SAF User Documentation : P1_PCXD Physical Context Definition Viewpoint

Domain	Aspect	Maturity
Physical	Context & Exchange	✅ released

Example

Purpose

The Physical Context Definition Viewpoint identifies the various contexts the SOI is used in, along with the associated external entities sharing a physical interface with the system. For each context, the applicable environmental conditions shall be defined. The physical context helps identify the interface requirements needed to integrate a system into its environment in a given context.

Applicability

The Physical Context Definition Viewpoint supports the "Design Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2023 [§2.3.5.5] and contributes to the artifacts "System Design Description" and "System Interface Definition".

Presentation

A block definition diagram (BDD) depicting the elements available in a specific context. At least one BDD is used per identified context featuring

- one block representing the Physical System, i.e., the system of interest
- one block representing the specific Physical System Context
- several blocks representing Physical Context Elements such as Physical User, Physical External System, and Physical Environment that are present in the Physical System Context
- composition relationships attaching the Physical Context Elements and the Physical System to the Physical System Context block

Stakeholder

- Acquirer
- Customer
- IV&V Engineer
- Safety Expert
- Security Expert
- Supplier
- System Architect

Concern

- Which are the external physical entities the system interacts with in the given context?
- Which are the given contexts the system is embedded and utilized in?
- Which interface partners does the system have?

Profile Model Reference

The following Stereotypes / Model Elements are used in the Viewpoint:

- SAF_P1_PCXD
- SAF_PhysicalContextRole
- SAF_PhysicalContext
- SAF_PhysicalEnvironment
- SAF_PhysicalExternalSystem
- SAF_PhysicalSystem
- SAF_PhysicalUser

Input from other Viewpoints

Required Viewpoints

none

Recommended Viewpoints

none