

# MODAF. SV-1 Resource Interaction Specification

## Description

The Resource Interaction Specification (SV-1) addresses the composition and interaction of resources. SV-1 now incorporates the human elements – Posts, Organizations and Roles. This view was previously known as the System Interface Description; the name change reflects the expanded scope of modeling in the solution space. The Resource Interaction Specification (SV-1) links together the operational and systems architecture views by depicting how resources are structured and interact in order to realize the logical architecture specified in an OV-2. An SV-1 may represent the realization of a requirement specified in an OV-2 (i.e. in a to-be architecture), and so there may be many alternative SV configurations that could realize the operational requirement. Alternatively, in an as-is architecture, the OV-2 may simply be a simplified, logical representation of the SV-1 to allow communication of key information flows to non-technical stakeholders. A resource interaction is a simplified representation of a pathway or network, usually depicted graphically as a connector (i.e. a line with possible amplifying information). The SV-1 depicts all interactions between resources that are of interest to the architect.

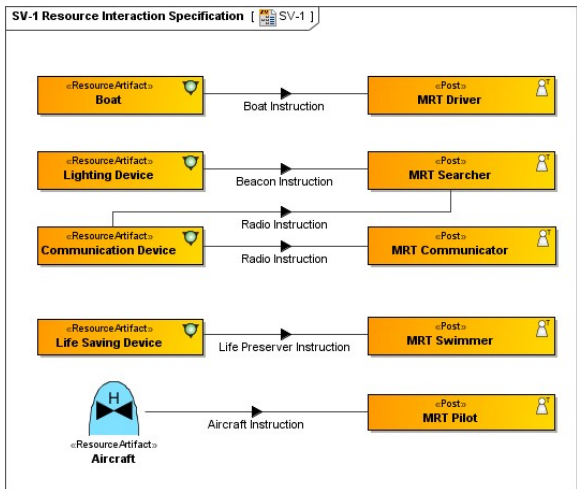
Note that interactions between systems may be further specified in detail in the SV-2 and SV-6. Sub-resource assemblies may be identified in the SV-1 to any level (i.e. depth) of decomposition the architect sees fit. The SV-1 may also identify the Physical Assets (e.g. Platforms) at which resources are deployed, and optionally overlay Operational Nodes that utilize those resources. In many cases, an operational node depicted in an OV-2 product may well be the logical representation of the resource that is shown in the SV-1.

## Implementation

SV-1 can be represented using:

- A SV-1 diagram which is based on the UML Class diagram.
- A SV-1 diagram which is based on the UML Composite Structure diagram.
- A UML Class diagram.
- A UML Composite Structure diagram.
- A SysML Block Definition diagram.
- A SysML Internal Block diagram.

## Sample



SV-1 Resource Interaction Specification

## Related views

An SV-1 can optionally be adorned with nodes originally specified in an OV-2. In this way, traceability can be established from the logical OV structure to the physical SV structure.

An interaction, as depicted in the SV-1, is an indicator that information passes from one resource to another. In the case of systems, this can be expanded into further detail in an SV-2. Resource Interactions are summarized in a Resource Interactions Matrix (SV-3).

The functions performed by the resources are specified in an SV-4 Resource Functionality Description, but may optionally be overlaid on the Resources in the SV-1.

An Operational View (OV) suite may specify a set of requirements – either as a specific operational plan, or a scenario for procurement. As OV-2 and OV-5 specify the logical structure and behavior, SV-1 and SV-4 specify the physical structure and behavior (to the level of detail required by the architectural stakeholders).

## Related elements

- Resource Artifact
- Software
- Capability Configuration
- Organization
- Post
- Resource Role
- Resource Interface
- Resource Port
- Resource Connector
- Capability
- Exhibits
- Fielded Capability
- Service
- Request
- Resource Interaction
- Control
- Exchange Element
- Energy
- Materiel

## Related procedures

- Creating SV-1 diagram
- Creating Resource Interaction in SV-1 diagram

## Related references

- Resource Interaction Creation Wizard
- Resource Interaction Manager Dialog