SAF User Documentation : System Requirement Viewpoint

Domain	Aspect	Maturity
Functional	Requirement	released

Example

#	Id	Name	Applied Stereotype	Text	Requirement Derived FROM	Source
1		Fire Detection				
2	SYS-REQ-001	24/7 Forest Fire Detection	SAF_SystemFunctionalRequirement [Class]	The FFDS system shall allow a forest fire detection day & night.		SDS
3	SYS-REQ-002	Forest Fire Detection	SAF_SystemFunctionalRequirement [Class]	The FFDS system shall allow a forest fire detection acquiring data collected by terrestrial-based and aerial-based systems.	CPBLTY-11 Fire Detection	SDS
4	SYS-REQ-002.1	Smoke and Fire Detection	SAF_SystemFunctionalRequirement [Class]	The FFDS system shall allow to detect smoke and fire.		SDS
5	SYS-REQ-002.2	Smoke and Fire Alert	SAF_SystemFunctionalRequirement [Class]	When a forest fire is detected, the FFDS system shall allow to warn FFDS operator, the Fire Department, and other interacting agents about the danger.		SDS
6		Fire Prediction				
8		Fire Assessment				
10		Fire Monitoring				

Purpose

The System Requirement Viewpoint specifies functions, non-functional properties, or constraints of the System. System Requirements are captured, the interrelationships between Functional and Non-Functional Requirements on the same level of abstraction and the traceability to Stakeholder Requirements are depicted.

Applicability

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

Stakeholder

- Hardware Developer
- IV&V Engineer
- Project Manager
- Software Developer

- System Architect

Concern

- What are the Interface Requirements imposed on the system?
- What are the exchange requirements imposed on the system?
- What are the functional requirements imposed on the system?
- What are the non-functional requirements imposed on the system?
- What are the requirements of environmental conditions imposed on the system?
- What is the range of acceptable system performance, i.e. the critical, top-level performance requirements derived from the operational needs?
- Which Stakeholder Requirements are addressed by System Requirements?

Presentation

A tabular format listing

- unique requirement ID, text, and attributes,
- traceability reference to Stakeholder Requirements,
- traceability reference to depended Requirements on the same level of abstraction.

Profile Model Reference

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

- SAF_SFV06a_View
- SAF_StakeholderRequirement
- SAF_SystemFunctionalRequirement
- SAF_SystemFunctionalRequirementConstraint
- SAF_SystemNonFunctionalRequirement
- SAF_SystemRequirement
- SAF_SystemRequirementDerivation
- SAF_SystemRequirementDerivation

Input from other Viewpoints

Required Viewpoints

- Stakeholder Requirement Viewpoint

Recommended Viewpoints

- Operational Story Viewpoint
- Operational Context Exchange Viewpoint

- Operational Capability Viewpoint
- Operational Process Viewpoint
- Operational Interaction Viewpoint
- Operational Capability Mapping Viewpoint
- Operational Process Mapping Viewpoint