SAF User Documentation : F8_SCYM System Capability Mapping Viewpoint

Domain	Aspect	Maturity
Functional	Traceability & Mapping	released

Example

#	Name	Documentation	Capability Supporting	Capability Supported BY	Refining System Requirement
1	Fire Alert Reporting	This capability demonstrates that the system has the power of [tbd]		Alert fire Manage Operator warning	
2	Fire Situation Analysis	This capability demonstrates that the system has the power of [tbd]		Analyze FF data	
3	Fire Situation Reporting	This capability demonstrates that the system has the power of [tbd]		Analyze FF data	
4	Forest Fire aerial-based Data Acquisition	This capability demonstrates that the system has the power of [tbd]			
5	Forest Fire terrestrial-based Data Acquisition	This capability demonstrates that the system has the power of [tbd]		Retrieve sensor data Provide Sensor Data Request sensor data	
6	Meteo Forecast Data Acquisition	This capability demonstrates that the system has the power of [tbd]		Acquire metadata	
7	Research Analysis Data Acquisition	This capability demonstrates that the system has the power of [tbd]			
8	Resource Management	This capability demonstrates that the system has the power of [tbd]			
9	Satellite Image Data Acquisition	This capability demonstrates that the system has the power of [tbd]		Acquire metadata	
10	Test & Maintenance	This capability demonstrates that the system has the power of [tbd]	Maintain System Test System		
11	User Management	This capability demonstrates that the system has the power of [tbd]			

Purpose

The System Capability Mapping Viewpoint describes the relationships of System Capabilities. The reasoning for System Capabilities as support for System Use Cases and the contribution of System Processes to Capabilities are described. Furthermore, the mapping of System Capabilities to Operational Capabilities are identified.

Applicability

The System Capability Mapping Viewpoint supports the "Stakeholder Needs and Requirements Definition Process" and "System Requirements Definition Process" activities of the INCOSE SYSTEMS ENGINEERING HANDBOOK 2015 [§4.2 & §4.3] and contributes to the identification of System Functions, and definition of System Requirements.

Presentation

A tabular format listing the relationships of System Capabilities to Operational Capabilities, System Use Cases, System Process Activities, and System Requirements.

Stakeholder

Concern

Profile Model Reference

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

- SAF_F8_SCYM_Table
- SAF_StakeholderRequirement
- SAF_SystemCapabilityComposition
- SAF_SystemCapabilityDependency
- SAF_SystemCapabilityEnabling
- SAF_SystemCapabilityGeneralization
- SAF_SystemCapabilitySupport
- SAF_SystemCapability
- SAF_SystemFunctionSupport
- SAF_SystemFunction
- SAF_SystemProcessEnabling
- SAF_SystemProcess
- SAF_SystemRequirement
- SAF_SystemUseCase

Input from other Viewpoints

Required Viewpoints

- System Capability Definition Viewpoint

Recommended Viewpoints

- Operational Capability Definition Viewpoint
- System Use Case Viewpoint
- System Process Viewpoint