

Physical Structure Viewpoint

Domain: **Physical** Aspect: **Structure**

Example

none

Purpose

The physical structure Viewpoint is used to model the internal structure of the SOI and to identify the internal system elements making up the SOI. The SOI breakdown structure identifies system elements and finally on implementation level hardware, software, mechanics. The SOI breakdown structure determines items that are reused and make or buy (COTS) items. The physical structure Viewpoint is elaborated for each candidate physical SOI architecture. It provides the basis for further assessment of the architecture candidates by identifying the system elements in each candidate solution. NOTE: It may be pointed out, that the physical architecture shall consider reuse, organizational, management and logistics support aspects. Hence, the physical architecture usually does not match the logical or the functional structure.

Applicability

The physical structure Viewpoint supports the "Allocation and Partitioning of Logical Entities to Physical Entities" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§ 4.4.2.7]. The physical structure Viewpoint presents the product breakdown structure of a technical solution for the SOI providing all the identified external interface(s), a structure capable to implement the functionality identified in the logical Viewpoint(s). Note:

Stakeholder

- [System Architect](#)
- [Customer](#)
- [Supplier](#)
- [Software Developer](#)
- [Hardware Developer](#)
- [Mechanic Developer](#)
- [Acquirer](#)
- [Project Manager](#)
- [Maintainer](#)
- [Security Expert](#)

Concern

- What are the configuration items in the physical architecture?
- What is the physical breakdown of the system?
- What are the HW components to be provided?
- What are the physical components?
- Which physical items the SOI is built of?
- What are the SW components to be provided?
- What physical items are used building up the system?
- what is the decomposition hierarchy of the system/logical elements
- What are necessary enabling systems?
- What are the major system elements?

Presentation

The following artifact(s) support the modeling activities:

Profile Model Reference

Input from other Viewpoints

Required Viewpoints

none

Recommended Viewpoints

none