System Requirement Traceability Viewpoint

Domain	Aspect	Maturity
Functional	Mapping & Crossreference	under construction

Example

#	Id	Name	Text	Refining System Function	Derived from Stakeholder Requirement
1		Fire Detection			
2	SYS-REQ-001	24/7 Forest Fire Recognition	The FFDS system shall allow a forest fire recognition day & night.		
3	SYS-REQ-002	Forest Fire Detection	The FFDS system shall allow a forest fire detection acquiring data collected by terrestrial-based and aerial-based systems.	Request sensor data(context FFDS Context)	CPBLTY-11 Fire Detection
4	SYS-REQ-002.1	Smoke and Fire Detection	The FFDS system shall allow querying and analysis of the provided sensor data using a smoke and fire detection algorithm.		
5	SYS-REQ-002.2	Smoke and Fire Alert	When a forest fire is detected the FFDS system shall be able to warn interacting agents, FFDS operator and Fire Department, about the danger.		
6		Fire Monitoring			
7	SYS-REQ-003	Forest Fire Evolution Monitoring	In the event of a forest fire the FFDS system shall allow a specific area of interest observation interacting with aerial-based systems.	Analyze FF data (context FFDS Context)	CPBLTY-12 Fire Monitoring
8		Fire Prediction			
9	SYS-REQ-004	Forest Fire Spread Prediction	In the event of a forest fire the FFDS system shall allow a fire spread prediction using empirical and physical fire spread models.	Analyze FF data (context FFDS Context)	CPBLTY-17 Propagation Estimation Capability
10		Fire Assessment			
11	SYS-REQ-005	Forest Fire Damage Assessment	For evaluating the impacts of forest fire in landscape and biodiversity the FFDS system shall allow the determination of burned and fire affected areas using digital image processing of pre- and post-fire images.		

Purpose

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

- System Story
- System Context Definition
- System Context Exchange
- System Functional Scenario
- System Context Interaction

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 contributes to System Requirements Verification and Traceability Matrix (RVTM).

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?

Presentation

A System Requirement Dependency Matrix featuring relationships from every SOI System Requirements to modeling elements such as

- System Story
- System Context Definition
- System Context Exchange
- System Functional Scenario
- System Context Interaction Referring to a Stakeholder Requirement the dependency relation is <<satisfy>>, otherwise <<trace>>.

Profile Model Reference

- SAF_SFV08a_View
- SAF_SystemFunctionalRequirement
- SAF_SystemFunctionalRequirementConstraint
- SAF_SystemFunctionalRequirementRefinement
- SAF_SystemNonFunctionalRequirement
- SAF_SystemRequirement
- SAF_SystemRequirementDerivation
- SAF_SystemRequirementDerivation
- SAF_SystemRequirementRefinement
- SAF_SystemRequirementRefinement

Input from other Viewpoints

Required Viewpoints

- Stakeholder Requirement Viewpoint
- System Requirement Viewpoint

Recommended Viewpoints

- System UseCase Viewpoint
- System Context Exchange Viewpoint
- System Capability Viewpoint
- System Process Viewpoint
- System State Viewpoint
- System Context Interaction Viewpoint