

SAF User Documentation : C2_GRID Grid Definition Viewpoint

| Domain | Aspect | Maturity |
|--------|----------------------|--|
| Common | Taxonomy & Structure |  under construction |

Example

| | CONTEXT & EXCHANGE | TAXONOMY & STRUCTURE | PROCESS & BEHAVIOR | INTERACTION & COLLABORATION | INTERFACE | REQUIREMENT | SAFETY & SECURITY | TRACEABILITY & MAPPING |
|------------------------|--|---|--|---|---|--|-------------------|---|
| COMMON DOMAIN SCV | | Common Structure FFDS Safety Assurance Definition SAF FFDS View Grid Rendering Framework FFDS Geometry Tools | | | | | | |
| OPERATIONAL DOMAIN SOV | Operational Context & Exchange Operational Overlaid Story FFDS Context Definition FFDS Context Exchange | Operational Structure Operational Context Item Definition Operational Pathway Definition SAF and FFDS Capability Definition Operational Identification Exchange | Operational Process Mission and Sensor Process Fire Detection and Identification Process | Operational Interaction | Operational Interface Definition | Stakeholder Requirement Stakeholder Requirement Table Stakeholder Requirement Definition | | Traceability & Mapping SAF and FFDS Capability Mapping Table SAF and FFDS Operational Process Mapping Table |
| FUNCTIONAL DOMAIN SFV | System Context & Exchange FFDS User Data, a Day & Life, and FFDS System FFDS Context Definition FFDS Context Exchange | System Structure FFDS System Context Item Definition FFDS Capability Definition FFDS Functional Capability Definition FFDS Functional Capability Exchange | System Process FFDS and FFDS Life Cycle FFDS Context Definition FFDS Context Exchange | System Interaction FFDS Context Definition FFDS Context Exchange | System Interface Definition FFDS System Interface Definition FFDS System Interface Exchange | System Requirement System Requirement Table System Requirement Definition | System Hazard | Traceability & Mapping FFDS Operational Process Mapping Table System Requirement Traceability Table |
| LOGICAL DOMAIN SLV | Logical Context & Exchange | Logical Structure FFDS Logical Architecture Definition | Logical Behavior FFDS Logical Interaction FFDS Logical Internal Exchange | Logical Interaction & Internal Exchange FFDS Logical Interaction FFDS Logical Internal Exchange | Logical Interface Definition | | | Mapping Mapping of FFDS to Logical Contexts |
| PHYSICAL DOMAIN SPV | Physical Context & Exchange FFDS PDS System Physical Context Definition FFDS PDS System Context | Physical Structure FFDS PDS System 1 | Physical Behavior | Physical Interaction & Internal Exchange FFDS Context Table Exchange and Mapping | Physical Interface Definition FFDS Physical Interface Table | | | Mapping Physical Logical Mapping Physical to Physical |

| # | Domain | Aspect | Name | △ Viewpoint ID | Diagrams |
|----|-------------|-----------------------------|---|----------------|--|
| 1 | Common | Taxonomy & Structure |  Argumentation Assurance Viewpoint | C2_ARAS |  FFDS Safety Assurance Definition |
| 2 | Common | Taxonomy & Structure |  Common Standards Definition Viewpoint | C2_CSTD |  FFDS_Standards  FFDS_Standards |
| 3 | Common | Taxonomy & Structure |  Grid Definition Viewpoint | C2_GRID |  SAF_FFDS_View Grid Structuring Formalism  FFDS View Overview |
| 4 | Common | Taxonomy & Structure |  Common Terms Definition Viewpoint | C2_TRMD |  PNG V3 Terms  FFDS Glossary Table |
| 5 | Functional | Context & Exchange |  System Context Definition Viewpoint | F1_SCXD |  FFDS Context Definition  FFDS Context Definition Table |
| 6 | Functional | Context & Exchange |  System Context Exchange Viewpoint | F1_SCXE |  FFDS Context Exchange |
| 7 | Functional | Context & Exchange |  System Use Case Viewpoint | F1_SUCS |  FFDS Use Case A Day in Life of the System  FFDS Use Case Table |
| 8 | Functional | Taxonomy & Structure |  System Capability Definition Viewpoint | F2_SCYD |  FFDS Capability Definition |
| 9 | Functional | Taxonomy & Structure |  System Domain Item Kind Viewpoint | F2_SDIK |  FFDS System Domain Item Definition |
| 10 | Functional | Taxonomy & Structure |  System Functional Breakdown Structure Viewpoint | F2_SFBS |  FFDS Function Breakdown Structure Definition |
| 11 | Functional | Process & Behavior |  System Functional Refinement Viewpoint | F3_SFRE |  Detect and Report Fire |
| 12 | Functional | Process & Behavior |  System Process Viewpoint | F3_SPRO |  FFDS A Day in the Life of FFDS |
| 13 | Functional | Process & Behavior |  System State Viewpoint | F3_SSTA |  FFDS System Modes and States |
| 14 | Functional | Interaction & Collaboration |  System Context Interaction Viewpoint | F4_SCXI |  FFDS Context Interaction |
| 15 | Functional | Interface |  System Interface Definition Viewpoint | F5_SIFD |  FFDS System Interface Definition |
| 16 | Functional | Requirement |  System Requirement Definition Viewpoint | F6_SRQD |  System Requirement Table |
| 17 | Functional | Traceability & Mapping |  System Capability Mapping Viewpoint | F8_SCYM |  FFDS Capability Mapping Table |
| 18 | Functional | Traceability & Mapping |  System Requirement Traceability Viewpoint | F8_SRQT |  System Requirement Traceability Matrix |
| 19 | Logical | Taxonomy & Structure |  Logical Structure Definition Viewpoint | L2_LSTD |  FFDS Logical Architecture Definition  FFDS Logical Architecture Definition Full Tree |
| 20 | Logical | Interaction & Collaboration |  Logical Internal Exchange Viewpoint | L4_LIEX |  FFDS Logical Internal Exchange  FFDS Logical Internal Exchange Full |
| 21 | Logical | Interaction & Collaboration |  Logical Internal Interaction Viewpoint | L4_LITI |  FFDS Internal Interaction |
| 22 | Logical | Traceability & Mapping |  Logical Functional Mapping Viewpoint | L8_LFUM |  Mapping of Functions To Logical Elements |
| 23 | Operational | Context & Exchange |  Operational Context Definition Viewpoint | O1_OCXD |  SAR Context Definition  FDN Context Definition |
| 24 | Operational | Context & Exchange |  Operational Context Exchange Viewpoint | O1_OCXE |  FDN Context Exchange |
| 25 | Operational | Context & Exchange |  Operational Story Viewpoint | O1_OSTY |  Exemplary Operational Story |
| 26 | Operational | Taxonomy & Structure |  Operational Capability Definition Viewpoint | O2_OCXD |  SAR and FDN Capability Definition |
| 27 | Operational | Taxonomy & Structure |  Operational Domain Item Kind Viewpoint | O2_ODIK |  Operational Domain Item Definition  Operational Domain Item Table |
| 28 | Operational | Taxonomy & Structure |  Operational Performer Viewpoint | O2_OPRF |  Operational Performer Definition  Operational Performer Table |
| 29 | Operational | Taxonomy & Structure |  Stakeholder Identification Viewpoint | O2_STID |  Stakeholder Identification Definition |
| 30 | Operational | Process & Behavior |  Operational Process Viewpoint | O3_OPRO |  Search and Rescue Process  Fire Detection and Notification Process |
| 31 | Operational | Interaction & Collaboration |  Operational Context Interaction Viewpoint | O4_OCXI |  Fire Detection and Notification |
| 32 | Operational | Requirement |  Stakeholder Requirement Definition Viewpoint | O6_SKRD |  Stakeholder Requirement Table |
| 33 | Operational | Traceability & Mapping |  Operational Capability Mapping Viewpoint | O8_OCYM |  SAR and FDN Capability Mapping Table |
| 34 | Operational | Traceability & Mapping |  Operational Process Mapping Viewpoint | O8_OPRM |  SAR and FDN Operational Process Mapping Table |
| 35 | Physical | Context & Exchange |  Physical Context Definition Viewpoint | P1_PCXD |  FFDS_POC System Physical Context Definition  FFDS_POC System Context |
| 36 | Physical | Context & Exchange |  Physical Context Exchange Viewpoint | P1_PCXE |  FFDS_POC System Context with peek inside  POC FFDS Interfaces |
| 37 | Physical | Taxonomy & Structure |  Physical Structure Definition Viewpoint | P2_PSTD |  POC FFDS System 1  POC Dev Sensor Node  POC Comms Node  POC CCU  POC Comms Node Network Aspects  POC Comms Node Environmental and Mounting |
| 38 | Physical | Interaction & Collaboration |  Physical Internal Exchange Viewpoint | P4_PIEX |  POC Comms Node Internal Exchange  Proof Of Concept FFDS System Internal Network Exchange  Proof Of Concept FFDS System Internal Exchange  Proof Of Concept FFDS System 1 ExchangeTable |
| 39 | Physical | Interface |  Physical Interface Definition Viewpoint | P5_PIFD |  Internal Interface Types  Boundary Interface Types  Arduino Interfaces Types |
| 40 | Physical | Traceability & Mapping |  Physical Functional Mapping Viewpoint | P8_PFUM |  Function To Physical |
| 41 | Physical | Traceability & Mapping |  Physical Logical Item Mapping Viewpoint | P8_PLIM | |
| 42 | Physical | Traceability & Mapping |  Physical Logical Mapping Viewpoint | P8_PLOM |  Physical Logical Mapping |

Purpose

The Grid Definition Viewpoint serves as overview about the of the Views present in a System Model.

Applicability

The Grid Definition Viewpoint supports the "System Viewpoints, Views and Models" input/output of various Technical Processes in INCOSE SYSTEMS ENGINEERING HANDBOOK 2023.

Presentation

A content diagram featuring a matrix view for the SAF Viewpoint conceptual model: Rows represent Domains, and columns represent Aspects, and the cells manage the Views.

A table featuring the saf viewpoints, the views (diagrams, tables, ..) of the system model conforming to those viewpoints, domain and aspect information

Stakeholder

- [SAF System model user](#)

Concern

- [Which viewpoints are used in the system model](#)
- [Which views of the frameworks viewpoints are present in the system model?](#)

Profile Model Reference

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

- Attribute "diagrams" of SAF_Viewpoint referencing SAF_Diagram
- [SAF_C2_GRID](#)
- [SAF_C2_GRID_Table](#)
- [SAF_Diagram](#)
- [SAF_Viewpoint](#)

Input from other Viewpoints

Required Viewpoints

none

Recommended Viewpoints

none