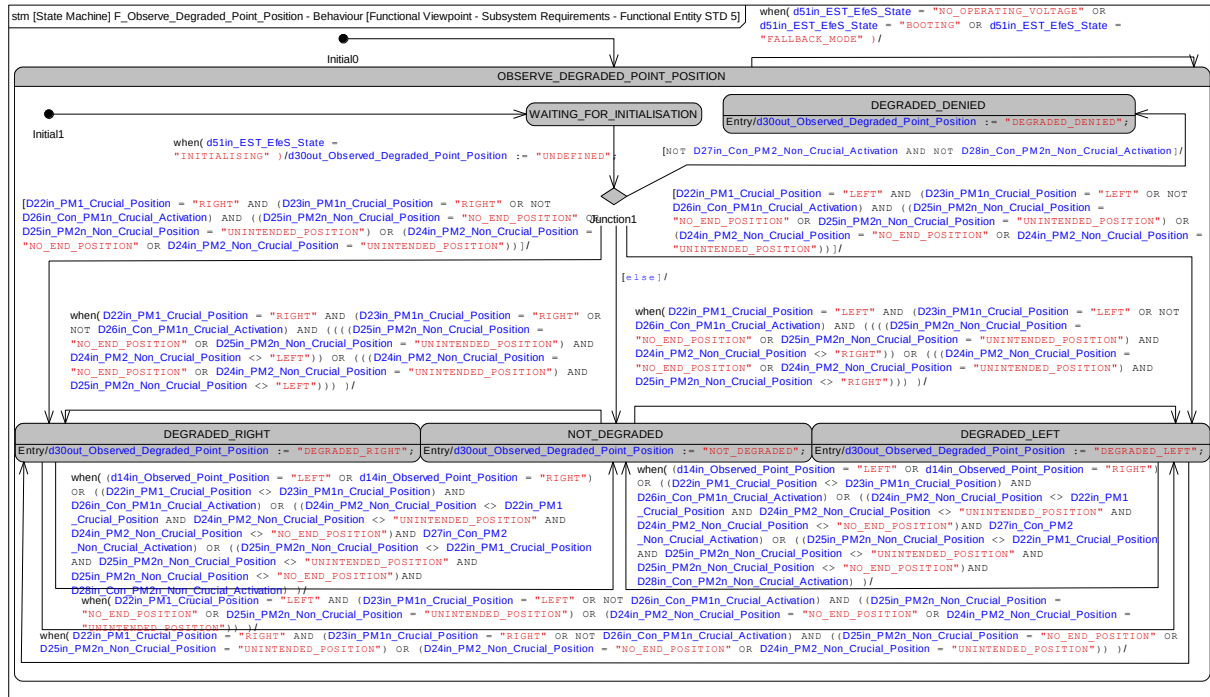
F_Control_Point



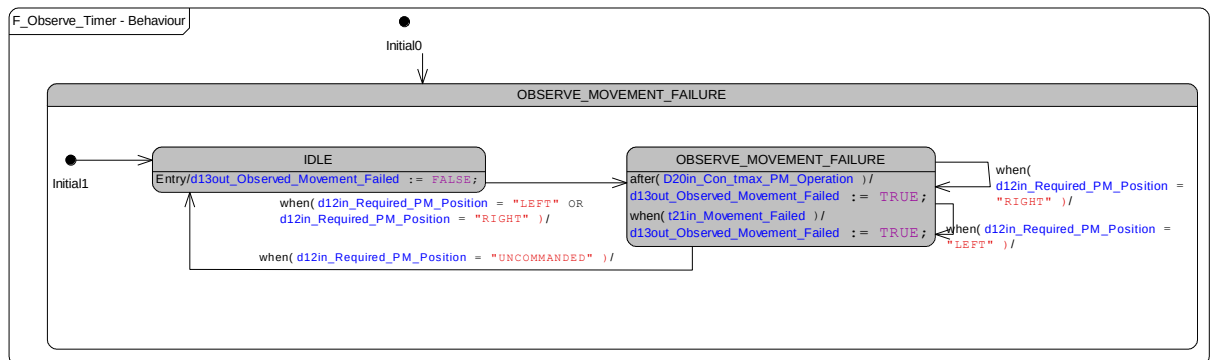
F_Observe_Overall_Point_Position



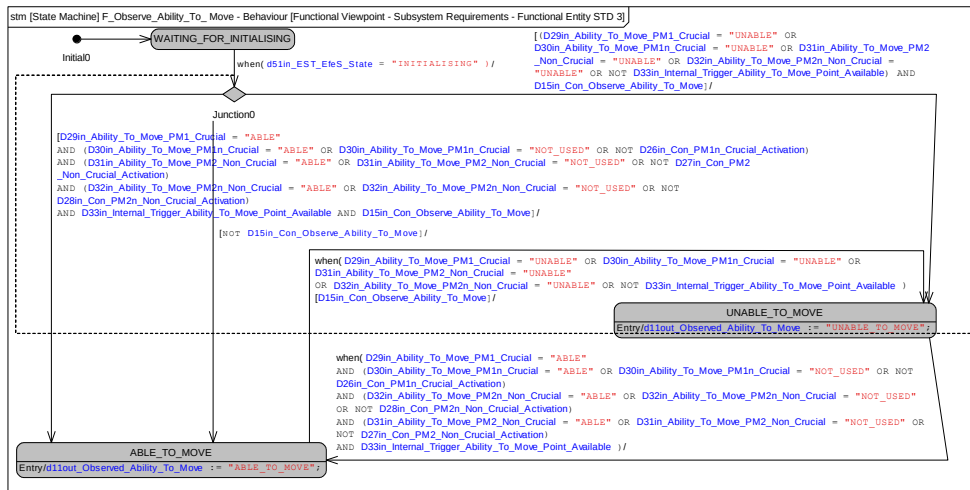
F_Observe_Degraded_Point_Position



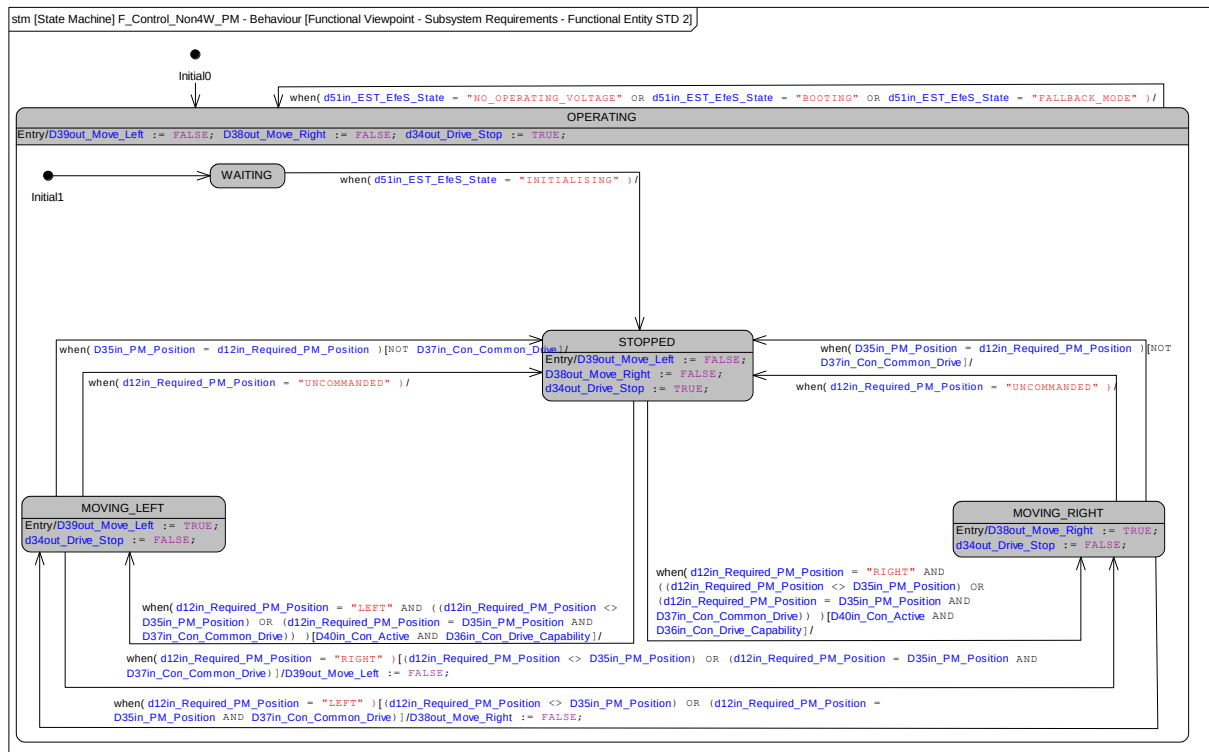
F_Observe_Movement_Failed



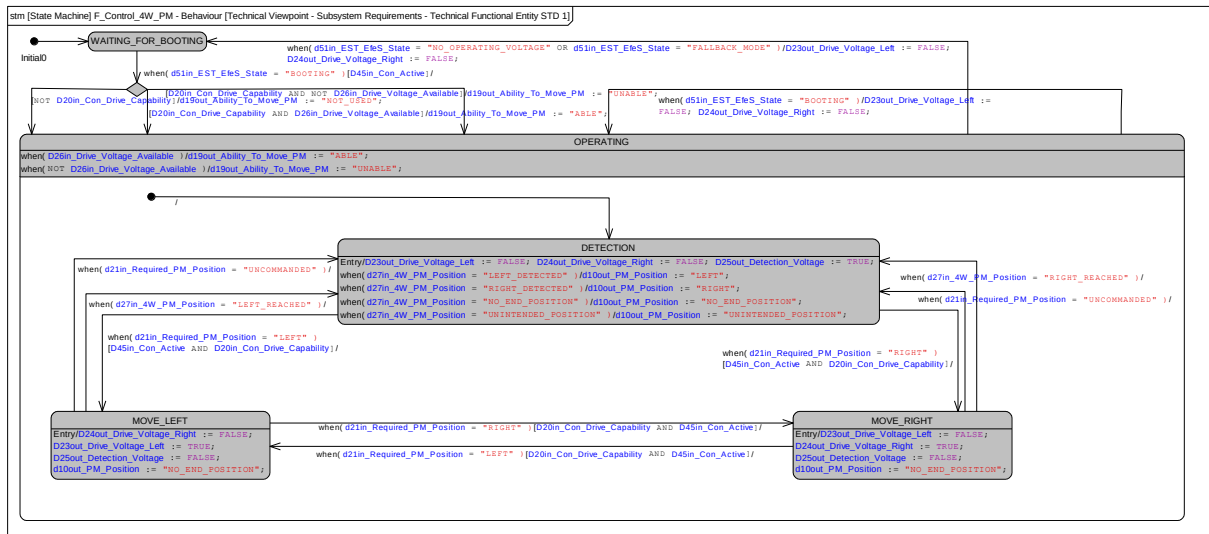
F_Observe_Ability_To_Move



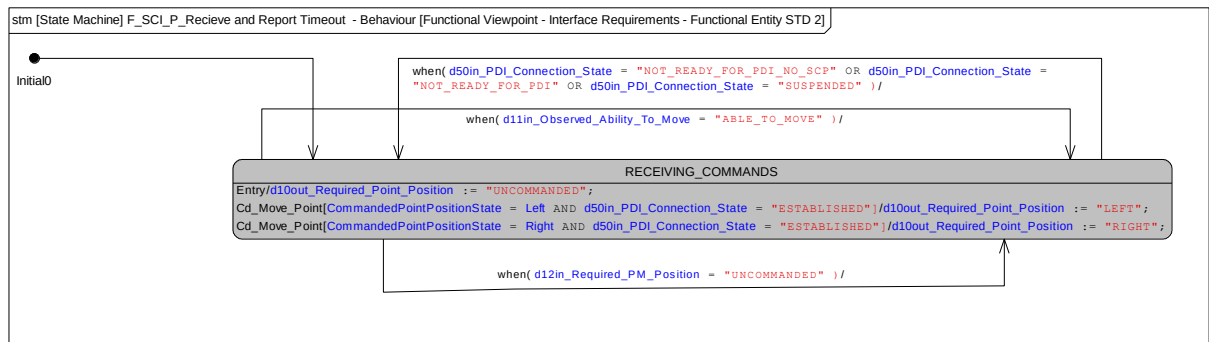
F_Control_Non4W_PM



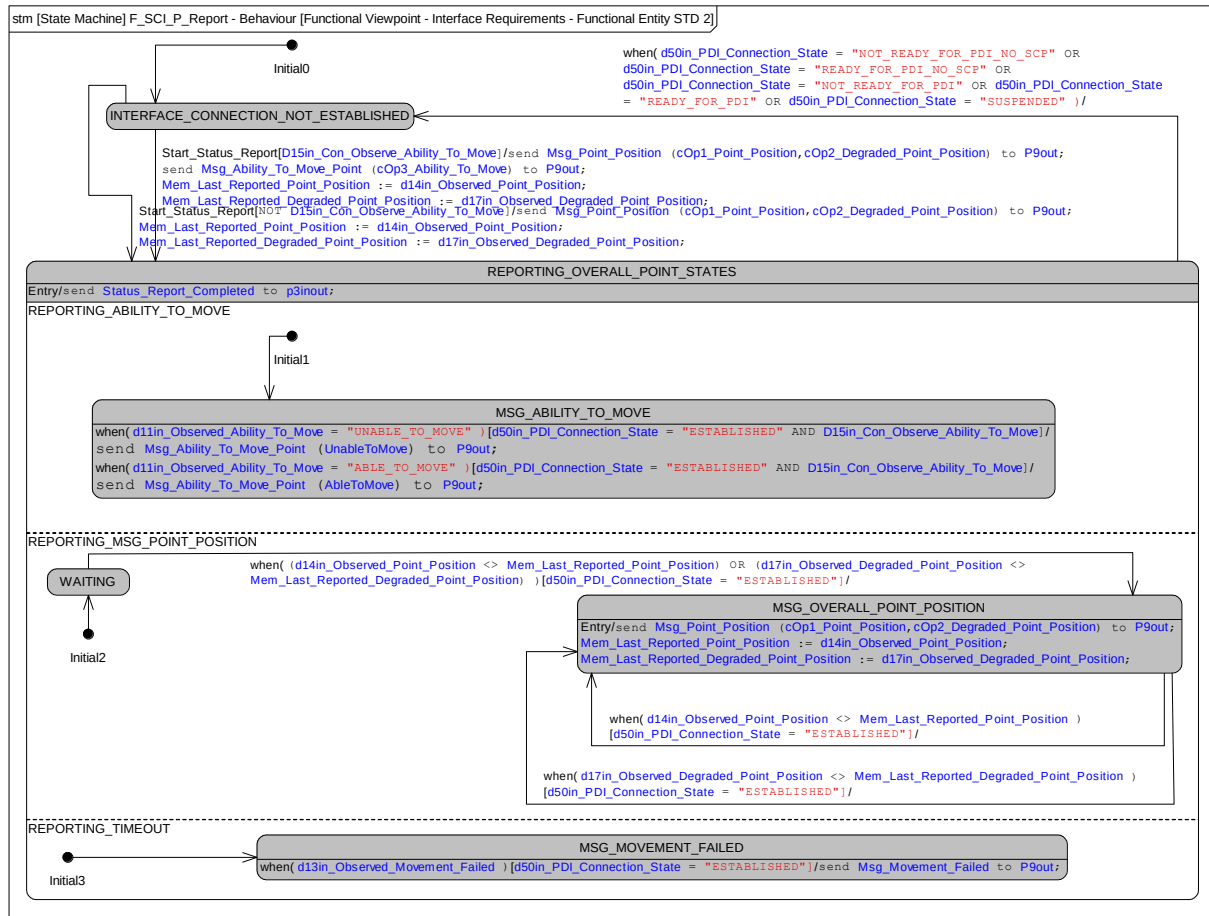
F_Control_4W_PM



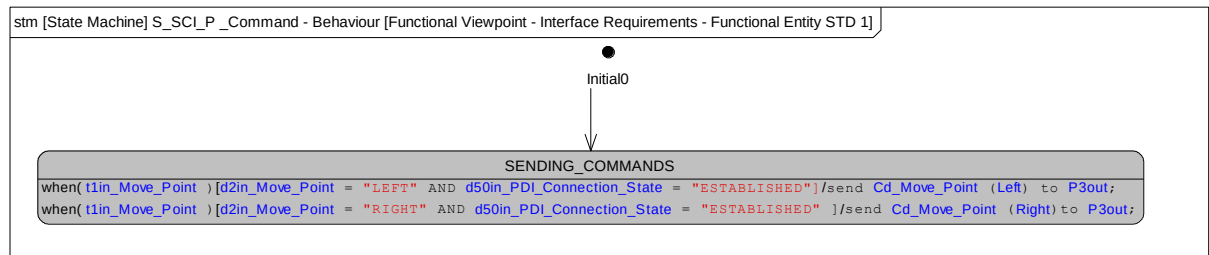
F_SCI_P_Recieve



F_SCI_P_Report



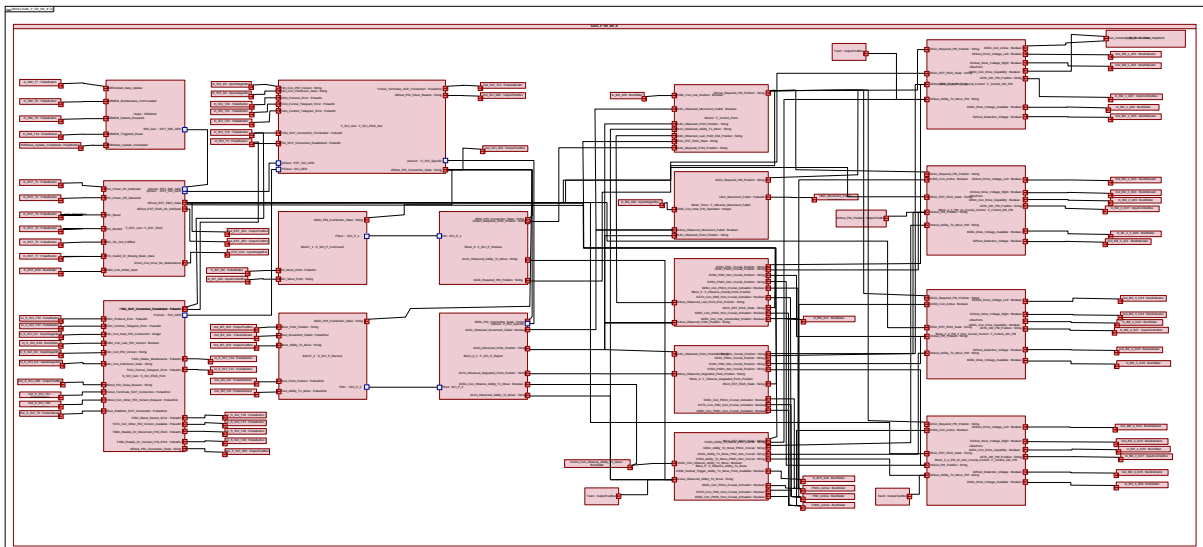
S_SCI_P_Command



S_SCI_P_Recieve



Simulator



[EUIO-439] [SDI-IO, correction of multiplicities for PhysicalChannelConnection](#) Created: 26.07.2024 Updated: 26.07.2024

Status:	Open
Project:	EULYNX CP SCI-IO
Component/s:	None

Type:	Error	Priority:	None
Reporter:	Nico Hurman	Assignee:	Unassigned
Resolution:	Unresolved		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original Estimate:	Not Specified		

Attachments:	 Figure SDI-IO multiplicity corrections.png
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Description

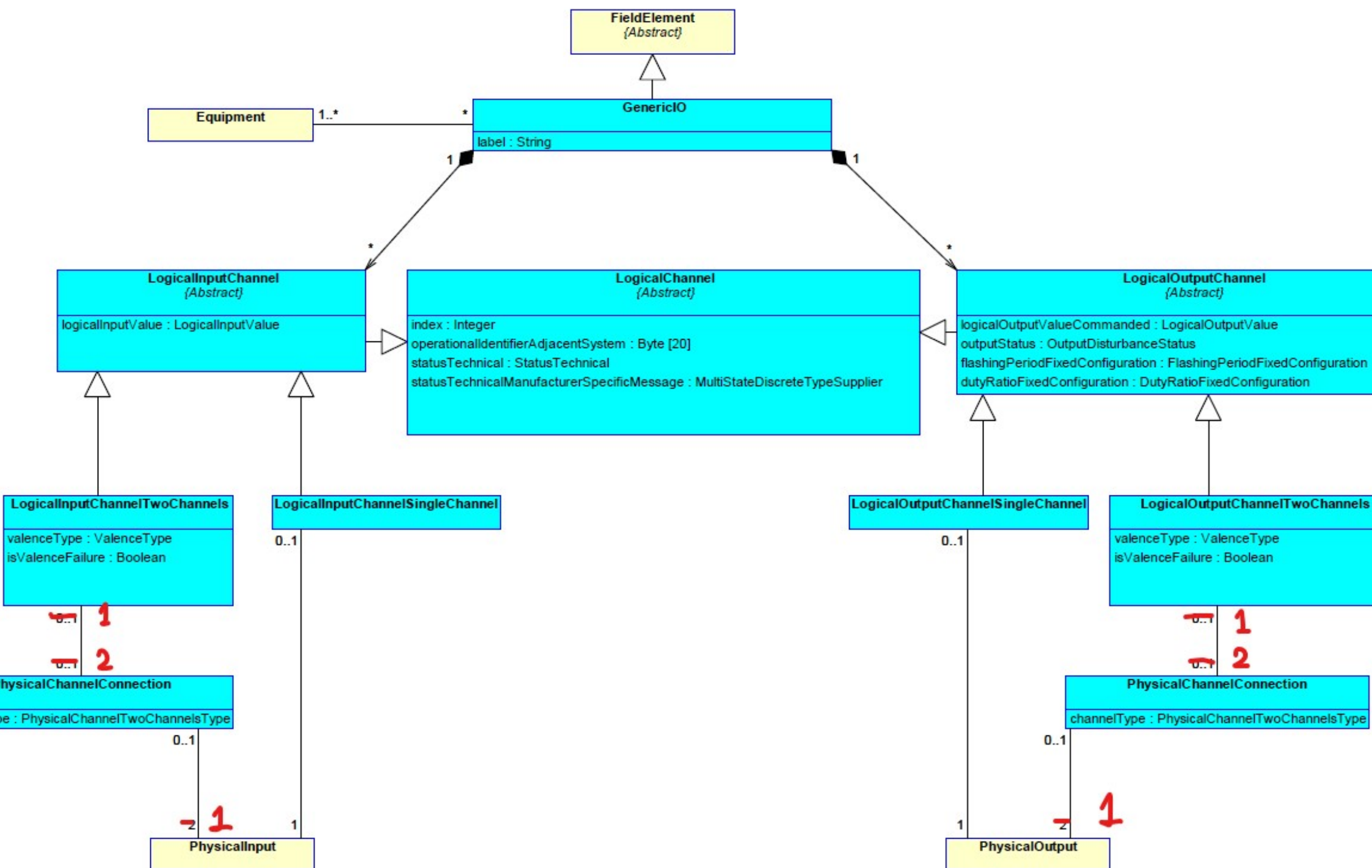
Current state
BL4R3

Problem
The multiplicities between LogicalInputChannelTwoChannels, PhysicalChannelConnection and PhysicalInput are incorrect.
Also valid for the multiplicities between LogicalOutputChannelTwoChannels, PhysicalChannelConnection and PhysicalOutput.

Intended state
See figure.

Impact
SDI-IO, only diagram.

Backwards compatibility analysis
Error correction for BL4R3.



[EUAR-690] [Alignment between RJ45 and SPF cage requirement](#) Created: 16.02.2024 Updated: 19.07.2024

Status:	Open
Project:	EULYNX CP Reference Architecture
Component/s:	None

Type:	Clarification	Priority:	None
Reporter:	Nico Huurman	Assignee:	Unassigned
Resolution:	Unresolved		
Remaining Estimate:	Not Specified		
Time Spent:	Not Specified		
Original Estimate:	Not Specified		

Sprint:	Postponed to later BL4 release
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Description

Current state

BL4R3 draft

Follow-up of [EUAR-607](#)

Problem

Review comment raised by ProRail (EvG).

Is it wise to have two different bandwidth specifications (100BASE-T (or more) vs. 1000BASE-T) for the same RJ45 hardware interface?

This was seemingly the intention of [EUAR-607](#) as agreed.

The original proposal was to define 1000Base-T also for the RJ45 variant, but this was contested by industry. SBB found out that 100Base-T is sufficient for the traffic of single EfeS, so the proposal was scaled down.

The consistency with the requirements for the SFP cage variant was not discussed.

Intended state

To be discussed and confirmed in RA WG.

[Proposal RefArch 20240304](#)

Change Eu.PoS.1203 to:

- [100BASE-T \(bandwidth of 100 Mbit/s\) or 1000BASE-T \(bandwidth of 1000 Mbit/s\)](#) (RJ45 [IEC 60603-7], copper dual twisted pair, reach of 100 m, as specified by [\[IEEE 802.3u\]](#) or [\[IEEE 802.3ab\]](#))

[Note: The bandwidth must be chosen such that the QoS-Parameter are met.](#)

Correct reference in Eu.PoS.1217:

If the physical implementation with RJ45 is used, the interface shall implement BASE-T

(RJ45, copper dual twisted pair, reach of 100 m, as specified by [IEEE [802.3u](#) or [802.3ab](#)]) with a bandwidth of 100mbit/s (100Base-T) or more.

Impact
POS

Backwards compatibility analysis
Same as [EUAR-607](#)

Comments

Comment by [Nico Hurman](#) [19.07.2024]

Not implemented in BL4R3! To be implemented as error correction?

Comment by [Nico Hurman](#) [02.04.2024]

Approved by TACS MG/CCB on 20240320 for implementation in BL4R3

Generated at Fri Jul 19 14:29:11 CEST 2024 by Nico Hurman using Jira 9.4.23#940023-sha1:042081f26695d2c2012dd9251033ab6e5ed712b1.

 SPT2TACS-950

 SPT2TACS-8740 - Correct missing Operation_State when leaving Data_Update

Type:  Change Request	Assignee(s):	Initial Estimate:
Change Type: Error	Owner(s):	Time Spent:
Local ID: EUAR-763	Owning Group:  SPT2TACS-552 - Reference Architecture-Board EWG	Estimate:
Severity:  Normal	To be Derived by Team:	Due Date:
Blocker:	Priority:  Medium [50.0]	
Requires CCB:  No	Status:  Created	
Author: Nico Huurman	Planned In:	
Project: SPT2-Trackside Assets CS	Resolution:	
Categories:		

Custom Fields

Notes:
Current State: BL4R3
Problem Description: PILZ raised that the reaction D10out_Operation_State = "NotMaintenance" is missing at the transitions going out of Data_Update. This means that the value of D10out_Operation_State is not defined in the state SMI_CONNECTION_ESTABLISHED, it can be either "NotMaintenance" or "Maintenance". This unclarity is not intended, the value must be "NotMaintenance". With this correction, the value of D10out_Operation_State will always be "NotMaintenance" in case the state DATA_UPDATE is entered because of the trigger T19in_Start_async_preload. This fact can be used as condition to allow Activation of a configuration item (only allowed in "Maintenance". In this way, the reference to the EST_EfeS_init_SubState is no longer needed.
Proposed Solution: Add D10out_Operation_State = "NotMaintenance" in 3 transitions going out of the state DATA_UPDATE. In the transition from MDM_INTERACTION_FOR_ITEM_I to ACTIVATING, delete the condition d52in_EST_EfeS_init_SubState = "WAITING_FOR_DATA_UPDATE" and replace it with D10out_Operation_State = "Maintenance". The port d52in is no longer needed.
Risk:
Potential Side Effects:
Architecture Changes:
Affected Architecture Elements:
Affected Functions:
Affected Interfaces:
Affected Features:
Affected Specifications: Gen-SMI [Eu.Doc.120]
Backwards Compatability: Error correction
Changed/New Requirements:
Change of Safety Relevant Areas:
Affected Domains:
Affected Subsystems:
Estimated Effort:
Estimated Schedule:
Economic Impact:

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Attachments

+

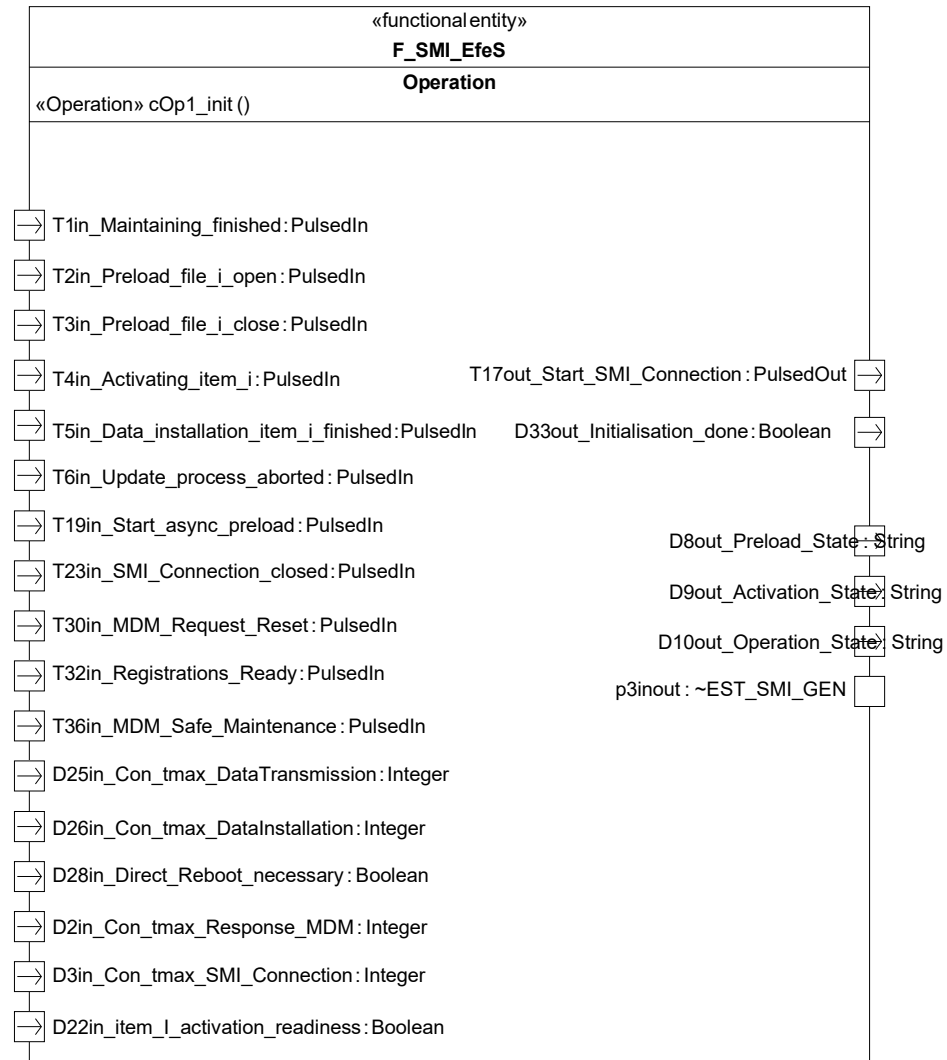


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[Browse files](#)

Created: 2024-10-15 15:20 , Updated: 2024-12-04 17:54

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ibd [Block] F_SMI_EfeS [Functional Viewpoint - Interface Requirements - Functional Entity]



SPT2TACS-1718

 SPT2TACS-9301 - Correct missing package marking

Type:  **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Error**

Owner(s):

Time Spent:

Local ID: **EULX-644**

Owning Group:  **SPT2TACS-456 - Level Crossing WG**

Remaining Estimate:

Severity:  **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority:  **Medium [50.0]**

Requires CCB:

Status:  **In verification**

Changed/New Requirements:

Planned In: **Error correction after BL4R3**

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3

Problem Description

Marking of the functional package is missing in SD 2.2.3, Eu.LC.3865.

Proposed Solution

Add marking of package 'Basic LC'

Affected Specifications

ReqSpec SubS LC

Backwards Compatability

Error correction for BL4R3 and BL4R2

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-1718 - LX-Board	SPT2-Trackside Assets CS			

Attachments

+



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SPT2TACS-870

SPT2TACS-871 - Missing condition for degraded point position at startup

Type: Change Request	Assignee(s): Philipp Wolber	Initial Estimate:
Change Type: Error	Owner(s):	Time Spent:
Local ID: EUP-577	Owning Group: SPT2TACS-427 - Point WG	Remaining Estimate:
Severity: Normal	Affected Domains:	Due Date:
Blocker:	To be Derived by Team:	
Architecture Changes:	Priority: Medium [50.0]	
Requires CCB: No	Status: In verification	
Changed/New Requirements:	Planned In: Error correction after BL4R3	
Change of Safety Relevant Areas:	Resolution:	
Author: Nico Huurman		
Project: SPT2-Trackside Assets CS		
Categories:		

Current State

BL4R3

Problem Description

The STM diagram F_Observe_Degraded_Point_Position (Eu.P.6015) contains an error.
The transitions from Junction1 after WAITING_FOR_INITIALISATION to DEGRADED_RIGHT / DEGRADED_LEFT have the conditions:
[D10in_PM1_Crucial_Position = "RIGHT" AND (D10in_PMi_Crucial_Position = "RIGHT" OR NOT D26in_Con_PMi_Crucial_Activation) AND ((D10in_PMk_Non_Crucial_Position = "NO_END_POSITION" OR D10in_PMk_Non_Crucial_Position = "UNINTENDED_POSITION") OR (D10in_PM1_Non_Crucial_Position = "NO_END_POSITION" OR D10in_PM1_Non_Crucial_Position = "UNINTENDED_POSITION"))]/
This does not exclude that the Point can be reported as 'Degraded Left' if one of the Non-crucial PMs is detected in the opposite position 'Right'. This is incorrect.
The functional definition of degraded position does not allow that one of the Non-crucial PMs is detected in a position that is opposite to the end position detected by all Crucial PMs.

Proposed Solution

Extend the conditions of these 2 transitions to cover D10in_PM1_Non_Crucial_Position <> "LEFT" AND D10in_PMk_Non_Crucial_Position <> "LEFT"
And equivalent correction for <> "RIGHT".
New V&V with a corrected simulator probably needed.

Affected Specifications

ReqSpec SubS P

Backwards Compatability

Error correction for the following releases:
●BL4 R1
●BL4 R2
●BL4 R3
<Provide an answer to the following questions:
Question 1: Can an EfeS implementing the change (new EfeS) operate with an EIL NOT implementing the change (old EIL)?
Question 2: Can an EfeS NOT implementing the change (old EfeS) operate with an EIL implementing the change (new EIL)?
Question 3: Must the PDI version be increased because of this change?>

Custom Fields

currentState:

Comments

#1 **Change in STM is done, Codegeneration is still needed** by **Philipp Wolber** on 2024-09-26 09:42
The change in PTC on the STM is done, Codegeneration is currently not working, waiting for a solution for the Framework Error between PTC and Visual Studios.
NewSimulator version needed.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-870 - P-Board	SPT2-Trackside Assets CS			

Hyperlinks

Role	URL	Actions
external reference	https://dsd-jira.jaas.service.deutschebahn.com/browse/EUP-577	

Attachments

+



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Created: 2024-08-15 11:21 , Updated: 2025-04-29 10:33

SPT2TACS-870

 SPT2TACS-9638 - Correct package marking for crucial point machine configuration

Type:  **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Error**

Owner(s):

Time Spent:

Local ID: **EUP-584**

Owning Group:  **SPT2TACS-427 - Point WG**

Remaining Estimate:

Severity:  **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority:  **Medium [50.0]**

Requires CCB:

Status:  **In verification**

Changed/New Requirements:

Planned In: **Error correction after BL4R3**

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3

Problem Description

The specific configuration data for the Subsystem Point contains:
- For each configured Point Machine, whether it is crucial or non-crucial (Eu.P.6295).
This information is needed for the determination of degraded point position, which is only relevant for multiple point machines.
The functional package marking contains incorrectly also Basic non-4-wire single P and Basic 4-wire single P

Proposed Solution

Remove package marking Basic non-4-wire single P and Basic 4-wire single P from Eu.P.6295.

Affected Specifications

ReqSpec SubS Point

Backwards Compatability

Error correction

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-870 - P-Board	SPT2-Trackside Assets CS			

Attachments

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SPT2TACS-950

 SPT2TACS-966 - Removal of redundancy PreloadItemStarted and PreLoadItemFinished

Type:  Change Request	Assignee(s): Nico Huurman	Initial Estimate:
Change Type: Enhancement - Clarification	Owner(s):	Time Spent:
Local ID: EUAR-720	Owning Group:  SPT2TACS-552 - Reference Architecture Board - EWG	Estimate:
Severity:  Normal	Affected Domains:	Due Date:
Blocker:	To be Derived by Team:	
Architecture Changes:	Priority:  Medium [50.0]	
Requires CCB:  No	Status:  In verification	
Changed/New Requirements:	Planned In: Baseline 4 Release 4 (2025-12-31)	
Change of Safety Relevant Areas:	Error correction after BL4R3	
Author: Nico Huurman	Resolution:	
Project: SPT2-Trackside Assets CS		
Categories:		

Description

Problem Description

Topic raised by Thales and Siemens
BL4R3, Batch 3, Eu.Doc.76, lines 8, 21, 22.
The method call PreloadItemStarted can be superseded with PreloadFile.Open; the Open method is part of the file transfer and must be called in any case.
The method call PreloadItemFinished can be superseded with PreloadFile.Close; the Close method is part of the file transfer and must be called in any case.
The PreloadItemStarted and PreloadItemFinished are strictly speaking redundant, as their functionality can also be covered by OPC UA FileType Open and FileType Close.
It is agreed to keep this redundancy in BL4R3. The mechanism can work okay with this redundancy.
Removing the redundancy is considered as an improvement/extension of the SMI specifications after BL4R3.

Proposed Solution

Additional minor change agreed in SMI Task Force 20241217:
- Delete class 'Items' as hierarchy level between 'Subsystem 1..n' and 'Item 1..n'. The classes 'Item 1..n' will be directly below the class 'Subsystem 1..n'.

A. Technical changes in the specifications:
[Eu.Doc.120]
1. In several SDs, the arrow Preload_item_i_Started must be replaced with PreloadFile.Open. With description:
Subsystem - Maintenance and Data Management
~~sends information about start of item~~
opens preload file.
Eu.Gen-SMI.46, .47, .50

2. In several SDs, the arrow Preload_item_i_Finished must be replaced with PreloadFile.Close. With description:
Subsystem - Maintenance and Data Management
~~informs about finished~~
closes preload file

~~item~~ .
Eu.Gen-SMI.46, .47, .50

3. In the STM, two ports and two FlowProperties must be renamed and description aligned.
T2in_Preload_item_i_started > T2in_Preload_file_i_open
T3in_Preload_item_i_finished > T3in_Preload_file_i_close
Preload_item_i_started > PreloadFile.Open
Preload_item_i_finished > PreloadFile.Close
[Eu.Doc.76]

4. Delete PreloadItemFinished and PreloadItemStarted from the information model figure and tables.
5. Improve and extend description of PreloadFile to describe the interactions PreloadFile.Open, PreloadFile.Write and PreloadFile.Close.

All exact changes in Eu.Doc.120 and Eu.Doc.76 are worked out in the attached files.

B. Pros and cons to (not) implement the described changes
Is it better to remove the redundancy?
What concrete benefits will it give in the loading of configuration items?
What is the impact on backwards compatibility and stability of the specifications?

Some industry partners raise that it is important to consider the compatibility with earlier releases of Baseline 4 (1, 2, 3).

Some industry partners raise that it is important to have a robust mechanism for the loading procedure for use on a broader scope in the System Pillar architecture. Redundancy in the specifications is error prone.

> Arguments collected and compared by industry partners. See attached slide.

> Recommended decision: Accept change request as error correction for BL4 R3, BL4 R2 and BL4 R1.

On this specific content, the functionality is reversed to how it was specified in Baseline 3.

Affected Specifications

Gen-SMI
IntDef+Spec SMI

No other documents

Backwards Compatability

Implemented as error correction, as agreed in SP TACS MG on 20240912.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Hyperlinks

Role	URL	Actions
external reference	https://dsd-jira.jaas.service.deutschebahn.com/browse/EUAR-720	

Attachments

+



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Attachments

Title	File Name	Size	Author	Last Modified	Actions
	EUAR-720 Pros and cons.pptx	36917 B	Ricky Holz	2024-08-20 16:19	
	EUAR-720_Changes in Eu.Doc.76 v3.docx	300272 B	Nico Huurman	2025-03-21 14:39	
	EUAR-720_Current_Changes_Eu.doc.120.docx	583245 B	Nico Huurman	2025-03-21 14:39	

Created: 2024-08-15 11:30 , Updated: 2025-03-21 14:39

EUAR-720

Changes:

~~sends information about start of item~~

opens preload file.

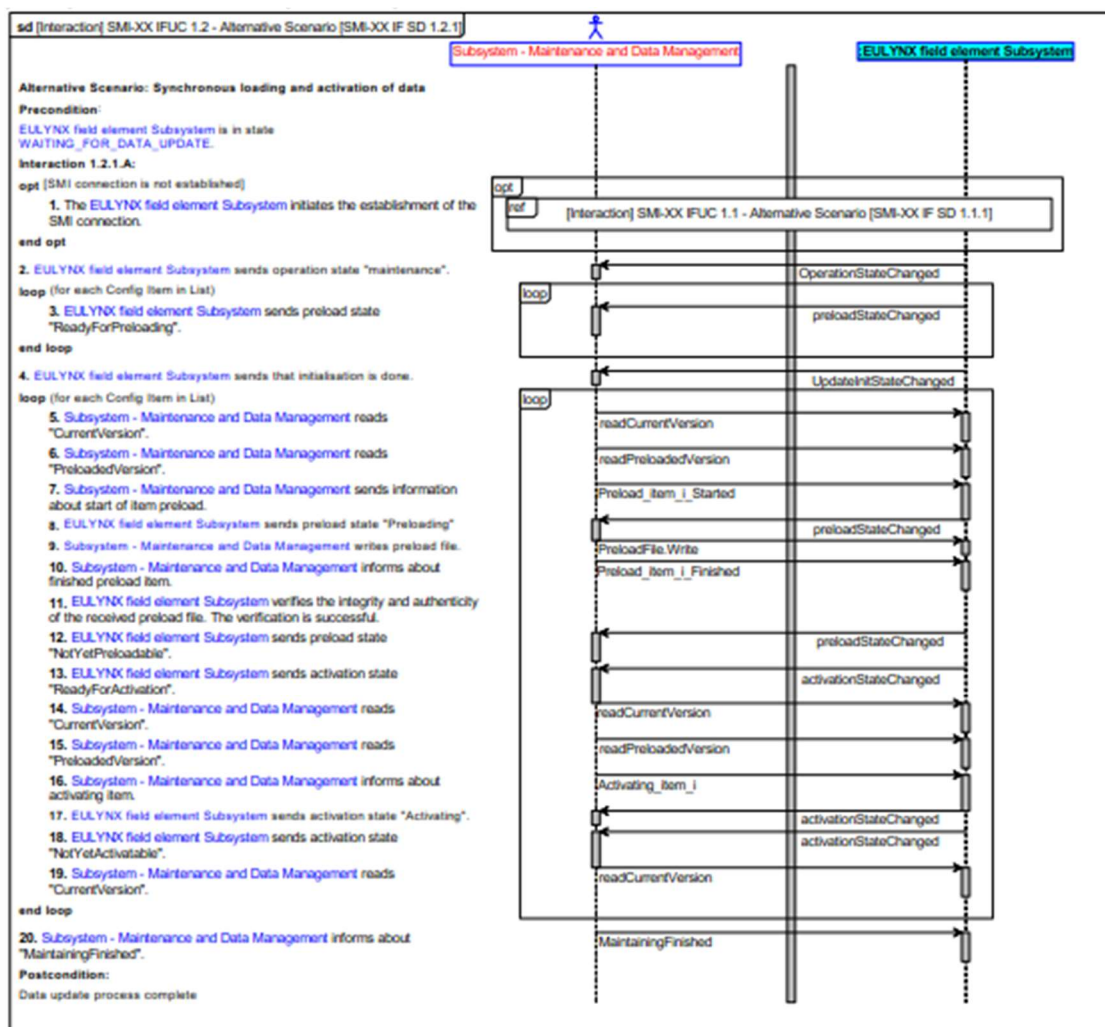
And

~~informs about finished item~~

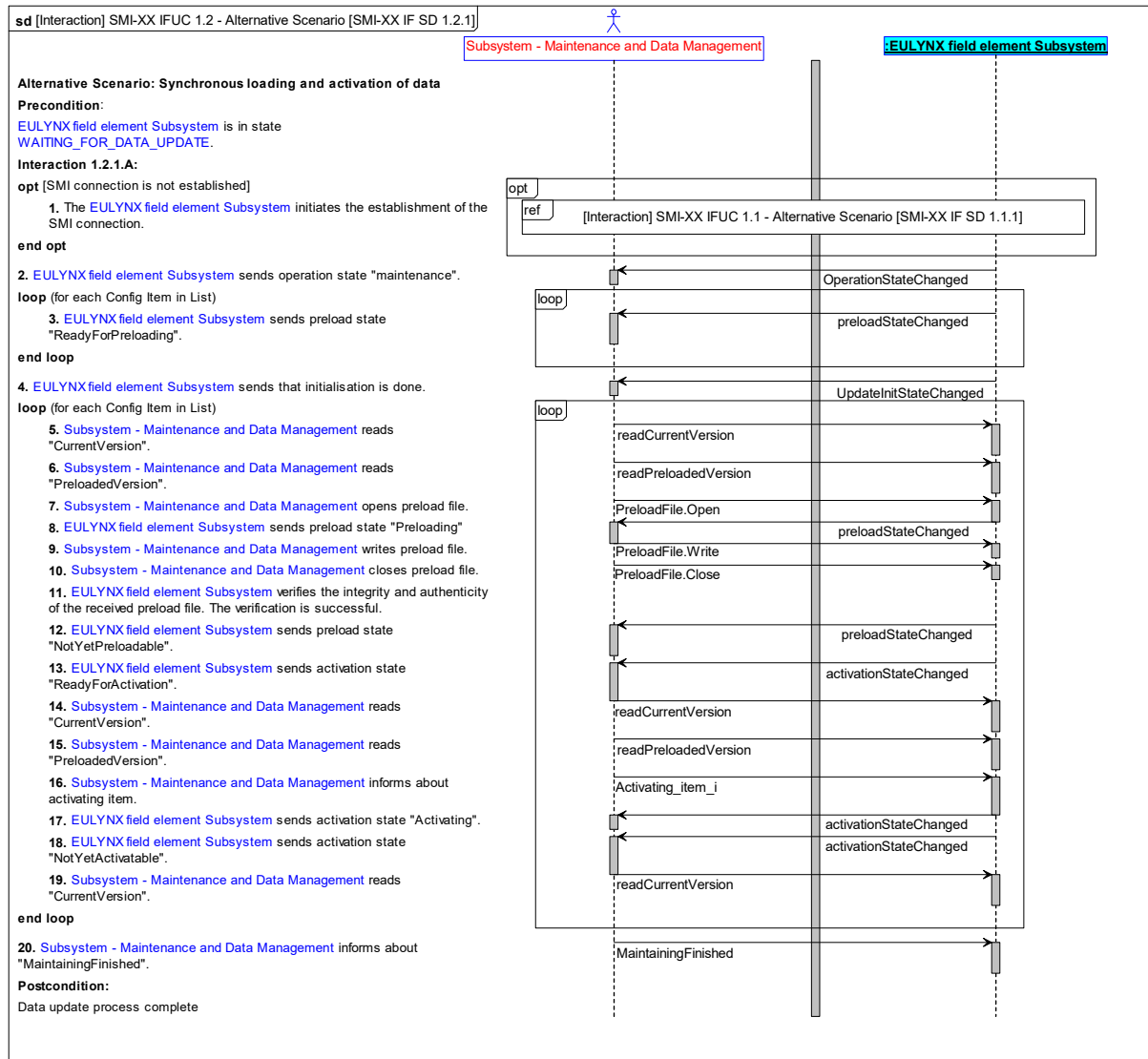
closes preload file

Eu.Gen-SMI.46

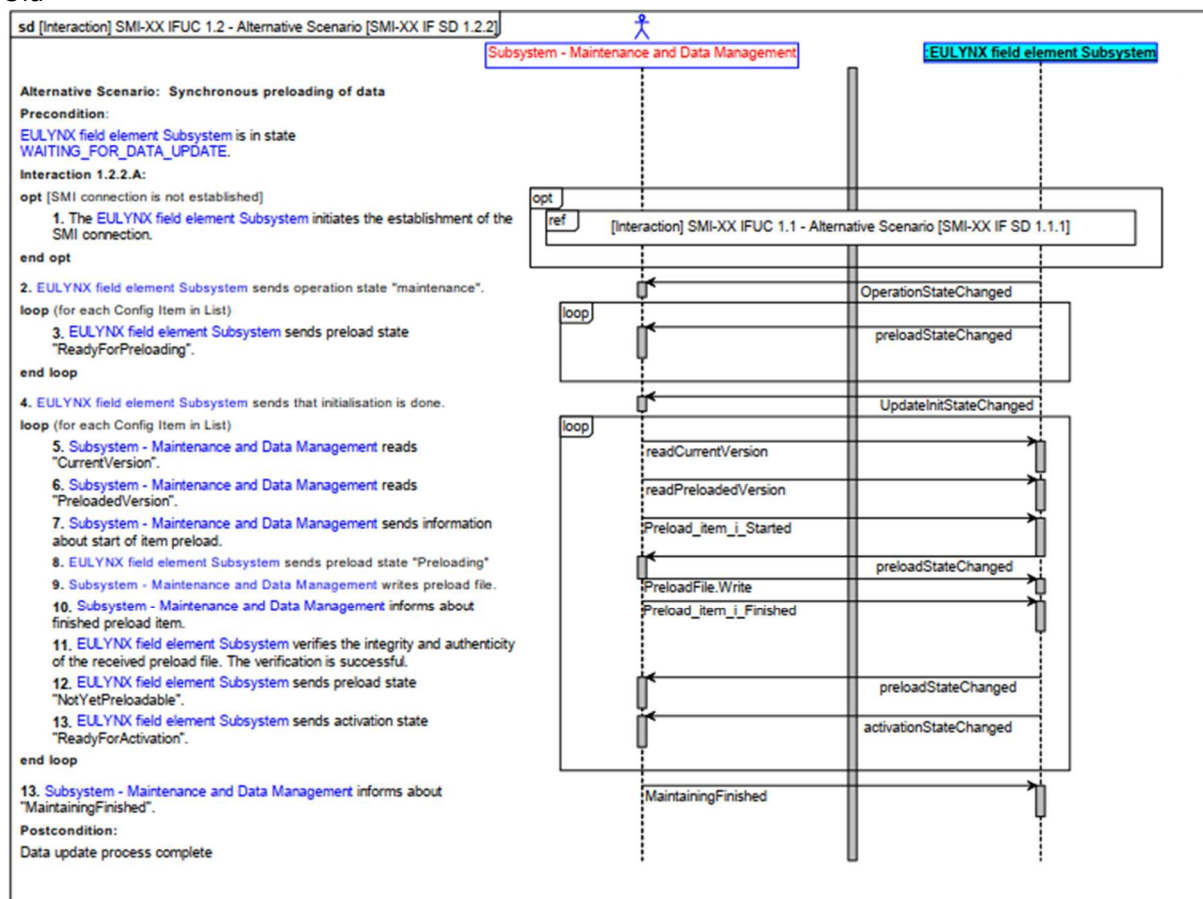
Old



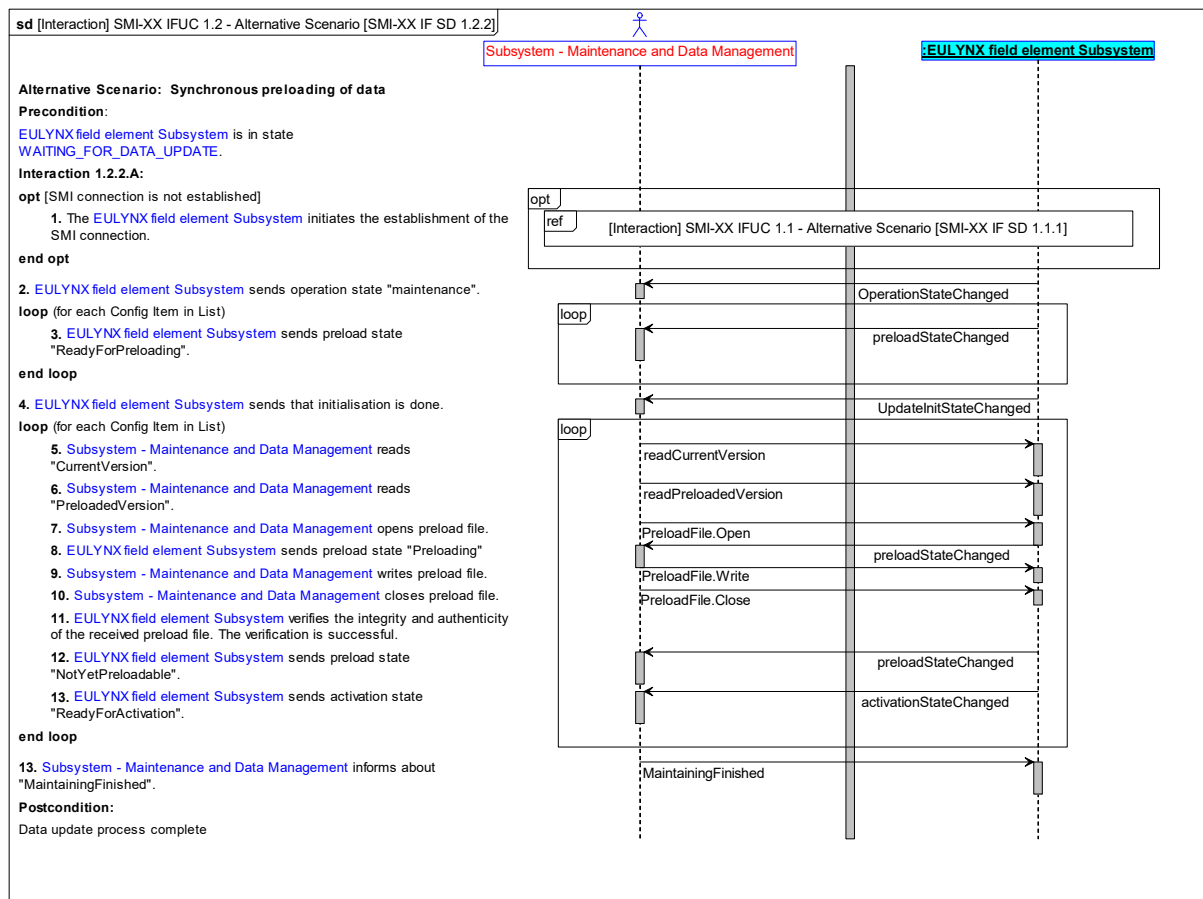
New



Old

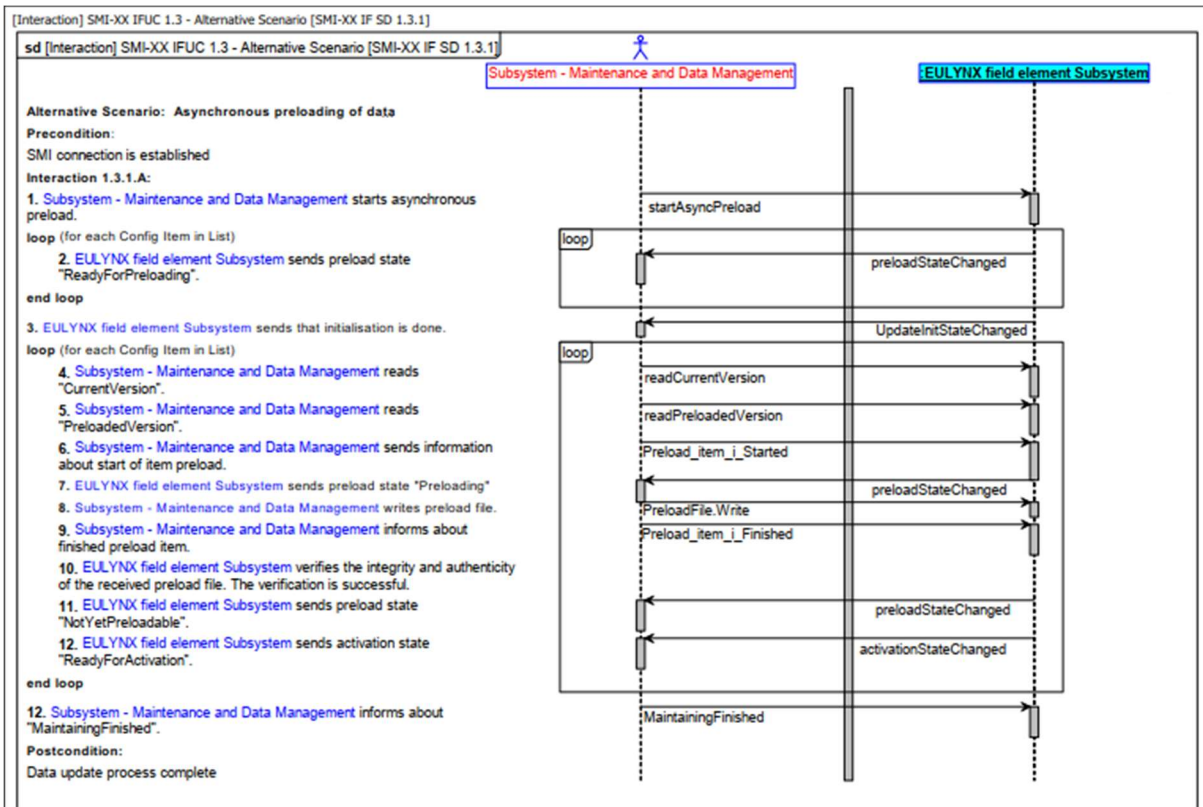


New

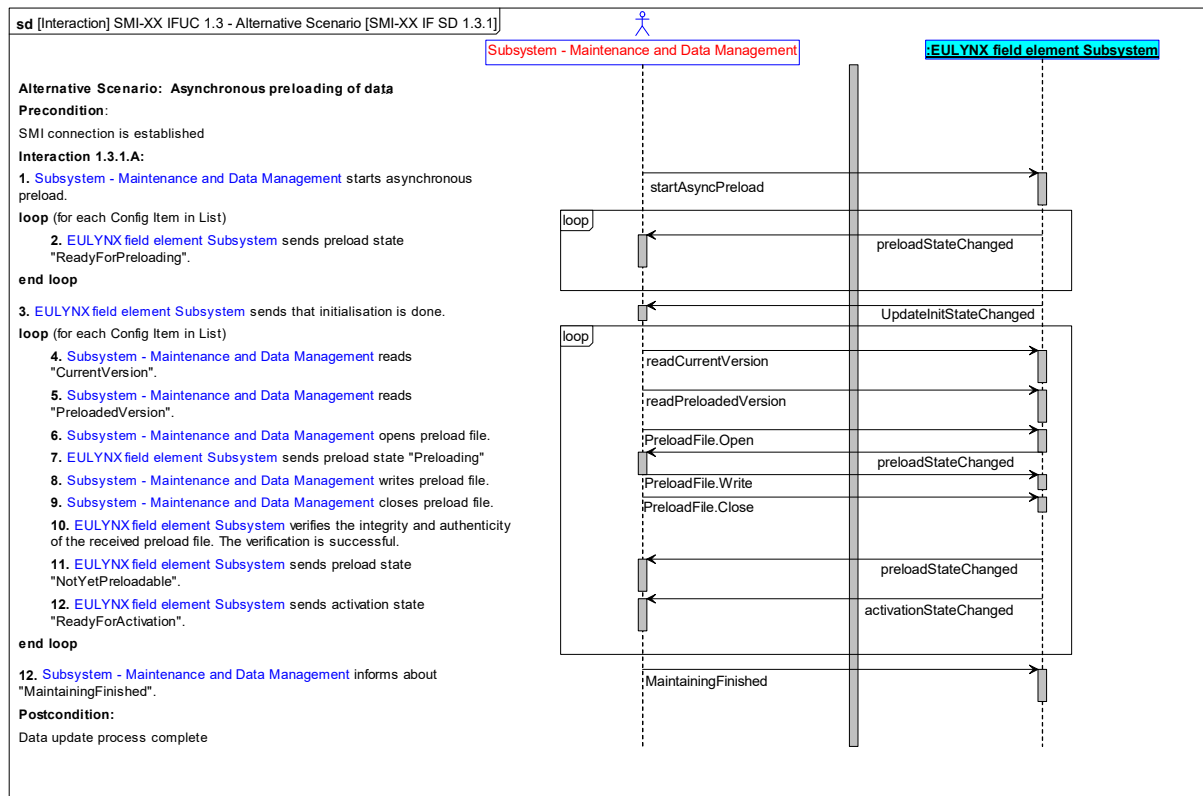


Eu.Gen-SMI.50

Old



New



New STM F_SMI_EfeS

Changes:

T2in_Preload_item_i_started > T2in_Preload_file_i_open

T3in_Preload_item_i_finished > T3in_Preload_file_i_close

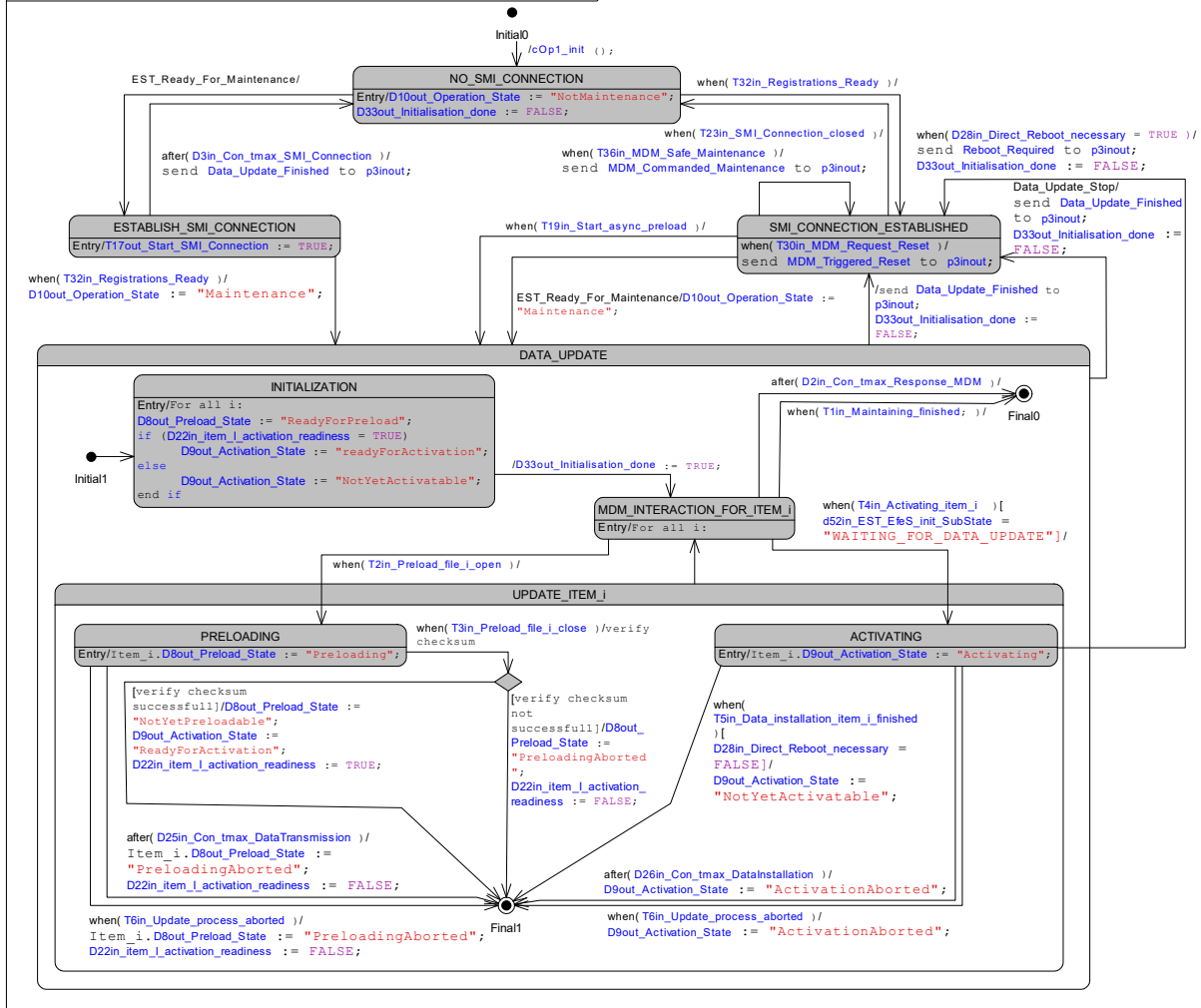
Preload_item_i_started > PreloadFile.Open

Preload_item_i_finished > PreloadFile.Close

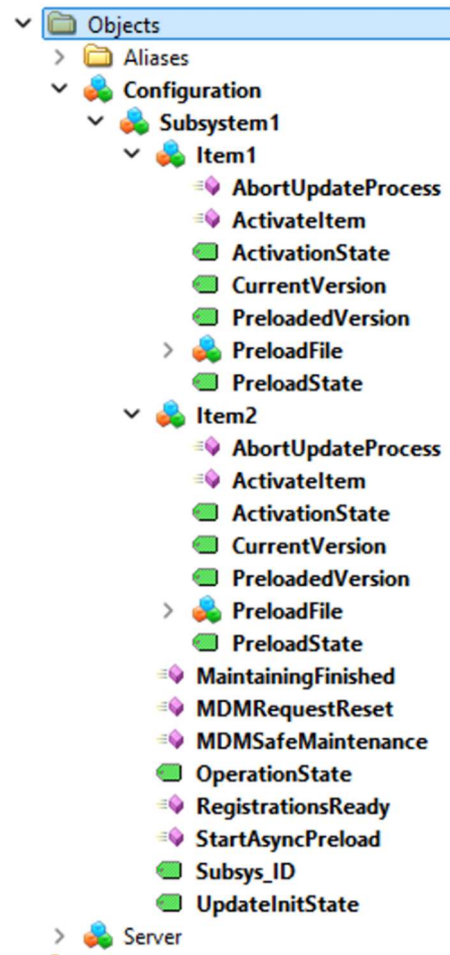
New:

The port **T2in_Preload_file_i_open** refines the FlowProperty **PreloadFile.Open**.

The port **T3in_Preload_file_i_close** refines the FlowProperty **PreloadFile.Close**.



Eu.SMI.233



Eu.SMI.244

Name	NodeClass	Parent	Additional Information	Description	Permission
Subsystem 1, ... , Subsystem n	Object	Configuration (global)		Contains all Configuration Items (CIs), methods and status variables used for maintaining a specific EULYNX field element Subsystem.	
Version	Variable	Configuration (global)	DataType: String Value: "M.m (E.A)"	Version of the SMI information model expressed as the document version of the Interface definition and specifications SMI [Eu.Doc.76]. This is used for version handling.	
Items	Object	Subsystem(n)		Group that contains all Configuration Items (data) for EULYNX field element Subsystem n.	Data-distribute Data-activate
Item 1, ..., Item n	Object	Items Subsystem(n)		CIs can contain configuration and engineering data or device software. There can be 1..n CIs.	Data-distribute Data-activate

Eu.SMI.254

Name	NodeClass	Parent	Additional Information	Description	Permission
PreloadedVersion	Variable	Item(n)	DataType: String	Version of a preloaded Configuration Item. Preloaded items can be activated immediately or at a later time if a two-step update procedure is applied. This value is set by the EULYNX field element Subsystem based on the version information read from the preloaded file.	Data-distribute Data-activate
PreloadFile	Object	Item(n)	DataType: FileType (OPC UA)	The preload file for Configuration Item n. PreloadFile.Open indicates that the MDM has opened the preload file before preloading. PreloadFile.Write indicates that the MDM loads the preload file to the EULYNX field element Subsystem. PreloadFile.Close indicates that the MDM has closed the preload file after preloading.	Data-distribute
PreloadItemFinished	Method	Item(n)	Inputs: no input arguments Outputs: no output arguments	Indicates that the preloading of the Configuration Item has been completed.	Data-distribute
PreloadItemStarted	Method	Item(n)	Inputs: no input arguments Outputs: no output arguments	Indicates that the preloading of the Configuration Item has been started.	Data-distribute

Eu.SMI.234

~~T2in_Preload_item_i_started~~ [T2in_Preload_item_i_started](#) shall be triggered by calling ~~PreloadItemStarted~~ [PreloadFile.Open](#)

Eu.SMI.235

~~T3in_Preload_item_i_finished~~ [T3in_Preload_file_i_close](#) shall be triggered by calling ~~PreloadItemFinished~~ [PreloadFile.Close](#)

EUAR-720

Arguments against change

- **Development:** Some companies already started developements based on the existing specification
- The requested changed is minor but would break the **backwards compatibility**.

Arguments for change

- **System Pillar:** As the SP work is starting, it is advisable to correct possible errors as soon as these are discovered. This would prevent future costs and reduce complexity. This is mostly relevant as the SMI interface is foreseen for all subsystems within the SP and not only for TACS.
- **backwards compatibility:** the argument on backwards compatibility is understandable and applies if many companies have already implemented the feature as is. If the development / implementation are not too advanced, backwards compatibility can be ensured via an error correction.

Next steps:

- Decision on change to be taken by the TACS Group: September '24.
- Planning of the change: several tickets / changes should be gathered in order to publish the changes in a planned way.

 SPT2TACS-950

 SPT2TACS-963 - SDI-XX, diagnostics for SSI

Type:  **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Enhancement - Clarification**

Owner(s):

Time Spent:

Local ID: **EUAR-731**

Owning Group:  **SPT2TACS-552 - Reference Architecture Board EWG**

Responsible: **EWG**

Severity:  **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority:  **Low [30.0]**

Requires CCB:  **No**

Status:  **In verification**

Changed/New Requirements:

Planned In: **Baseline 4 Release 4** (2025-12-31)

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Problem Description

Proposal Thales (Christian Löffler):
SMI and SSI will also partly depend on TLS but there is no relation to TlsCertificate class.
Diagnostics for SSI to be covered in future version.

Proposed Solution

Draft updated after alignment with Cybersecurity domain, 20241204
Version 3 attached.

Affected Specifications

SDI-XX
Further impact to be analysed

Backwards Compatability

To be analysed
<Provide an answer to the following questions:
Question 1: Can an EfeS implementing the change (new EfeS) operate with an EIL NOT implementing the change (old EIL)?
Question 2: Can an EfeS NOT implementing the change (old EfeS) operate with an EIL implementing the change (new EIL)?
Question 3: Must the PDI version be increased because of this change?>

Comments

#1 **Word file Explanation** by **Philipp Wolber** on 2025-01-15 16:15
The Attached Word File is hard to understand and to implement.

Can the necessary changes be shown step by step? Where something should be renamed, deleted or added. For new objects, the meaning should also be added if necessary

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Hyperlinks

Role	URL	Actions
external reference	https://dsd-jira.jaas.service.deutschebahn.com/browse/EUAR-731	

Attachments

Attachments

Title	File Name	Size	Author	Last Modified	Actions
	Diagnostics for SSI draft4.docx	33374 B	Nico Huurman	2025-03-18 15:19	

Created: 2024-08-15 11:30 , Updated: 2025-03-18 15:19

SPT2TACS-950

SPT2TACS-9635 - Refine version handling of SDI and SMI models in namespaceURI

SPT2TACS-9787 SPT2TACS-9788 SPT2TACS-9789 SPT2TACS-9790 SPT2TACS-9791

Type: Change Request	Assignee(s): Nico Huurman	Initial Estimate:
Change Type: Enhancement - Clarification	Owner(s):	Time Spent:
Local ID: EUAR-790	Owning Group: SPT2TACS-552 - Reference Architecture Board - EWG	Due Date:
Severity: Normal	Affected Domains:	Due Date:
Blocker:	To be Derived by Team:	
Architecture Changes:	Priority: Medium [50.0]	
Requires CCB:	Status: In verification	
Changed/New Requirements:	Planned In: Baseline 4 Release 4 (2025-12-31)	
Change of Safety Relevant Areas:	Resolution:	
Author: Nico Huurman		
Project: SPT2-Trackside Assets CS		
Categories:		

Current State

BL4R3
Drafts for BL4R4

Problem Description

Follow-up of EUAR-774.
Remark CLo in SMI Task Force 20250507: Should we remove the (E.A) part from the namespaceURI? These kind of version changes should not impact the compatibility of the model.

Proposed Solution

[New proposal 20250521]

- Decouple OPC UA model version from specification document version
- Define the OPC UA model version in the specification, as with PDI-version
- Use 3-tier version number
- Tier 1 (BL4R3: 1):
 - Reflects major functional model changes, definitely not 'OPC UA compatible'
 - Included in OPC UA namespaceURI
- Tier 2 (BL4R3: 1.0):
 - Reflects minor functional model changes, either not 'OPC UA compatible' or 'OPC UA compatible' but intentionally non-comaptible
 - Included in OPC UA namespaceURI
- Tier 3 (BL4R3: 1.0.0):
 - Reflects minor model changes, 'OPC UA compatible'
 - Only included in OPC UA meta-attribute 'version'

Exact textual changes/additions in IntDef SDI and IntDef+Spec SMI to be worked out.

In IntDefSDI

NEW Req object

The overall OPC UA Information model on the connected systems shall be composed of two OPC UA Information models, a generic and a specific part.

Eu.SDI.246

The version number of the OPC UA Information model shall consist of 3 levels, M.m.c., expressing Major, minor and compatible changes in the information model.
The upper two levels, M.m., shall be marked in the namespaceURI. All three levels, M.m.c., shall be marked in the OPC UA variable 'version'. be marked in the namespaceURI. The version number shall be in the format "M.m (E.A)" and equal to the document version of the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem [Eu.Doc.78], [Eu.Doc.80], [Eu.Doc.81], [Eu.Doc.82] or [Eu.Doc.110].

NEW Info object

The applicable value of the version number of the specific part is defined in the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem [Eu.Doc.78], [Eu.Doc.80], [Eu.Doc.81], [Eu.Doc.82] or [Eu.Doc.110]. The applicable value of the version number of the generic part is defined in the Interface specification SDI Generic [Eu.Doc.94].

In IntSpec SDI Generic

NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.1.0.](#) [in BL4R4]

In IntSpec SDI-P
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.1.0.](#) [in BL4R4]

In IntSpec SDI-LC
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntSpec SDI-LS
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntSpec SDI-IO
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntSpec SDI-TDS
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntDef+Spec SMI
Eu.SMI.292
The version number of the OPC UA Information model shall [consist of 3 levels, M.m.c., expressing Major, minor and compatible changes in the information model. The upper two levels, M.m., shall be marked in the namespaceURI. All three levels, M.m.c., shall be marked in the OPC UA variable 'version'. be marked in the namespaceURI. The version number shall be in the format "M.m \(E.A\)" and equal to the document version of the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem \[Eu.Doc.78\], \[Eu.Doc.80\], \[Eu.Doc.81\], \[Eu.Doc.82\] or \[Eu.Doc.110\].](#)

NEW Req object is section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

[outdated proposal] The task force agrees.

Refine Eu.SMI.292:
The version number of the OPC UA Information model shall be marked in the namespaceURI. The version number shall be in the format "M.m ~~(E.A)~~" and equal to the document version of the Interface definition and specification SMI [Eu.Doc.76].

Refine Eu.SDI.246 (see also changes in EUAR-781):
The version number of the OPC UA Information model shall be marked in the namespaceURI. The version number shall be in the format "M.m ~~(E.A)~~" for both the specific and generic part of the OPC UA Information model. The version number of the specific part shall be equal to the document version of the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem [Eu.Doc.78], [Eu.Doc.80], [Eu.Doc.81], [Eu.Doc.82] or [Eu.Doc.110]. The version number of the generic part shall be equal to the document version of the Interface specification SDI Generic [Eu.Doc.94].

Affected Specifications

IntDef+Spec SMI
IntDef SDI

Backwards Compatability

See EUAR-774

Extension of OPC UA models for SMI and diagnostics.
Backwards compatibility handled via version management of the OPC UA models for SMI and diagnostics.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
---------	------	-------	---------	----------	--------	-------------

has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9787 - LS - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		In verification Nico Huurman
_ is derived by	 SPT2TACS-9788 - P - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9789 - IO - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9790 - TDS - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9791 - LC - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		

Attachments



Browse files

Diagnostics for SSI

Extention proposal for SDI Generic

Class: SSISharedCybersecurityServiceInterface

Rename existing class 'SSI' to new name.

Instantiation of parent class Interface

Associated to class TransportChannelOther

Attribute: interfaceRevisionSSISpecificationGeneric

Proposed updated definition: Indicates the version of the Shared Cybersecurity Services Specification which was used for development and production of the connected system. For example the connected system is developed and produced based on Shared Cybersecurity Services Specification version 1.6 (1.A), the interfaceRevisionSSISpecification has the value "1.6 (1.A)".

Question: Does the updated definition fit for the new SP specification structure?

Current definition: Indicates the version of the Interface specification for SSI Generic which was used for development and production of the connected system. For example the connected system is developed and produced based on Interface specification for SSI Generic version 1.6 (1.A), the interfaceRevisionSSISpecification has the value "1.6 (1.A)".

Attribute: serviceConnectionStatus

Proposed updated Enumeration values

- Unknown: The status unknown is used when the state is not yet established e.g. if connection to the system is lost
- IntentionallyNotConnected: The service function interface is intentionally not connected.
- NotConnectedDisturbed: The service function interface is not connected and disturbed
- Connected: The service function interface is connected

Enumeration [same values as ConnectionStatus]

- Unknown: The status unknown is used when the state is not yet established e.g. if connection to the system is lost
- NotAvailableNotConnected: The service function interface is neither available nor connected
- AvailableNotConnected: The service function interface is available but not connected
- Connected: The service function interface is connected
- NotConnectedDisturbed: The service function interface is not connected and disturbed

Attribute: connectionLastTimeDate

DateTime

Met opmerkingen [RP1]: Can we bind that to release versions of the new Security Guideline?

e.g. new Guideline for BL4R4 referring to a certain set of EU-Rail Sec documents should be a precise definition. Otherwise we need to use the versioning scheme of EU-Rail

Met opmerkingen [NH2R1]: Refer to SP-Cybersecurity-SharedCybersecurityServices

Met opmerkingen [NH3R1]: Nico will update drafted name and definition.

Met opmerkingen [NH4R1]: Draft updated

heeft opmaak toegepast: Niet Doorhalen

Met opmerkingen [RP5]: How can we determine (from a client point of view) if the service is available when no connection is established?

Met opmerkingen [RP6R5]: I'd assume that from a client point of view we can just differentiate between

Connected
NotConnected (intentionally)
Error (Tried to connect but was not possible/connection lost)

Met opmerkingen [NH7R5]: 'Available' is meant to indicate that on the side of the field element (reporting device) there is no condition blocking this interface.

Met opmerkingen [NH8R5]: May need to refine to express:
Availability (of the EfeS/connection system) can be:
Available, intentionally not available, disturbed.
Connection (to the partner) can be:
Connected, intentionally not connection, connection disturbed.

Met opmerkingen [NH9R5]: Simplify for security services?

Met opmerkingen [NH10R5]: Merge NotAvailableNotConnected and AvailableNotConnected into IntentionallyNotConnected. Draft meaning.

Met opmerkingen [NH11R5]: Draft updated

Class: **SecureTimeSynchronisation**

Instantiation of parent class SharedCybersecurityServiceInterface

Class: **PublicKeyInfrastructure**

Instantiation of parent class SharedCybersecurityServiceInterface

Class: **IdentityAndAccessManagement**

Instantiation of parent class SharedCybersecurityServiceInterface

Class: **SecurityLogging**

Instantiation of parent class SharedCybersecurityServiceInterface

Class: **TransportChannelOther**

Instantiation of parent class TransportChannel

Met opmerkingen [RP12]: Should we already align these class names with the EU-Rail drafts?

Met opmerkingen [NH13R12]: Should be aligned in this version

Met opmerkingen [RP14]: What's the meaning of this class?

Met opmerkingen [NH15R14]: Fine

 SPT2TACS-950

 SPT2TACS-958 - SDI-XX, express source and target of Interface classes

Type:  Change Request	Assignee(s): Philipp Wolber	Initial Estimate:
Change Type: Enhancement - Clarification	Owner(s):	Time Spent:
Local ID: EUAR-739	Owning Group:  SPT2TACS-552 - Reference Architecture-Board EWG	Estimate:
Severity:  Normal	Affected Domains:	Due Date:
Blocker:	To be Derived by Team:	
Architecture Changes:	Priority:  Medium [50.0]	
Requires CCB:  No	Status:  In verification	
Changed/New Requirements:	Planned In: Baseline 4 Release 4 (2025-12-31)	
Change of Safety Relevant Areas:	Resolution:	
Author: Nico Huurman		
Project: SPT2-Trackside Assets CS		
Categories:		

Problem Description

Comment Siemens (GBo) about LogEventInterface
Intended content of NodeIDSource and NodeIDTarget to be clarified. Understandable 'meaning' to be drafted.
Decided on 20240516 to delete these attributes in BL4R3.
To consider improving and re-introducing these attributes after BL4R3

Proposed Solution

Agreed in SDI Task Force 20241108
The following changes agreed (see attached diagram)
- Add association between classes Interface and Subsystem
- Add Attribute communicationPartnerSubsystemIdentification in class Interface.
> Description: The technical identifier of the subsystem or adjacent systems (see Eu.SAS.77 in [Eu.Doc.16]) that is the communication partner on the interface.

Discussed in SDI Task Force 20241017
Title updated from: SDI-XX, clarify and maybe re-introduce NodeIDSource and NodeIDTarget
Title updated to: SDI-XX, express source and target of Interface classes

To be discussed after BL4R3.

Affected Specifications

Eu.Doc.94 (SDI-XX)
No further impact

Backwards Compatability

Extension of diagnostic model.
Backwards compatibility handled via version management of diagnostic model.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Hyperlinks

Role	URL	Actions
external reference	https://dsd-jira.jaas.service.deutschebahn.com/browse/EUAR-739	

Attachments

+



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Attachments

Title	File Name	Size	Author	Last Modified	Actions
	Updated SDI-XX interface_diagram for EUAR-739.pdf	248768 B	Nico Huurman	2024-11-09 17:01	

Created: 2024-08-15 11:30 , Updated: 2024-12-09 12:03

SPT2TACS-950

SPT2TACS-8737 - Add SDI-XX attribute for expiration of Con_tmax_DataInstallation in SMI

Type: **Change Request**

Assignee(s): **Philipp Wolber**

Initial Estimate:

Change Type: **Enhancement - Clarification**

Owner(s):

Time Spent:

Local ID: **EUAR-760**

Owning Group: **SPT2TACS-552 - Reference Architecture Board EWG**

Responsible: **EWG**

Severity: **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority: **Medium [50.0]**

Requires CCB: **No**

Status: **In verification**

Changed/New Requirements:

Planned In: **Baseline 4 Release 4** (2025-12-31)

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3

Problem Description

In Eu.Doc.120 (Gen-SMI), the description of the time Con_tmax_DataInstallation states 'A diagnostic message is issued.' when the timer expires. The diagnostic data model for SDI-XX does not contain a message for this information.

Proposed Solution

Add an attribute in the class ConfigurationItem names IsDataInstallationTimeExceeded, type Boolean.
With meaning:
TRUE if the last try to activate and install a new version of the configuration item was not completed within the configured time period.

Affected Specifications

SDI-XX

Backwards Compatability

Extension of diagnostic model.
Backwards compatibility handled via version management of diagnostic model.

Comments

#1 **Missing Informations for types** by **Philipp Wolber** on 2024-12-09 11:31
see Attachements for "Modelling Rule", "Accurancy", "Sampling" and "Attribute Type"

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Attachments

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Attachments

Title	File Name	Size	Author	Last Modified	Actions
	values.png	20019 B	Philipp Wolber	2024-12-09 11:30	

Created: **2024-10-15 14:13** , Updated: **2025-04-08 12:57**

Properties of 'IsDataInstallationTimeExceeded'

General Text Options Data Type Signature Changes Style Items VB Attribute Meta Data

Tag Definition Name	Tag Value
Attribute Type	diagnosis
Name (de)	
Meaning (de)	
Name (en)	
Meaning (en)	TRUE if the last try to activate and install a new version of the configuration item was not completed within the configured time period.
Update	
Scope	
Rule	
Old Physical Unit	
Physical Unit	
Modelling Rule	Mandatory
Accuracy	Current value
Sampling Rate	1000

 SPT2TACS-950

 SPT2TACS-8740 - Correct missing Operation_State when leaving Data_Update

Type:  **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Error**

Owner(s):

Time Spent:

Local ID: **EUAR-763**

Owning Group:  **SPT2TACS-552 - Reference Architecture-Board EWG**

Use Case ID:

Severity:  **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority:  **Medium [50.0]**

Requires CCB:  **No**

Status:  **In verification**

Changed/New Requirements:

Planned In: **Error correction after BL4R3**

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3

Problem Description

PILZ raised that the reaction D10out_Operation_State = "NotMaintenance" is missing at the transitions going out of Data_Update. This means that the value of D10out_Operation_State is not defined in the state SMI_CONNECTION_ESTABLISHED, it can be either "NotMaintenance" or "Maintenance". This unclarity is not intended, the value must be "NotMaintenance".

With this correction, the value of D10out_Operation_State will always be "NotMaintenance" in case the state DATA_UPDATE is entered because of the trigger T19in_Start_async_preload. This fact can be used as condition to allow Activation of a configuration item (only allowed in "Maintenance". In this way, the reference to the EST_EfeS_init_SubState is no longer needed.

Proposed Solution

Add D10out_Operation_State = "NotMaintenance" in 3 transitions going out of the state DATA_UPDATE.

In the transition from MDM_INTERACTION_FOR_ITEM_I to ACTIVATING, delete the condition d52in_EST_EfeS_init_SubState = "WAITING_FOR_DATA_UPDATE" and replace it with D10out_Operation_State = "Maintenance". The port d52in is no longer needed.

Affected Specifications

Gen-SMI [Eu.Doc.120]

Backwards Compatability

Error correction for:
BL4 Release 1
BL4 Release 2
BL4 Release 3

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Attachments

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Attachments

Title	File Name	Size	Author	Last Modified	Actions
	[EUAR-763] F_SMI_efes_stm.pdf	96837 B	Nico Huurman	2024-12-04 17:54	
	[EUAR-763] F_SMI_efes_ibd.pdf	69776 B	Nico Huurman	2024-12-04 17:54	

Created: **2024-10-15 15:20** , Updated: **2025-04-08 13:03**

 SPT2TACS-950

 SPT2TACS-9038 - Add SDI-XX attribute for reporting PDI repetition

Type:  **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Enhancement - Clarification**

Owner(s):

Time Spent:

Local ID: **EUAR-765**

Owning Group:  **SPT2TACS-552 - Reference Architecture-Board EWG**

Responsible: **EWG**

Severity:  **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority:  **Medium [50.0]**

Requires CCB:

Status:  **In verification**

Changed/New Requirements:

Planned In: **Baseline 4 Release 4** (2025-12-31)

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3

Problem Description

In the SAS [Eu.Doc.16], specifically Eu.SAS.2078 requires that a diagnostic message be sent when a communication partner receives a repeated command or message. The diagnostic data model for SDI-XX does not contain a message for this information.

Proposed Solution

Add an enumeration value in the list for the attribute PdiEventNotification
11. 'pdiRepetition'

Affected Specifications

SDI-XX

Backwards Compatability

Extension of diagnostic model.
Backwards compatibility handled via version management of diagnostic model.

Comments

#1 **Meaning needed** by **Philipp Wolber** on 2025-01-15 15:37
New value "11. 'pdiRepetition'" needs a defined "meaning"

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Attachments

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SPT2TACS-950

SPT2TACS-9394 - Refine diagnostic attributes for connections status

Type: **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Enhancement - Clarification**

Owner(s):

Time Spent:

Local ID: **EUAR-771**

Owning Group: **SPT2TACS-552 - Reference Architecture Board - EWG**

Urgency:

Severity: **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority: **Medium [50.0]**

Requires CCB:

Status: **In verification**

Changed/New Requirements:

Planned In: **Baseline 4 Release 4** (2025-12-31)

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3
Drafts for BL4R4

Problem Description

Comment raised by PZie. The diagnostic attributes for connection status must be more aligned with the RaSTA connection status information.

Proposed Solution

Change ConnectionStatus in class Interface to a boolean IsConnectionAvailable.
Meaning: TRUE if the interface is available at the subsystem.

Update the enumeration values for ScpConnectionStatus

Unknown	0: The status Unknown is used when the state is not yet established e.g. if connection to the system is lost
Closed	1: The connection is terminated
Down	2: The service "Open Connection" has been invoked; the connection is ready to be established
Start	3: Client: A connection request has been sent and a connection response is expected. Server: A connection response has been sent and a heartbeat is expected.
Up	4: The connection is established; messages can be received and sent
RetrReq	5: A retransmission request has been sent and a retransmission response is expected
RetrRun	6: After the retransmission response is received, retransmitted data are accepted until a heartbeat or regular data is/are received

Update the enumeration values for TransportChannelRastaStatus

Unknown	0: The status unknown is used when the state is not yet established
Closed	1: TCP: The connection is terminated UDP: Port is closed and no data exchange is possible
Established	2: TCP: The connection is established and data exchange is possible UDP: Port is open and data exchange is possible

Add attribute status in class TransportChannelOpcua with enumeration values TransportChannelOpcuaStatus

Unknown	0: The status Unknown is used when the state is not yet established e.g. if connection to the system is lost
Connected	1: The channel is connected
NotConnected	2: The channel is not connected

Affected Specifications

SDI-XX

Backwards Compatability

Extension of diagnostic model.
Backwards compatibility handled via version management of diagnostic model.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Attachments

Created: 2025-03-18 12:39 , Updated: 2025-06-24 09:08

SPT2TACS-950

SPT2TACS-9395 - Remove enumeration ReplaceableRevalidation

Type: **Change Request**

Change Type: **Enhancement - Clarification**

Local ID: **EUAR-772**

Severity: **Normal**

Blocker:

Architecture Changes:

Requires CCB:

Changed/New Requirements:

Change of Safety Relevant Areas:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Assignee(s): **Nico Huurman**

Owner(s):

Owning Group: **SPT2TACS-552 - Reference Architecture-Board - EWG**

Affected Domains:

To be Derived by Team:

Priority: **Medium [50.0]**

Status: **In verification**

Planned In: **Baseline 4 Release 4** (2025-12-31)

Resolution:

Initial Estimate:

Time Spent:

Due Date:

Current State

BL4R3
Drafts for BL4R4

Problem Description

The definition of the enumeration value ReplaceableRevalidation in the attribute replacementIndication is not clear.

Proposed Solution

Delete the enumeration value ReplaceableRevalidation

Affected Specifications

SDI-XX

Backwards Compatability

Extension of diagnostic model.
Backwards compatibility handled via version management of diagnostic model.

Linked Work Items

Suspect	Role	Title	Project	Revision
	has parent	SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS	

Attachments

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SPT2TACS-950

SPT2TACS-9399 - Version handling of SDI and SMI models in namespaceURI

Type: **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Enhancement - Clarification**

Owner(s):

Time Spent:

Local ID: **EUAR-774**

Owning Group: **SPT2TACS-552 - Reference Architecture Board - EWG**

Responsible: **EWG**

Severity: **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority: **Medium [50.0]**

Requires CCB:

Status: **In verification**

Changed/New Requirements:

Planned In: **Baseline 4 Release 4** (2025-12-31)

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3
Drafts for BL4R4

Problem Description

KKI raised that there is no need to have an explicit attribute 'Version' on the top level of the OPC UA model for SMI. Such an attribute was added in BL4R3 with ticket EUAR-641.

Proposed Solution

Remove again the attribute 'Version' from the OPC UA model of SMI.
In figure in Eu.SMI.233 and in table in Eu.SMI.244.

Instead, a general OPC UA requirement will be added in section 3.2.2, between Eu.SMI.287 and Eu.SMI.268.
The version number of the OPC UA Information model shall be marked in the namespaceURI. The version number shall be in the format "M.m (E.A)" and equal to the document version of specification SMI [Eu.Doc.76].

A similar general OPC UA requirement will also be added for SDI, in section 3.3, between Eu.SDI.237 and Eu.SDI.217.
The version number of the OPC UA Information model shall be marked in the namespaceURI. The version number shall be in the format "M.m (E.A)" and equal to the document version of SDI corresponding to type of the EULYNX field element subsystem [Eu.Doc.78], [Eu.Doc.80], [Eu.Doc.81], [Eu.Doc.82] or [Eu.Doc.110].

Affected Specifications

IntDef SDI
IntDef+Spec SMI

Backwards Compatability

Extension of OPC UA models for SMI and diagnostics.
Backwards compatibility handled via version management of the OPC UA models for SMI and diagnostics.

Linked Work Items

Suspect	Role	Title	Project	Revision
	has parent	SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS	

Attachments

SPT2TACS-950

 SPT2TACS-9553 - Update reference to security permissions in SDI, SMI

Type:  Change Request	Assignee(s): Nico Huurman	Initial Estimate:
Change Type: Enhancement - Clarification	Owner(s):	Time Spent:
Local ID: EUAR-778	Owning Group:  SPT2TACS-552 - Reference Architecture Board EWG	Estimate:
Severity:  Normal	Affected Domains:	Due Date:
Blocker:	To be Derived by Team:	
Architecture Changes:	Priority:  Medium [50.0]	
Requires CCB:	Status:  In verification	
Changed/New Requirements:	Planned In: Baseline 4 Release 4 (2025-12-31)	
Change of Safety Relevant Areas:	Resolution:	
Author: Nico Huurman		
Project: SPT2-Trackside Assets CS		
Categories:		

Current State

BL4R3
Drafts for BL4R4

Problem Description

See additions described in EUAR-747.
Contrary to previous agreements, the SP Cybersecurity domain decided to not include any content related to the security permissions for SDI and SMI in their publication in early 2025.
The topic has been handed over to the Transversal domain.

Some changes were drafted by TCCS after the previous agreement.

Proposed Solution

Change Eu.SMI.290
The OPC UA server on the connected system shall respect the security permissions.
The following security permissions are used:

- eu.rail.smi.configuration-read
- eu.rail.smi.configuration-distribute
- eu.rail.smi.configuration-activate
- eu.rail.smi.component-reset

Gert Bolz to provide table marking for configuration-read > Ticket to be updated when available.

The new permission 'Configuration-read' will be added in the tables at the following rows:

- Item 1, ..., Item n
- ActivationState
- CurrentVersion
- PreloadedVersion
- PreloadFile
- PreloadState
- OperationState
- Subsys_ID
- UpdateInitState

In the other entries in the column 'Permission', two out of 3 permissions will be renamed:
Data-distribute > Configuration-distribute
Data-activate > Configuration-activate

For consistency, the equivalent change is needed in Eu.SDI.241.
The OPC UA server on the connected system shall respect the security permissions.
The following security permissions are used:

- eu.rail.sdi.diagnostics-read

Affected Specifications

SMI [Eu.Doc.76]
SDI [Eu.Doc.77]

Backwards Compatability

Transversal CCS (Gert Bolz) has confirmed that there is no impact on backwards compatibility.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS			

Attachments

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Created: 2025-04-17 11:37 , Updated: 2025-06-24 09:08

SPT2TACS-950

 SPT2TACS-9555 - Missing general OPC UA requirement for SMI

Type:  **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Enhancement - Clarification**

Owner(s):

Time Spent:

Local ID: **EUAR-780**

Owning Group:  **SPT2TACS-552 - Reference Architecture-Board - EWG**

Responsible Gate:

Severity:  **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority:  **Medium [50.0]**

Requires CCB:

Status:  **In verification**

Changed/New Requirements:

Planned In: **Baseline 4 Release 4** (2025-12-31)

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

BL4R3
Drafts for BL4R4

Problem Description

During review for BL4R4, the SMI task force noted that a general OPC UA requirement is missing for SMI.
Eu.SDI.214 is present in the IntDef SDI [Eu.Doc.77], but the equivalent requirement is missing in the IntDef and Spec SMI [Eu.Doc.76]

Proposed Solution

Copy the content of Eu.SDI.214 to IntDef and Spec SMI [Eu.Doc.76]
After Eu.SMI.267.

Affected Specifications

IntDef and Spec SMI [Eu.Doc.76]

Backwards Compatability

Not a new functional requirement, already included for SDI

Linked Work Items

Suspect	Role	Title	Project	Revision	Status
	has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS		

Attachments



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SPT2TACS-950

SPT2TACS-9635 - Refine version handling of SDI and SMI models in namespaceURI

SPT2TACS-9787 SPT2TACS-9788 SPT2TACS-9789 SPT2TACS-9790 SPT2TACS-9791

Type: Change Request	Assignee(s): Nico Hurman	Initial Estimate:
Change Type: Enhancement - Clarification	Owner(s):	Time Spent:
Local ID: EUAR-790	Owning Group: SPT2TACS-552 - Reference Architecture Board - EWG	Due Date:
Severity: Normal	Affected Domains:	Due Date:
Blocker:	To be Derived by Team:	
Architecture Changes:	Priority: Medium [50.0]	
Requires CCB:	Status: In verification	
Changed/New Requirements:	Planned In: Baseline 4 Release 4 (2025-12-31)	
Change of Safety Relevant Areas:	Resolution:	
Author: Nico Hurman		
Project: SPT2-Trackside Assets CS		
Categories:		

Current State

BL4R3
Drafts for BL4R4

Problem Description

Follow-up of EUAR-774.
Remark CLo in SMI Task Force 20250507: Should we remove the (E.A) part from the namespaceURI? These kind of version changes should not impact the compatibility of the model.

Proposed Solution

[New proposal 20250521]

- Decouple OPC UA model version from specification document version
- Define the OPC UA model version in the specification, as with PDI-version
- Use 3-tier version number
- Tier 1 (BL4R3: 1):
 - Reflects major functional model changes, definitely not 'OPC UA compatible'
 - Included in OPC UA namespaceURI
- Tier 2 (BL4R3: 1.0):
 - Reflects minor functional model changes, either not 'OPC UA compatible' or 'OPC UA compatible' but intentionally non-comaptible
 - Included in OPC UA namespaceURI
- Tier 3 (BL4R3: 1.0.0):
 - Reflects minor model changes, 'OPC UA compatible'
 - Only included in OPC UA meta-attribute 'version'

Exact textual changes/additions in IntDef SDI and IntDef+Spec SMI to be worked out.

In IntDefSDI

NEW Req object

The overall OPC UA Information model on the connected systems shall be composed of two OPC UA Information models, a generic and a specific part.

Eu.SDI.246

The version number of the OPC UA Information model shall consist of 3 levels, M.m.c., expressing Major, minor and compatible changes in the information model.
The upper two levels, M.m., shall be marked in the namespaceURI. All three levels, M.m.c., shall be marked in the OPC UA variable 'version'. be marked in the namespaceURI. The version number shall be in the format "M.m (E.A)" and equal to the document version of the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem [Eu.Doc.78], [Eu.Doc.80], [Eu.Doc.81], [Eu.Doc.82] or [Eu.Doc.110]:

NEW Info object

The applicable value of the version number of the specific part is defined in the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem [Eu.Doc.78], [Eu.Doc.80], [Eu.Doc.81], [Eu.Doc.82] or [Eu.Doc.110]. The applicable value of the version number of the generic part is defined in the Interface specification SDI Generic [Eu.Doc.94].

In IntSpec SDI Generic

NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.1.0.](#) [in BL4R4]

In IntSpec SDI-P
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.1.0.](#) [in BL4R4]

In IntSpec SDI-LC
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntSpec SDI-LS
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntSpec SDI-IO
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntSpec SDI-TDS
NEW Req object in section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

In IntDef+Spec SMI
Eu.SMI.292
The version number of the OPC UA Information model shall [consist of 3 levels, M.m.c., expressing Major, minor and compatible changes in the information model. The upper two levels, M.m., shall be marked in the namespaceURI. All three levels, M.m.c., shall be marked in the OPC UA variable 'version'. be marked in the namespaceURI. The version number shall be in the format "M.m \(E.A\)" and equal to the document version of the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem \[Eu.Doc.78\], \[Eu.Doc.80\], \[Eu.Doc.81\], \[Eu.Doc.82\] or \[Eu.Doc.110\].](#)

NEW Req object is section 2.
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [error correction BL4R3]
[The version number of the OPC UA Information model as described in this document is 1.0.0.](#) [in BL4R4]

[outdated proposal] The task force agrees.

Refine Eu.SMI.292:
The version number of the OPC UA Information model shall be marked in the namespaceURI. The version number shall be in the format "M.m ~~(E.A)~~" and equal to the document version of the Interface definition and specification SMI [Eu.Doc.76].

Refine Eu.SDI.246 (see also changes in EUAR-781):
The version number of the OPC UA Information model shall be marked in the namespaceURI. The version number shall be in the format "M.m ~~(E.A)~~" for both the specific and generic part of the OPC UA Information model. The version number of the specific part shall be equal to the document version of the specific Interface specification SDI corresponding to type of the EULYNX field element subsystem [Eu.Doc.78], [Eu.Doc.80], [Eu.Doc.81], [Eu.Doc.82] or [Eu.Doc.110]. The version number of the generic part shall be equal to the document version of the Interface specification SDI Generic [Eu.Doc.94].

Affected Specifications

IntDef+Spec SMI
IntDef SDI

Backwards Compatability

See EUAR-774

Extension of OPC UA models for SMI and diagnostics.
Backwards compatibility handled via version management of the OPC UA models for SMI and diagnostics.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
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has parent	 SPT2TACS-950 - Reference Architecture-Board	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9787 - LS - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		In verification Nico Huurman
_ is derived by	 SPT2TACS-9788 - P - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9789 - IO - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9790 - TDS - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		
_ is derived by	 SPT2TACS-9791 - LC - Refine version handling of SDI and SMI models in namespaceURI	SPT2-Trackside Assets CS		

Attachments



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 SPT2TACS-1718

 SPT2TACS-9242 - SDI-LC, Is MotorTurnData mandatory for BarrierTurnEvent?

Type:  Change Request	Assignee(s): Nico Huurman	Initial Estimate:
Change Type: Enhancement - Clarification	Owner(s):	Time Spent:
Local ID: EULX-643	Owning Group:  SPT2TACS-456 - Level Crossing WG	Remaining Estimate:
Severity:  Normal	Affected Domains:	Due Date:
Blocker:	To be Derived by Team:	
Architecture Changes:	Priority:  Medium [50.0]	
Requires CCB:	Status:  In verification	
Changed/New Requirements:	Planned In: Baseline 4 Release 4 (2025-12-31)	
Change of Safety Relevant Areas:	Resolution:	
Author: Nico Huurman		
Project: SPT2-Trackside Assets CS		
Categories:		

Current State

BL4R3

Problem Description

See EUAR-738 ( SPT2TACS-959 - SDI-XX, Is MotorTurnData mandatory for BarrierTurnEvent?)

Proposed Solution

See EUAR-738 ( SPT2TACS-959 - SDI-XX, Is MotorTurnData mandatory for BarrierTurnEvent?)
The MotorTurnData for BarrierTurnEvent remains in the diagnostic model as optional diagnostic data.
This is expressed by changing the multiplicity value on the link between BarrierTurnEvent and MotorTurnData, on the side of MotorTurnData to 0..1

Affected Specifications

IntSpec SDI-LC

Backwards Compatability

Extension of diagnostic model.
Backwards compatibility handled via version management of diagnostic model.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	 SPT2TACS-1718 - LX-Board	SPT2-Trackside Assets CS			

Attachments

+



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SPT2TACS-834

SPT2TACS-839 - SDI-LS, errors related to balise cabling

Type: **Change Request**

Assignee(s): **Nico Huurman**

Initial Estimate:

Change Type: **Enhancement - Clarification**

Owner(s):

Time Spent:

Local ID: **EULS-463**

Owning Group: **SPT2TACS-458 - Light Signal WG**

Remaining Estimate:

Severity: **Normal**

Affected Domains:

Due Date:

Blocker:

To be Derived by Team:

Architecture Changes:

Priority: **Low [30.0]**

Requires CCB: **No**

Status: **In verification**

Changed/New Requirements:

Planned In: **Baseline 4 Release 4** (2025-12-31)

Change of Safety Relevant Areas:

Resolution:

Author: **Nico Huurman**

Project: **SPT2-Trackside Assets CS**

Categories:

Current State

Draft BL4R3

Problem Description

Comment on Eu.SDI-LS.276.
Enumeration values of Attribute InterfaceConnectionStatus, used in Class LightSignalAdjacentOutputChannel

Original comment PZi: The possible errors on balise cabling must be defined by UNISIG. Up to my knowledge the detection of open or short circuits is not required by UNISIG. Please check, if those error detection functions are required. Otherwise, no error detection is given. This whole item shall be deleted

Reaction PZi 20250321: I just want to avoid, that we define requirements that are related to a UNISIG interface, but are not given by UNISIG. I still could not find diagnostic requirements for the Balise cabling BUT, I know, that we have some (limited) capabilities.

So, it seems possible to find some errors even on communication cabling. I just had a look at the Subset-036 from Baseline 4.0.0, where no diagnostic requirements are given.

Based on this, I would also vote for an optional tag.

Proposed Solution

Update 20250324:
Change attribute InterfaceConnectionStatus in the class LightSignalAdjacentOutputChannel from Mandatory to Optional (Eu.SDI-LS.265).
No changes needed in the enumeration values of InterfaceConnectionStatus
Align 'Meaning' in Eu.SDI-LS.265:
Indicates the connection status of the interface to the light signal adjacent system.

Can't be covered in BL4 R3, topic raised too late.
To be discussed for later release.

Affected Specifications

SDI-LS

Backwards Compatability

Extension of diagnostic model.
Backwards compatibility handled via version management of diagnostic model.

Linked Work Items

Suspect	Role	Title	Project	Revision	Status	Assignee(s)
	has parent	SPT2TACS-834 - LS-Board	SPT2-Trackside Assets CS			

Hyperlinks

Role	URL	Actions
external reference	https://dsd-jira.jaas.service.deutschebahn.com/browse/EULS-463	

Attachments

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