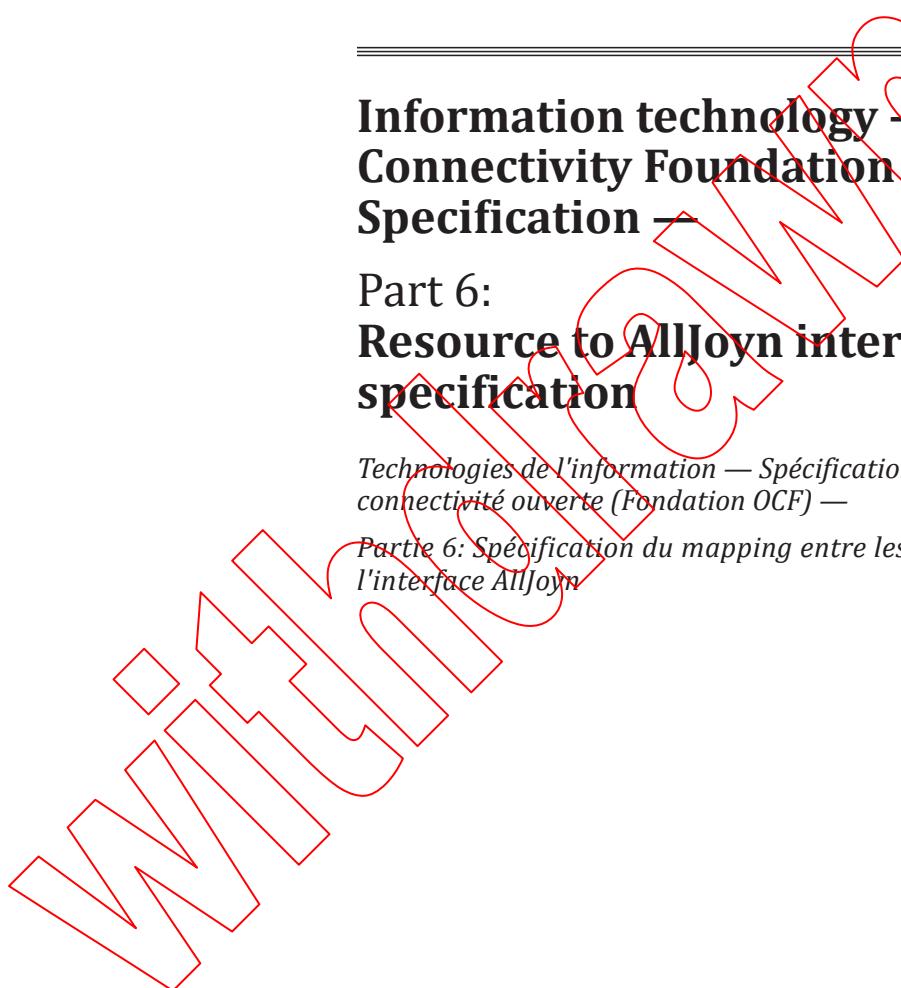


First edition  
2018-11

Information technology — Open  
Connectivity Foundation (OCF)  
Specification —  
Part 6:  
**Resource to AllJoyn interface mapping  
specification**

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

*Partie 6: Spécification du mapping entre les ressources et  
l'interface AllJoyn*



Reference number  
ISO/IEC 30118-6:2018(E)



© ISO/IEC 2018

Withdrawn



## COPYRIGHT PROTECTED DOCUMENT

© ISO/IEC 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

## Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of document should be noted (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by the Open Connectivity Foundation (OCF) (as the OCF Resource to AllJoyn Interface Mapping, 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.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

This is a preview - click here to buy the full publication

withdrawn

## CONTENTS

1	Scope .....	10
2	Normative references .....	10
3	Terms, definitions symbols and abbreviations .....	11
3.1	Terms and definitions .....	11
3.2	Symbols and abbreviations .....	11
3.3	Conventions .....	11
4	Document conventions and organization .....	11
4.1	Notation.....	11
4.2	Data types .....	12
5	Theory of Operation .....	12
5.1	Interworking Approach.....	12
5.2	Mapping Syntax.....	12
5.2.1	General .....	12
5.2.2	Value Assignment .....	12
5.2.3	Property Naming .....	12
5.2.4	Arrays .....	12
5.2.5	Default Mapping .....	13
5.2.6	Conditional Mapping.....	13
5.2.7	Loops .....	13
5.2.8	Method Invocation.....	13
6	Device Type Mapping.....	13
6.1	Introduction .....	13
6.2	AllJoyn Device Types to OCF Device Types .....	13
6.3	OCF Device Types with no AllJoyn Equivalent.....	15
7	Resource to Interface Equivalence .....	16
7.1	Introduction .....	16
7.2	AllJoyn Interfaces to OCF Resources .....	16
8	Detailed Mapping APIs.....	18
8.1	Air Quality Mapping .....	19
8.1.1	Introduction .....	19
8.1.2	Example URI .....	20
8.1.3	Resource Type.....	20
8.1.4	RAML Definition .....	20
8.1.5	Property Definition .....	22
8.1.6	CRUDN behavior.....	22
8.2	Air Quality Level Mapping.....	22
8.2.1	Introduction .....	22
8.2.2	Example URI .....	22
8.2.3	Resource Type .....	22

8.2.4	RAML Definition .....	22
8.2.5	Property Definition .....	24
8.2.6	CRUDN behavior.....	25
8.3	Current Humidity Mapping .....	25
8.3.1	Introduction .....	25
8.3.2	Example URI .....	25
8.3.3	Resource Type.....	25
8.3.4	RAML Definition .....	25
8.3.5	Property Definition .....	27
8.3.6	CRUDN behavior.....	27
8.4	Current Temperature Mapping .....	27
8.4.1	Introduction .....	27
8.4.2	Example URI .....	27
8.4.3	Resource Type.....	27
8.4.4	RAML Definition .....	27
8.4.5	Property Definition .....	29
8.4.6	CRUDN behavior.....	29
8.5	Target Humidity Mapping.....	29
8.5.1	Introduction .....	29
8.5.2	Example URI .....	29
8.5.3	Resource Type.....	29
8.5.4	RAML Definition .....	29
8.5.5	Property Definition .....	34
8.5.6	CRUDN behavior.....	35
8.6	Target Temperature Mapping .....	35
8.6.1	Introduction .....	35
8.6.2	Example URI .....	35
8.6.3	Resource Type.....	35
8.6.4	RAML Definition .....	35
8.6.5	Property Definition .....	40
8.6.6	CRUDN behavior.....	40
8.7	Audio Volume Mapping.....	40
8.7.1	Introduction .....	40
8.7.2	Example URI .....	40
8.7.3	Resource Type.....	40
8.7.4	RAML Definition .....	40
8.7.5	Property Definition .....	44
8.7.6	CRUDN behavior.....	44
8.8	Climate Control Mode Mapping.....	44
8.8.1	Introduction .....	44
8.8.2	Example URI .....	44
8.8.3	Resource Type.....	44
8.8.4	RAML Definition .....	44
8.8.5	Property Definition .....	48

8.8.6	CRUDN behavior .....	49
8.9	Closed Status Mapping .....	49
8.9.1	Introduction .....	49
8.9.2	Example URI .....	49
8.9.3	Resource Type .....	49
8.9.4	RAML Definition .....	49
8.9.5	Property Definition .....	50
8.9.6	CRUDN behavior .....	50
8.10	Cycle Control Mapping .....	50
8.10.1	Introduction .....	50
8.10.2	Example URI .....	50
8.10.3	Resource Type .....	50
8.10.4	RAML Definition .....	50
8.10.5	Property Definition .....	52
8.10.6	CRUDN behavior .....	52
8.11	Fan Speed Level Mapping .....	52
8.11.1	Introduction .....	52
8.11.2	Example URI .....	52
8.11.3	Resource Type .....	53
8.11.4	RAML Definition .....	53
8.11.5	Property Definition .....	56
8.11.6	CRUDN behavior .....	56
8.12	Heating Zone Mapping .....	56
8.12.1	Introduction .....	56
8.12.2	Example URI .....	57
8.12.3	Resource Type .....	57
8.12.4	RAML Definition .....	57
8.12.5	Property Definition .....	58
8.12.6	CRUDN behavior .....	59
8.13	HVAC Fan Mode Mapping .....	59
8.13.1	Introduction .....	59
8.13.2	Example URI .....	59
8.13.3	Resource Type .....	59
8.13.4	RAML Definition .....	59
8.13.5	Property Definition .....	62
8.13.6	CRUDN behavior .....	62
8.14	On Off Mapping .....	63
8.14.1	Introduction .....	63
8.14.2	Example URI .....	63
8.14.3	Resource Type .....	63
8.14.4	RAML Definition .....	63
8.14.5	Property Definition .....	67
8.14.6	CRUDN behavior .....	67
8.15	Oven Cycle Phase Mapping .....	67

8.15.1	Introduction .....	67
8.15.2	Example URI .....	67
8.15.3	Resource Type .....	67
8.15.4	RAML Definition .....	67
8.15.5	Property Definition .....	69
8.15.6	CRUDN behavior .....	69
Annex A	Swagger2.0 (Informative) .....	70
A.1	Audio Volume Mapping .....	70
A.1.1	Introduction .....	70
A.1.2	Example URI .....	70
A.1.3	Resource Type .....	70
A.1.4	Swagger2.0 Definition .....	70
A.1.5	Property Definition .....	72
A.1.6	CRUDN behavior .....	73
A.2	Climate Control Mode Mapping .....	73
A.2.1	Introduction .....	73
A.2.2	Example URI .....	73
A.2.3	Resource Type .....	73
A.2.4	Swagger2.0 Definition .....	73
A.2.5	Property Definition .....	76
A.2.6	CRUDN behavior .....	76
A.3	Closed Status Mapping .....	77
A.3.1	Introduction .....	77
A.3.2	Example URI .....	77
A.3.3	Resource Type .....	77
A.3.4	Swagger2.0 Definition .....	77
A.3.5	Property Definition .....	78
A.3.6	CRUDN behavior .....	78
A.4	Air Quality Mapping .....	78
A.4.1	Introduction .....	78
A.4.2	Example URI .....	79
A.4.3	Resource Type .....	79
A.4.4	Swagger2.0 Definition .....	79
A.4.5	Property Definition .....	81
A.4.6	CRUDN behavior .....	81
A.5	Air Quality Level Mapping .....	81
A.5.1	Introduction .....	81
A.5.2	Example URI .....	82
A.5.3	Resource Type .....	82
A.5.4	Swagger2.0 Definition .....	82
A.5.5	Property Definition .....	84
A.5.6	CRUDN behavior .....	85
A.6	Current Humidity Mapping .....	85
A.6.1	Introduction .....	85

A.6.2	Example URI .....	85
A.6.3	Resource Type .....	85
A.6.4	Swagger2.0 Definition .....	85
A.6.5	Property Definition .....	86
A.6.6	CRUDN behavior.....	87
A.7	Current Temperature Mapping .....	87
A.7.1	Introduction .....	87
A.7.2	Example URI .....	87
A.7.3	Resource Type .....	87
A.7.4	Swagger2.0 Definition .....	87
A.7.5	Property Definition .....	89
A.7.6	CRUDN behavior.....	89
A.8	Cycle Control Mapping .....	89
A.8.1	Introduction .....	89
A.8.2	Example URI .....	89
A.8.3	Resource Type .....	90
A.8.4	Swagger2.0 Definition .....	90
A.8.5	Property Definition .....	91
A.8.6	CRUDN behavior.....	92
A.9	Fan Speed Level Mapping .....	92
A.9.1	Introduction .....	92
A.9.2	Example URI .....	92
A.9.3	Resource Type .....	92
A.9.4	Swagger2.0 Definition .....	92
A.9.5	Property Definition .....	95
A.9.6	CRUDN behavior.....	95
A.10	Heating Zone Mapping.....	95
A.10.1	Introduction .....	95
A.10.2	Example URI .....	96
A.10.3	Resource Type .....	96
A.10.4	Swagger2.0 Definition .....	96
A.10.5	Property Definition .....	97
A.10.6	CRUDN behavior.....	98
A.11	HVAC Fan Mode Mapping .....	98
A.11.1	Introduction .....	98
A.11.2	Example URI .....	98
A.11.3	Resource Type .....	98
A.11.4	Swagger2.0 Definition .....	98
A.11.5	Property Definition .....	101
A.11.6	CRUDN behavior.....	101
A.12	On Off Mapping .....	101
A.12.1	Introduction .....	101
A.12.2	Example URI .....	101
A.12.3	Resource Type .....	101

A.12.4	Swagger2.0 Definition .....	101
A.12.5	Property Definition .....	103
A.12.6	CRUDN behavior.....	103
A.13	Oven Cycle Phase Mapping.....	104
A.13.1	Introduction .....	104
A.13.2	Example URI .....	104
A.13.3	Resource Type .....	104
A.13.4	Swagger2.0 Definition .....	104
A.13.5	Property Definition .....	106
A.13.6	CRUDN behavior.....	106
A.14	Target Humidity Mapping .....	106
A.14.1	Introduction .....	106
A.14.2	Example URI .....	106
A.14.3	Resource Type .....	106
A.14.4	Swagger2.0 Definition .....	107
A.14.5	Property Definition .....	110
A.14.6	CRUDN behavior.....	111
A.15	Target Temperature Mapping .....	111
A.15.1	Introduction .....	111
A.15.2	Example URI .....	111
A.15.3	Resource Type .....	111
A.15.4	Swagger2.0 Definition .....	111
A.15.5	Property Definition .....	115
A.15.6	CRUDN behavior.....	115

## Figures

No table of figures entries found.

Withdrawn

## Tables

Table 6-1 AllJoyn to OCF Device Type Mapping .....	14
Table 7-1 AllJoyn Interface to OCF Resource Type Mapping – Minimum Interface Set .....	16
Table 7-2 AllJoyn Interface to OCF Resource Type Mapping – Optional Interface Set .....	17
Table 8-1 Interface to Resource Summary.....	18

Withdrawn

## 1 Scope

The OCF Resource to AllJoyn Interface Mapping specification ("this specification") provides detailed mapping information to provide equivalency between AllJoyn defined Interfaces and OCF defined Resources,

This specification provides mapping for Device Types (AllJoyn to/from OCF), identifies equivalent OCF Resources for both mandatory and optional AllJoyn interfaces and for each interface defines the detailed Property by Property mapping using OCF defined extensions to JSON schema to programmatically define the mappings.

## 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 Interconnect Consortium Core Specification*, Version 1.0.

OCF Resource Type Specification, *Open Interconnect Consortium Resource Type Specification*, Version 1.0

OCF Smart Home Device Specification, *Open Interconnect Consortium Smart Home Device Specification*, Version 1.0

Derived Models for Interoperability between IoT Ecosystems, Stevens & Merriam, March 2016

[https://www.iab.org/wp-content/IAB-uploads/2016/03/OCF-Derived-Models-for-Interoperability-Between-IoT-Ecosystems\\_v2-examples.pdf](https://www.iab.org/wp-content/IAB-uploads/2016/03/OCF-Derived-Models-for-Interoperability-Between-IoT-Ecosystems_v2-examples.pdf)

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>

AllJoyn Common Data Model Interface Definitions

<https://wiki.alljoyn.org/cdm>

Swagger 2.0, *Swagger RESTful API Documentation Specification*, Version 2.0  
<http://swagger.io/specification/>

OCF Resource Type Definitions, *API Definition Language for OCF Resource Type Definitions*, Release OCF-v1.0.0  
<https://github.com/openconnectivityfoundation/derivedmodels>