System Architecture Framework

SAF User Documentation : System Requirement Traceability Viewpoint

Domain	Aspect	Maturity
Functional	Traceability & Mapping	✅ released

Example

Legend
↗ SAF_SystemFunctionalRequirementRefinement
↗ SAF_SystemRequirementDerivation

	Detect and Report Fire (context FFDS	Request sensor data (context FFDS	Analyze FF data (context FFDS Cont	Alert fire (context FFDS Context)	Retrieve sensor data (context FFDS	Provide Sensor Data (context FFDS	StakeholderRequirement [CONOPS_	Capability [CEO FFDS Vendor]	CPBLTY-11 Fire Detection	CPBLTY-12 Fire Monitoring	Capability [Fire Dept. Operation	CPBLTY-25 Propagation Estimati
FFDS_Requirement	1	2	1	1	2				1	1		1
Fire Detection	1		1	1	2				1			
SYS-REQ-002 Forest Fire Detection	3	↗		↗	↗		1	1	↗			
SYS-REQ-002.1 Smoke and Fire Detection	1				↗							
SYS-REQ-002.2 Smoke and Fire Alert	1			↗								
Fire Monitoring		1								1		
SYS-REQ-003 Forest Fire Evolution Monitoring	1	↗					1	1	↗			
Fire Prediction		1										1
SYS-REQ-004 Forest Fire Spread Prediction	1	↗					1			1	↗	

Purpose

The System Requirement Traceability Viewpoint specifies for every System Requirement the traceability to the functional domain level

- System Use Case
- System Capability
- System Context Definition
- System Context Exchange
- System Context Interaction
- System Process
- System State

Applicability

The System Requirement Traceability Viewpoint supports the "System Requirements Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§4.3] and contributes to the System Requirements Traceability. The System Requirement Traceability Viewpoint also contributes to the System Requirements Verification and Traceability Matrix (RVTM).

Presentation

A dependency matrix featuring relationships for every System Requirement to the functional domain level

- System Use Case
- System Capability
- System Context Definition
- System Context Exchange
- System Context Interaction
- System Process
- System State

Stakeholder

- Project Manager

Concern

- What is the rationale for this system requirement?
- Which Stakeholder Requirements are addressed by System Requirements?
- Which system interface is addressed by a system requirement?

Profile Model Reference

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

- SAF_SFV08b_View
- SAF_SystemFunctionalRequirementConstraint
- SAF_SystemFunctionalRequirementRefinement
- SAF_SystemFunctionalRequirement
- SAF_SystemNonFunctionalRequirement
- SAF_SystemRequirementDerivation
- SAF_SystemRequirementRefinement
- SAF_SystemRequirement

Input from other Viewpoints

Required Viewpoints

- Stakeholder Requirement Viewpoint
- System Requirement Viewpoint

Recommended Viewpoints

- System Use Case Viewpoint
- System Capability Viewpoint
- System Context Exchange Viewpoint
- System Context Interaction Viewpoint
- System Process Viewpoint
- System Functional Refinement Viewpoint
- System State Viewpoint