

sdfRelation

Added object relation support for SDF

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Status

- Submitted I-D
 - draft-laari-asdf-relation-00
- Draft has (roughly) similar relation support as DTDL Relationship
- Initial design in the draft
 - There are also other possible designs
- Is it Class definition or..?
 - Class -> Kind -> Type -> Instance

sdfRelation: Current design (in the I-D)

```
namespace: {
  "exont": "https://example.com/relationOntology",
  "otheront": "https://example.com/otherOntology"
},
sdfObject: {
  "temperature": {
    "description": "Example temperature object",
    "sdfProperty": {
      ...
    },
  },
  "sdfRelation": {
    "sameAs": {
      "relType": "exont:same-as",
      "target": "otheront:TemperatureSensor"
    },
    "containedIn": {
      "relType": "exont:contained-in",
      "target": "otheront:Room"
    }
  }
}
```

sdfRelation: SDF *Qualities*

Quality	Type	Required	Description
relType	string/ IRI?	no	What kind of relationship these definitions have
target	string	no	Target definition for the relation
description	string	no	Description of the relationship
maxItems	integer	no	Maximum number of instances of the target types
minItems	integer	no	Minimum number of instances of the target types
property	object	no	Additional properties for this relation
writable	boolean	no	Is the target writable or not

sdfRelation VS. DTDL Relationship

Quality (SDF)	Quality (DTDL)	Description	Required
sdfRelation	@type	In DTDL, this is "Relationship", this is the objects sdfRelation entity	yes
"name-of-relation"	name	In SDF, this is the entity name	yes
relType	@id	DTDL: The ID of the relationship description	no
writable	writable	Boolean, is this relation writable or not	no
target	target	An Interface ID, in SDF the target definition	no
\$comment	comment	This is for model authors in DTDL	no
description	description	DTDL: localizable description for display	no
	displayName	DTDL: localizable name for display	no
property	properties	A set of Properties that define relationship-specific state	no
maxItems	maxMultiplicity	max nof target instances	no
minItems	minMultiplicity	min nof target instances	no

sdfRelation: example alternative design

```
"sdfThing": {  
  sdfObject: {  
    "Arm-A" { }  
  },  
  sdfObject: {  
    "Arm-B" { }  
  }  
},  
"sdfRelation": {  
  "AB": {  
    "type": "exont:next-to",  
    "direction": "bi-directional"  
    "party-1": "Arm-A",  
    "party-2": "Arm-B"  
  },  
  "BC": {  
    "type": "exont:next-to",  
    "direction": "bi-directional"  
    "party-1": "Arm-B",  
    "party-2": "Arm-C"  
  }  
}  
...
```