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Part 5: Smart home device specification

Technologies de l'information — Spécification de la Fondation pour la connectivité ouverte (Fondation OCF) —

Partie 5: Spécification des appareils pour applications domotiques

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This document was prepared by the Open Connectivity Foundation (OCF) (as the OCF Smart Home Device Specification, Version 1.0.0) and drafted in accordance with its editorial rules. It was adopted, under the JTC 1 PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

A list of all parts in the ISO/IEC 30118 series can be found on the ISO website.

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1 Scope

The OCF Smart Home Device specification is an Application Profile specification.

The Smart Home Device specification specifies the Smart Home devices. The Smart Home Device definitions use Resource definitions from the OCF Resource Type Specification.

The Smart Home Device Specification is built on top of the Core Specification. The Core Specification specifies the core architecture, interfaces protocols and services to enable the implementation of profiles for IoT usages and ecosystems. The Core specification also defines the main architectural components of network connectivity, discovery, data transmission, device & service management and ID & security. The core architecture is scalable to support simple devices (constrained devices) and more capable devices (smart devices).

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

OCF Core Specification, *Open Connectivity Foundation Core Specification*, Version 1.0.

OCF Resource Type Specification, *Open Connectivity Foundation Resource Type Specification*, Version 1.0.

OCF Security Specification, *Open Connectivity Foundation Security Capabilities*, Version 1.0

IETF RFC 7049, *Concise Binary Object Representation (CBOR)*, October 2013
http://www.ietf.org/rfc/rfc7049.txt

IETF RFC 7159, *The JavaScript Object Notation (JSON) Data Interchange Format*, March 2014
http://www.ietf.org/rfc/rfc7159.txt

RAML, *Restful API modelling language,* Version 0.8.
https://github.com/raml-org/raml-spec/blob/master/versions/raml-08/raml-08.md

IETF RFC 4566, SDP: Session Description Protocol, July 2006
https://tools.ietf.org/html/rfc4566

3 Terms, definitions symbols and abbreviations

3.1 Terms and definitions

3.1.1
Actuator
Resource with support of the UPDATE operation.

3.1.2
Smart Home Bridge Device
A Smart Home Device that is capable of representing other devices that exist on the network.

3.1.3
Smart Home Device
A Device that is conformant to the normative requirements contained in this specification.

3.1.4
Sensor
Resource without support of the UPDATE operation.

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3.2 Symbols and abbreviations

3.2.1
CRUDN
Create Retrieve Update Delete Notify
This is an acronym indicating which operations are possible on the Resource.

3.2.2
CSV
Comma Separated Value
Comma Separated Value is a construction to have more fields in 1 string separated by commas. If a value itself contains a comma then the comma can be escaped by adding "\" in front of the comma.

3.2.3

OCF
Open Connectivity Foundation
The organization that created these specifications.

3.2.4
RAML
RESTful API Modelling Language
RAML is a simple and succinct way of describing practically-RESTful APIs. See RAML.

3.2.5
REST
Representational State Transfer
REST is an architecture style for designing networked applications and relies on a stateless, client-server, cacheable communications protocol.

3.2.6
SDP
Session Description Protocol
SDP describes multimedia sessions for the purposes of session announcement, session invitation, and other forms of multimedia session initiation. It is fully defined in https://github.com/raml-org/raml-spec/blob/master/versions/raml-08/raml-08.md
IETF RFC 4566.

3.3 Conventions

In this specification a number of terms, conditions, mechanisms, sequences, parameters, events, states, or similar terms are printed with the first letter of each word in uppercase and the rest lowercase (e.g., Network Architecture). Any lowercase uses of these words have the normal technical English meaning.

4 Document conventions and organization

This document lists all the Devices used in the smart home domain. The devices are specified by which mandatory and optional Resources are used.

For the purposes of this document, the terms and definitions given in OCF Core Specification and OCF Resource Type Specification apply.

4.1 Notation

In this document, features are described as required, recommended, allowed or DEPRECATED as follows:

Required (or shall or mandatory).

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