

**OCF “Fargo” – Clause 7.8.3.1 example needs alignment to OCF Resource Types –
Core Technology WG CR 3050**

Legal Disclaimer

THIS IS A DRAFT SPECIFICATION DOCUMENT ONLY AND HAS NOT BEEN ADOPTED BY THE OPEN CONNECTIVITY FOUNDATION. THIS DRAFT DOCUMENT MAY NOT BE RELIED UPON FOR ANY PURPOSE OTHER THAN REVIEW OF THE CURRENT STATE OF THE DEVELOPMENT OF THIS DRAFT DOCUMENT. THE OPEN CONNECTIVITY FOUNDATION AND ITS MEMBERS RESERVE THE RIGHT WITHOUT NOTICE TO YOU TO CHANGE ANY OR ALL PORTIONS HEREOF, DELETE PORTIONS HEREOF, MAKE ADDITIONS HERETO, DISCARD THIS DRAFT DOCUMENT IN ITS ENTIRETY OR OTHERWISE MODIFY THIS DRAFT DOCUMENT AT ANY TIME. YOU SHOULD NOT AND MAY NOT RELY UPON THIS DRAFT DOCUMENT IN ANY WAY, INCLUDING BUT NOT LIMITED TO THE DEVELOPMENT OF ANY PRODUCTS OR SERVICES. IMPLEMENTATION OF THIS DRAFT DOCUMENT IS DONE AT YOUR OWN RISK AMEND AND IT IS NOT SUBJECT TO ANY LICENSING GRANTS OR COMMITMENTS UNDER THE OPEN CONNECTIVITY FOUNDATION INTELLECTUAL PROPERTY RIGHTS POLICY OR OTHERWISE. IN CONSIDERATION OF THE OPEN CONNECTIVITY FOUNDATION GRANTING YOU ACCESS TO THIS DRAFT DOCUMENT, YOU DO HEREBY WAIVE ANY AND ALL CLAIMS ASSOCIATED HERewith INCLUDING BUT NOT LIMITED TO THOSE CLAIMS DISCUSSED BELOW, AS WELL AS CLAIMS OF DETRIMENTAL RELIANCE.

The OCF logo is a trademark of Open Connectivity Foundation, Inc. in the United States or other countries. *Other names and brands may be claimed as the property of others.

Copyright © 2019 Open Connectivity Foundation, Inc. All rights reserved.

Copying or other form of reproduction and/or distribution of these works are strictly prohibited.

7.8.3 Collections

7.8.3.1 Overview

A Resource that contains one or more references (specified as Links) to other Resources is a Collection. These references may be related to each other or just be a list; the Collection provides a means to refer to this set of references with a single handle (i.e. the URI). A simple Resource is kept distinct from a Collection. Any Resource may be turned into a Collection by binding Resource references as Links. Collections may be used for creating, defining or specifying hierarchies, indexes, groups, and so on.

A Collection shall have at least one Resource Type and at least one OCF Interface bound at all times during its lifetime. During creation time of a Collection the Resource Type and OCF Interfaces are specified. The initial defined Resource Types and OCF Interfaces may be updated during its life time. These initial values may be overridden using mechanism used for overriding in the case of a Resource. Additional Resource Types and OCF Interfaces may be bound to the Collection at creation or later during the lifecycle of the Collection.

A Collection shall define a Property that is an array with zero or more Links. The target URIs in the Links may reference another Collection or another Resource. The referenced Collection or Resource may reside on the same Device as the Collection that includes that Link (called a local reference) or may reside on another Device (called a remote reference). The context URI of the Links in the array shall (implicitly) be the Collection that contains that Property. The (implicit) context URI may be overridden with explicit specification of the "anchor" Parameter in the Link where the value of "anchor" is the new base of the Link.

A Resource may be referenced in more than one Collection, therefore, a unique parent-child relationship is not guaranteed. There is no pre-defined relationship between a Collection and the Resource referenced in the Collection, i.e., the application may use Collections to represent a relationship but none is automatically implied or defined. The lifecycles of the Collection and the referenced Resource are also independent of one another.

In the following example a Property "links" represents the list of Links in a Collection. The "links" Property has, as its value, an array of items and each item is a Link.

```
/my/house ← This is IRI/URI of the Resource
{
  "rt": ["my.r.house"], ← This and the next 3 lines are the Properties of the
Resource
  "color": "blue",
  "n": "myhouse",
  "links": [
    { ← This and the next 4 lines are the Parameters of a Link
      "href": "/door",
      "rt": ["oic.r.door"],
      "if": ["oic.if.a", "oic.if.baseline"]
    },
    {
      "href": "/door/lock",
      "rt": ["oic.r.lock.status"],
      "if": ["oic.if.a", "oic.if.baseline"]
    }
  ]
}
```

```
    },  
    {  
      "href": "/light",  
      "rt": ["oic.r.light"],  
      "if": ["oic.if.s", "oic.if.baseline"]  
    },  
    {  
      "href": "/binarySwitch",  
      "rt": ["oic.r.switch.binary"],  
      "if": ["oic.if.a", "oic.if.baseline"]  
    }  
  ]  
}
```

A Collection may be:

- A pre-defined Collection where the Collection has been defined a priori and the Collection is static over its lifetime. Such Collections may be used to model, for example, an appliance that is composed of other Devices or fixed set of Resources representing fixed functions.
- A Device local Collection where the Collection is used only on the Device that hosts the Collection. Such Collections may be used as a short-hand on a Client for referring to many Servers as one.
- A centralized Collection where the Collection is hosted on a Device but other Devices may access or update the Collection.
- A hosted Collection where the Collection is centralized but is managed by an authorized agent or party.