

SWIM-SERV-012 Service functionality

- [Requirement](#)
- [Guidance](#)
 - [Examples](#)
- [Guidance for JSON service description](#)
 - [Schema](#)
 - [Guidance](#)
 - [Functionality - Mandatory](#)
 - [Example](#)

Requirement

Title	Service functionality								
Identifier	SWIM-SERV-012								
Requirement	A service description shall describe the functionality of the service as a list of functions and their associated real world effects.								
Rationale	The functions provide business and operational experts with a business view of the interactions with the service, without having to look at the interface details.								
Verification	Completeness: Verify that the elements are included. Consistency: Verify that the functions and real world effects are consistent with the operational needs. Correctness: Not Applicable.								
Examples/Notes	<p>Note: A function is a type of activity describing the functionality of a service. Every function usually (but not always) can be mapped to service operations defined as a part of the service's interface; i.e., functions provide a "business view" and service operations provide a "technical view" of a particular service activity.</p> <p>Note: A real world effect is an ultimate purpose associated with the interaction with the service. It may be the response to a request for information or the change in the state of some entities shared between the participants in the interaction.</p> <p>Example functions and real world effects:</p> <table border="1"><thead><tr><th>function</th><th>real world effect</th></tr></thead><tbody><tr><td>Retrieve a list of flights</td><td>(Network Information sharing)</td></tr><tr><td>Retrieve information of a single flight</td><td>(Network Information sharing)</td></tr><tr><td>Provide Departure Planning Information (DPI)</td><td>NM systems updated with the information; NM systems publish the resulting flight update</td></tr></tbody></table>	function	real world effect	Retrieve a list of flights	(Network Information sharing)	Retrieve information of a single flight	(Network Information sharing)	Provide Departure Planning Information (DPI)	NM systems updated with the information; NM systems publish the resulting flight update
function	real world effect								
Retrieve a list of flights	(Network Information sharing)								
Retrieve information of a single flight	(Network Information sharing)								
Provide Departure Planning Information (DPI)	NM systems updated with the information; NM systems publish the resulting flight update								
Level of Implementation	Mandatory								

Guidance

Examples

See the [Service Functionality section](#) within the [Donlon TOBT Setting Service Description](#).

Guidance for JSON service description



tentative JSON Guidance

[Guidance for JSON service descriptions v0.0.3d](#) integrated within the [SWIM Service Description Handbook v1.0](#).

Schema

The guidance concerns JSON Schema v0.0.3 (see [Schema releases](#)).

```
    "ServiceGeneralDescription" :
    {
        "description" : "Description of the service in terms of what it provides, the
purpose and under which conditions and quality levels the service is provided.",
        "type": "object",
        "additionalProperties": false,
        "required": ["operationalNeed", "functionality", "qualityOfService",
"accessAndUseCondition", "validation"],
        "properties":
        {
            "functionality":
            {
                "description" : "A type of activity describing the functionality
of a service. [SWIM-SERV-012]",
                "type" : "array",
                "items" : { "$ref": "#/definitions/Functionality" },
                "minItems": 1
            },
        }
    },

    "Functionality" :
    {
        "description" : "A type of activity describing the functionality of a service.",
        "type": "object",
        "additionalProperties": false,
        "required": ["name", "description", "realWorldEffect"],
        "properties":
        {
            "name":
            {
                "description" : "The name of the service function.",
                "type" : "string",
                "minLength":1
            },
            "description":
            {
                "description" : "Description of the service function. [SWIM-SERV-
012]",
                "type" : "string",
                "minLength":1
            },
            "realWorldEffect":
            {
                "description" : "An ultimate purpose associated with the
interaction with the service. It may be the response to a request for information or the change in the
state of some entities shared between the participants in the interaction. [SWIM-SERV-012]",
                "type" : "string",
                "minLength":1
            }
        }
    },
},
```

Rules expressed for the cases as defined in Registry URD.

case	rules
COMPLIANT	mandatory
CANDIDATE	same
DEFINITION	same

Guidance

Express the functionality offered by the service as a **list** of service functions.

Within field `functionality` (itself within field `serviceGeneralDescription`) list **one or more** occurrences of type `Functionality`.



business view

The functions provide business and operational experts with a business view of the interactions with the service, without having to look at the interface details.

The service operations provide with a technical view of the interactions (see [SWIM-SERV-021 Service operations](#))

Functionality - Mandatory

Note: A function is a type of activity describing the functionality of a service. Every function usually (but not always) can be mapped to service operations defined as a part of the service's interface; i.e., functions provide a "business view" and service operations provide a "technical view" of a particular service activity.

attribute name	description	type	guidance	rule
name	The name of the service function.	string	Provide a short name for the service function	Mandatory
description	Description of the service function.	string	Describe the service function. Note: A function is a type of activity describing the functionality of a service. Every function usually (but not always) can be mapped to service operations defined as a part of the service's interface; i.e., functions provide a "business view" and service operations provide a "technical view" of a particular service activity.	Mandatory
realWorldEffect	An ultimate purpose associated with the interaction with the service. It may be the response to a request for information or the change in the state of some entities shared between the participants in the interaction. [SWIM-SERV-012]	string	Guidance: describe here the real-world-effect, if any. May be left blank if not realWorldEffect outside the sharing of information. Note: A real world effect is an ultimate purpose associated with the interaction with the service. It may be the response to a request for information or the change in the state of some entities shared between the participants in the interaction.	Mandatory, can be empty.

Example

```
"serviceGeneralDescription": {  
  "functionality": [  
    {  
      "name": "Set TOBT",  
      "description": "Allow the service consumer to set (i.e. define or update) the TOBT value for a specific flight.",  
      "realWorldEffect": "The Target Off-Block Time (TOBT) value is defined"  
    },  
    {  
      "name": "Delete TOBT",  
      "description": "Allow the service consumer to delete the TOBT value for a specific flight.",  
      "realWorldEffect": "The Target Off-Block Time (TOBT) value is undefined"  
    }  
  ],  
}
```

A complete JSON example is available in page [JSON example - Donlon TOBT Setting service description](#).