OCF "Fargo" – Semantic Tags – Core Technology WG CR 1970

Legal Disclaimer

***** Change #1 *****

3.1.37
Semantic Tag
meta-information that provides additional contextual information with regard to the Resource that is the target of a Link

***** Change #2 *****

7.11 Semantic Tags

7.11.1 Introduction

Semantic Tags are meta-information associated with a specific Resource instance that are represented as both Link Parameters and Resource Properties that provide a mechanism whereby the Resource be annotated with additional contextual metadata that helps describe the Resource.

When a Semantic Tag is defined for a Resource, it shall be present as a Link Parameter in all Links that are present that target the Resource, including Links in "/oic/res" if the Resource is a Discoverable Resource. The Semantic Tag is further treated as a Common Property associated with the Resource and so shall be returned as part of the "baseline" response for the Resource if a Semantic Tag has been populated.

7.11.2 Semantic Tag Definitions

7.11.2.1 Relative and Descriptive Position Semantic Tags

7.11.2.1.1 Introduction

Consider where there may be multiple instances of the same Resource Type exposed by a Device; or a case where there may be potentially ambiguity with regard to the physical attribute that a Resource is representing. In such a case the ability to annotate the Links to the Resource with information pertaining to the relative position of the Resource within the Physical Device becomes useful.

7.11.2.1.2 “tag-pos-desc” or Position Description Semantic Tag

The “tag-pos-desc” Semantic Tag describes the position of the Resource as a descriptive position. If the tag is not exposed it conveys the same meaning as if the tag is exposed with a value of “unknown”. The value for the “tag-pos-desc” Semantic Tag if exposed, shall be a string containing a value from the enumeration detailed in Annex A. The population of the Semantic Tag is defined by the Device vendor and shall not be mutable by a Client. This Semantic Tag should not contain any 3rd party defined values (see clause 7.9).

Table BB "tag-pos-desc" Semantic Tag Definition

Link Parameter name	type	contents	Value example
tag-pos-desc	Enumeration	See Annex A	“tag-pos-desc”: “topleft”

7.11.2.1.3 “tag-pos-rel” or Relative Position Semantic Tag

The “tag-pos-rel” Semantic Tag describes the position of the Resource as a relative position in 3D space against a known point defined by the Device vendor. The known point is defined using [x,y,z] form as [0.0,0.0,0.0]. The position itself is then represented by the x-, y-, and z-plane relative position from this known point using a bounded box of size +1.0/-1.0 in each plane.

Figure 1 illustrates the definition of "tag-pos-rel".

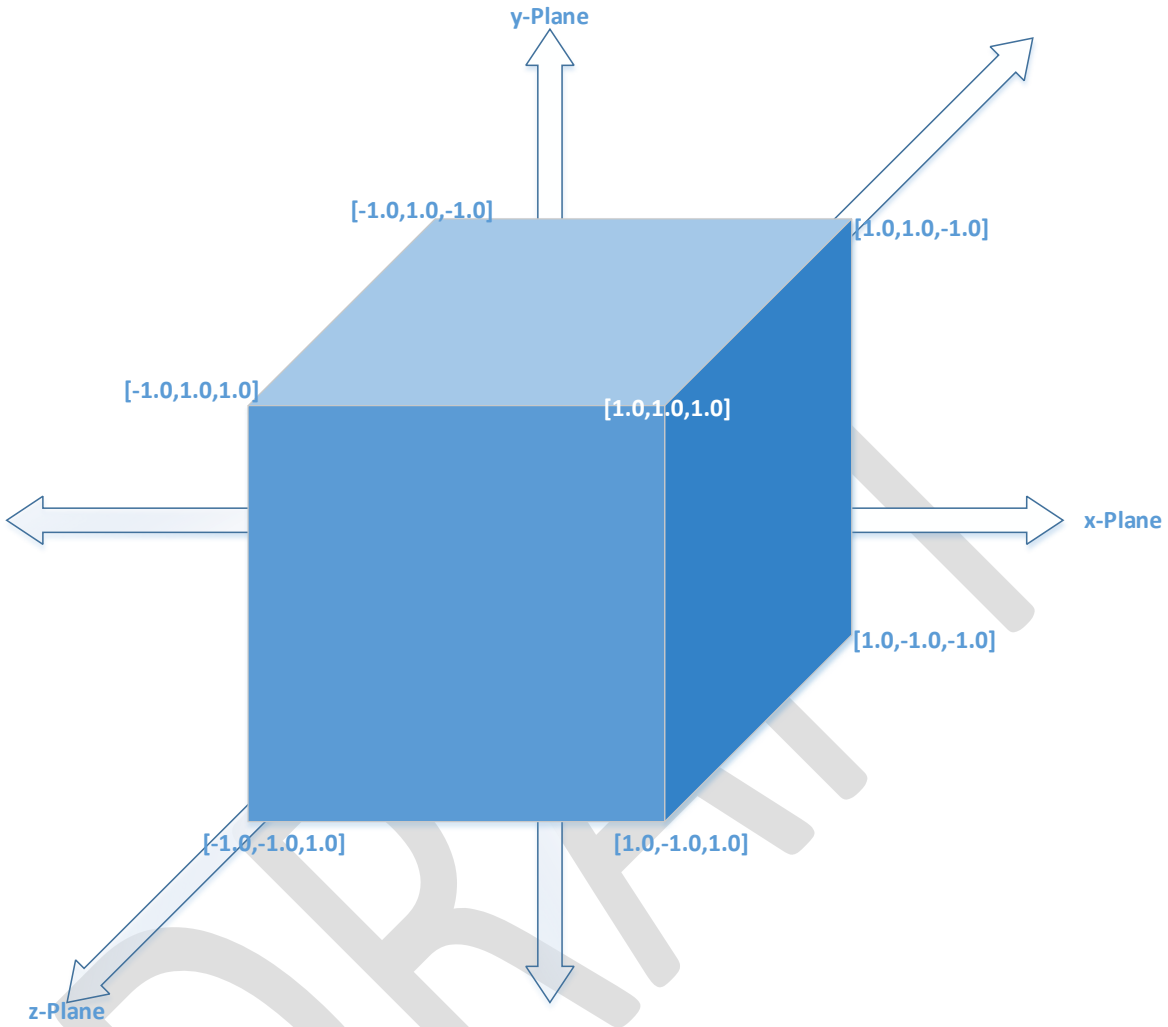

Figure 1 "tag-pos-rel" definition

The “tag-pos-rel” Semantic Tag value is defined by the Device vendor and shall not be mutable by a Client. This is detailed in Table CC.

Table CC "tag-pos-rel" Semantic Tag Definition

Link Parameter name	type	contents	Value example
tag-pos-rel	Array	Three element array of numbers defining the position relative to a known [0,0,0] point within the context of an abstract box [-1,-1,-1],[1,1,1].	“tag-pos-rel”: [0.5,0.5,0.5]

7.11.2.2 Functional Behaviour Semantic Tags

7.11.2.2.1 Introduction

Consider, for example, the case of a Device that supports two target temperatures simultaneously for different modes of operation, for example a temperature for “heating” and a separate temperature for “cooling”.

There is then ambiguity with respect to the target mode of the specific temperature Resource; it isn't explicit which instance of temperature is associated with which Device function. In such a case the ability to annotate the Links to the Resource with information pertaining to the function of the Resource within the Physical Device becomes useful.

7.11.2.2.2 “tag-func-desc” or Function Description Semantic Tag

The “tag-func-desc” Semantic Tag describes the function of the Resource, if exposed it shall be populated with a value from the currently supported set of standardized enumeration values defined in clause B.2.2 of the OCF Device Specification. If the tag is not exposed it conveys the same meaning as if the tag is exposed with a value of “unknown”. The value for the “tag-func-desc” Semantic Tag, if exposed, is defined by the Device vendor and shall not be mutable by a Client. This Semantic Tag should not contain any 3rd party defined values (see clause 7.9).

This "tag-func-desc" Semantic Tag is detailed in Table DD.

Table CC "tag-func-desc" Semantic Tag Definition

Link Parameter name	type	contents	Value example
tag-func-desc	Enumeration	See OCF Device Specification Annex B.2	“tag-func-desc": ”cool"

Annex A

A.1 Semantic Tag enumeration support

A.1.1 Introduction

This Annex defines the enumerations that are applicable to defined Semantic Tags.

A.1.2 "tag-pos-desc" supported enumeration

Figure 2 defines the enumeration from which a value populated within an instance of the "tag-pos-desc" Semantic Tag is taken.

```
"pos-descriptions": {

"enum":
["unknown","top","bottom","left","right","centre","topleft","bottomleft","centreleft",
"centreright","bottomright","topright","topcentre","bottomcentre"]

}
```

Figure 2 Enumeration for "tag-pos-desc" Semantic Tag

Figure 3 provides an illustrative representation of the definition of the values that can be represented within an instance of "tag-pos-desc".

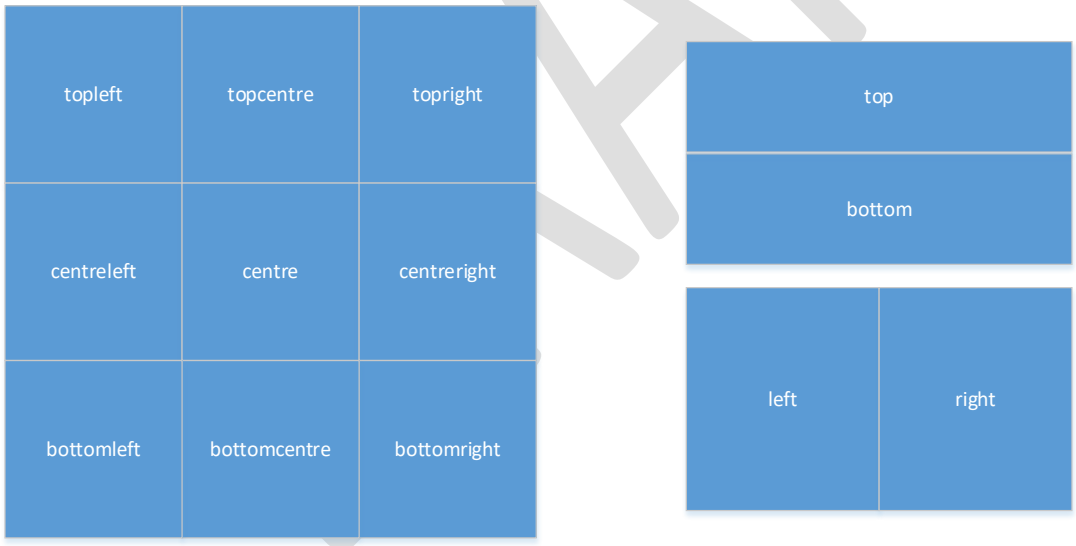

Figure 3 Definition of "tag-pos-desc" Semantic Tag values