System Architecture Framework

SAF User Documentation : Logical Functional Mapping Viewpoint

Domain	Aspect	Maturity
Logical	Traceability & Mapping	✅ released

Example
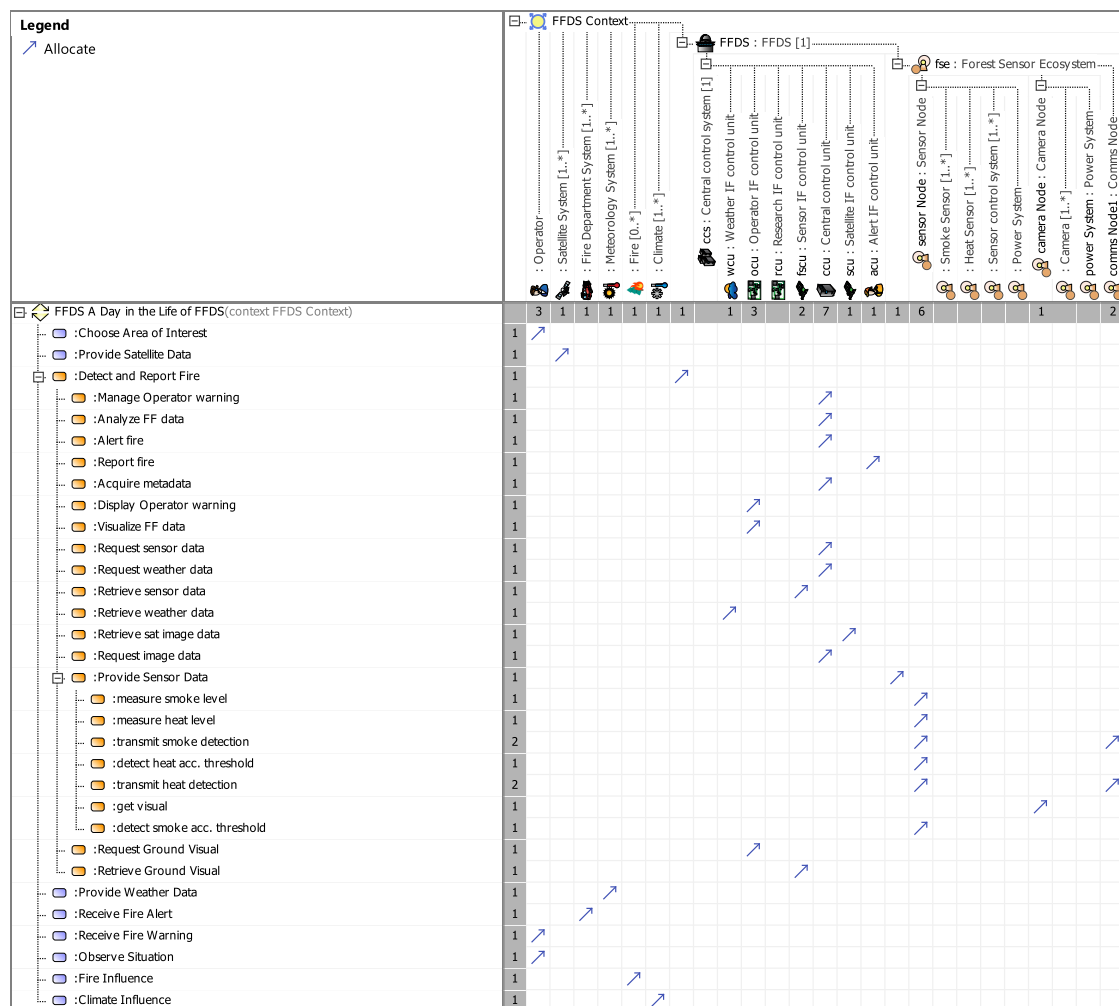
Purpose

The Logical Functional Mapping Viewpoint captures the assignment of the System Functions and the System Partial Functions to the Logical SOI and the Logical SOI Elements.

Applicability

The Logical Function Mapping Viewpoint supports the "System Architecture Definition process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§ 4.4] and contributes to the System Architecture description.

Presentation

A dependency matrix featuring

- the call behavior action representing usage of System Functions or System Partial Functions,
- the part properties representing usage of Logical SOI Elements,
- the allocation relationship between above mentioned elements.

Stakeholder

- Hardware Developer
- Software Developer
- System Architect

Concern

- Which (system and system partial) functions are assigned to a logical item and logical item components? Note: if allocation of usage is used, then allocation of definition is a derived relationship XOR.

Profile Model Reference

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

- Allocate [SysML Profile]
- SAF_LogicalInternalRole contained in SAF_LogicalElement
- SAF_FunctionAction
- SAF_LogicalElement
- SAF_LogicalSOI
- SAF_SLV08a_View
- SAF_SystemFunction
- SAF_SystemPartialFunction

Input from other Viewpoints

Required Viewpoints

- Logical Structure Viewpoint
- System Process Viewpoint

- System Functional Refinement Viewpoint

Recommended Viewpoints

- System Domain Item Kind Viewpoint