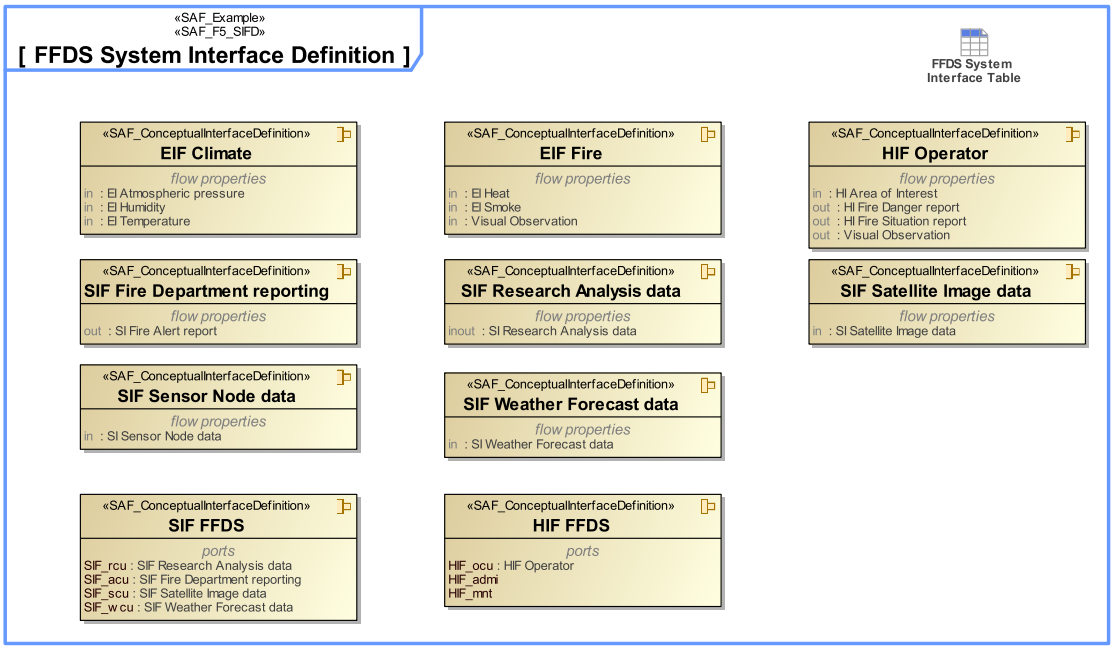
SAF User Documentation : F5_SIFD System Interface Definition Viewpoint

Domain	Aspect	Maturity
Functional	Interface	released

Example



Purpose

The System Interface Definition Viewpoint captures system wide concepts defining interfaces. It allows to adopt long-lived standards and to harmonize conceptual interface definitions to improve interchangeability, interoperability, and portability.

Applicability

The System Interface Definition Viewpoint supports the "prepare for system requirement definition" activity part of the "System Requirements Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2023 [§2.3.5.3] and contributes to the artifact "System Requirements Definition Report".

Furthermore, the viewpoint supports the "Interface Management" approach of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2023 [§3.2.4].

Presentation

A block definition diagram (BDD) featuring Conceptual Interface blocks with ports, and flow properties.

A tabular format listing Conceptual Interface blocks, their ports, and flow properties.

Stakeholder

- Acquirer
- Customer
- Hardware Developer
- IV&V Engineer
- Maintainer
- Safety Expert
- Security Expert
- Software Developer
- System Architect

Concern

- Which are the interface definitions for the logical architecture?
- Which kind of conceptual items (energy, material, information, etc.) are exchanged between the system and external entities?
- Which standards, protocols, and format specifications apply to a physical interface?

Profile Model Reference

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

- Attribute "realizingConnector" of InformationFlow referencing Connector
- Connector [UML_Standard_Profile]
- FlowProperty [SysML Profile]
- FlowProperty contained in SAF_ConceptualInterfaceDefinition
- FlowProperty typed by SAF_DomainKind
- ItemFlow [SysML Profile]
- ItemFlow typed by SAF_DomainKind
- ProxyPort [SysML Profile]
- ProxyPort typed by SAF_ConceptualInterfaceDefinition
- SAF_ConceptualInterfaceDefinition
- SAF_DomainKind

- SAF_F5_SIFD

Input from other Viewpoints

Required Viewpoints

none

Recommended Viewpoints

none