vCard representation of resources
draft-cal-resource-vcard-03

Abstract

This specification describes the vCard representation of resources.

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1. Introduction

This specification defines the vCard representation of resources to ease their discovery by clients.

2. Conventions Used in This Document

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [RFC2119].
3. General Considerations

Data values MUST have valid representation for the specified value type with respect to escape characters, line folding, and so on.

4. Resource Object

A resource object definition SHOULD contain all information required to find the right resource. For this, it SHOULD contain all, or a set of properties described in Section 5. Additional proprietary properties may be defined as well, but MUST begin with "X-". Clients encountering properties they don't know about MUST ignore them.

Properties required to contact or schedule the resource are not included in this specification. vCard properties defined in vCard Format Specification [RFC6350] can be used to include additional contact information for the resource.

5. Resource Properties

5.1. Mandatory Properties

The following properties MUST be specified in a vCard representing a resource:

- FN
- UID
- KIND

5.1.1. Special Notes:

5.1.1.1. KIND

Some of the possible values for the KIND property are "Location", "Individual", "Device", or "Group".

Location is used for any physical location resource such as room, building, etc.

Individual is used for a human resource such as driver, technician, etc.

Device is used for a computing device such as an appliance, a computer, or a network element.
Group is used to specify a group of resources with a specific skill set. For example: drivers, electricians, etc.

5.2. Base vCard Properties

The following properties defined in [RFC6350] or [RFC2739] make sense for vCards representing resources (this list is not exhaustive, and other properties might be applicable as well):

- ADR
- CALADRURI
- CATEGORIES
- EMAIL
- FBURL
- FN
- KIND
- MEMBER
- NOTE
- NICKNAME
- ORG
- PHOTO
- RELATED
- TZ
- UID

5.3. New vCard Properties for resources

Format and cardinality of new vCard properties are defined as described in Section 3.3 of [RFC6350].

5.3.1. ACCESSIBLE

Purpose: Specify if the resource is accessible to physically disabled people.
ValueType: Boolean value.
Cardinality: *1

ABNF:

ACCESSIBLE-param = "VALUE=boolean" / any-param
ACCESSIBLE-value = boolean

Default value: FALSE.
Example value: TRUE

5.3.2. ACCESSIBILITYINFO

Purpose:
Specify special resource accessibility info for the physically disabled people.

ValueType: URI value. It MAY also be a free-form text value.
Cardinality: *

ABNF:

ACCESSIBILITYINFO-param = "VALUE=" ("text" / "uri") / any-param
ACCESSIBILITYINFO-value = URI / text

Default value: None
Example value: http://www.example.com/room1_specialaccess.html

5.3.3. CAPACITY

Purpose: Provide information on the capacity of the resource.

ValueType: Integer.
Cardinality: *1

ABNF:

CAPACITY-param = "VALUE=integer" / any-param
CAPACITY-value = integer
5.3.4. INVENTORY

Purpose: List other resources available as part of this resource.

Value: Value MAY be a URI that could be a vCard. The vCard could be of the KIND group whose members point to the various inventory items.

Value MAY also be a free form text listing one or more inventory items.

Cardinality: *

ABNF:

```
INVENTORY-param = "VALUE=" ("text" / "uri") / any-param
INVENTORY-value = uri / text
```

Default value: None

Example values: Printer, Projector http://www.example.com/Room1Inventory.vcf

5.3.5. LOCATIONTYPE

Purpose: Provide more information on the type of a LOCATION resource.

ValueType: Text.

The value SHOULD be one of the values defined in [RFC4589]

Cardinality: *

ABNF:

```
LOCATIONTYPE-param = "VALUE=text" / any-param
LOCATIONTYPE-value = text
```

Default value: None

Example value: office
5.3.6. **RESTRICTED**

Purpose: Specify if there are restrictions to physically accessing the resource. For example locked doors, or other barriers.

**ValueType**: Boolean value.

**Cardinality**: *1

**ABNF**:

RESTRICTED-param = "VALUE=boolean" / any-param
RESTRICTED-value = boolean

Default value: FALSE. Absence of this property indicates no restriction to physically accessing the resource.

Example value: TRUE

5.3.7. **RESTRICTEDACCESSINFO**

Purpose: Specify extra information on physically accessing resources that have restrictions. For example where to pick up keys to a locked resource.

**ValueType**: URI value. It MAY also be a free-form text value.

**Cardinality**: *

**ABNF**:

RESTRICTEDACCESSINFO-param = "VALUE=" ("text" / "uri") / any-param
RESTRICTEDACCESSINFO-value = URI / text

Default value: None

Example value: http://www.example.com/room1_entryinfo.html

5.3.8. **NOCOST**

Purpose: Specify if there is a cost associated with using the resource.

**ValueType**: Boolean value.
Cardinality: *1

ABNF:

NOCOST-param = "VALUE=boolean" / any-param
NOCOST-value = boolean

Special Notes: If this property is absent, it indicates that the resource may be booked free of cost.

Default value: TRUE

Example value: TRUE

5.3.9. COSTINFO

Purpose: Provide the URL pointing to complete pricing information for usage of the resource.

Value Type: URI value. It MAY also be a free-form text value.

Cardinality: *

ABNF:

COSTINFO-param = "VALUE=" ("text" / "uri") / any-param
COSTINFO-value = uri / text

Default value: None

Example value: http://www.example.com/cost.html

5.4. New Parameter Values

5.4.1. RELATED TYPE Values

This document specifies the following additional values that can be used as the value for the TYPE parameter of the RELATED property defined in Section 6.6.6 of [RFC6350].

- container: an entity that contains the entity associated with this vCard. For example, the building that contains the room resource specified by the vCard.

- manager: an entity that manages the resource entity associated with this vCard.
6. Examples

6.1. Location Resource

This example defines a room resource.

BEGIN:VCARD
VERSION:4.0
UID:urn:uuid:room1-id
KIND: location
LOCATIONTYPE: classroom
FN: Room One
ORG: Engineering
NICKNAME: The One
NOTE: Room 1 in Engineering Building X
CATEGORIES: rooms, engineering_resources
CALADRURI: mailto:room1@example.com
ACCESSIBLE: TRUE
ACCESSIBILITYINFO: http://www.example.com/room1_disabledaccess.html
CAPACITY: 100
INVENTORY: phone, projector
FBURL: http://www.example.com/freebusy/home/Room1/
TZ: America/Los_Angeles
RELATED;TYPE=owner: http://www.example.com/ResOwner1.vcf
RELATED;TYPE=manager: http://www.example.com/ResManager1.vcf
RELATED;TYPE=container:http://www.example.com/BldX.vcf
RESTRICTED: TRUE
RESTRICTEDACCESSINFO: http://www.example.com/room1_splaccess.html
NOCOST: FALSE
COSTINFO: http://www.example.com/cost.html
END:VCARD

6.2. Role Resources Group

This example defines a group resource.
BEGIN:VCARD
VERSION:4.0
UID:urn:uuid:driverXPool-id
KIND: group
FN: Driver X Pool
ORG: Transportation
NICKNAME: The X Group
NOTE: Drivers in the Transportation department driver pool X
CATEGORIES: drivers
MEMBER:urn:uuid:driver1-id
MEMBER:urn:uuid:driver2-id
MEMBER:urn:uuid:driver3-id
FBURL: http://www.example.com/freebusy/home/DriversX/
TZ: America/Los_Angeles
RELATED;TYPE=manager:
   http://www.example.com/DriversManager.vcf
NOCOST: FALSE
COSTINFO: http://www.example.com/driversXcost.html
END:VCARD

7. Security Considerations

As this document only defines schema for representing resource information and does not refer to the actual storage mechanism itself, or any data exchange protocol, no special security considerations are required as part of this document.

8. IANA Considerations

8.1. VCard Property and Value Registration

The following new VCard Properties need to be registered by IANA.

New VCard Properties Table:
+----------------------+---------------------------+  
| VCard Property Name  | VCard Property Definition |
+----------------------+---------------------------+  
| ACCESSIBLE           | Section 5.3.1             |
| ACCESSIBILITYINFO    | Section 5.3.2             |
| CAPACITY             | Section 5.3.3             |
| COSTINFO             | Section 5.3.9             |
| INVENTORY            | Section 5.3.4             |
| LOCATIONTYPE         | Section 5.3.5             |
| NOCOST               | Section 5.3.8             |
| RESTRICTED           | Section 5.3.6             |
| RESTRICTEDACCESSINFO | Section 5.3.7             |
+----------------------+---------------------------+  

The following new VCard Parameter Values need to be registered by IANA.

New VCard Properties Table:

+---------------------+---------------------+-----------------------+  
| VCard Property Name | VCard Parameter     | VCard Parameter Value |
|                     | Name                |                       |
+---------------------+---------------------+-----------------------+  
| RELATED             | TYPE                | container Section     |
|                     |                     | 5.4.1                 |
| RELATED             | TYPE                | manager Section 5.4.1 |
| RELATED             | TYPE                | owner Section 5.4.1   |
+---------------------+---------------------+-----------------------+  

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