
**Information technology — Internet of
media things —**

**Part 3:
Media data formats and APIs**

*Technologies de l'information — Internet des objets media —
Partie 3: API et formats des données*





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Contents

Page

Foreword	x
Introduction	xi
1 Scope	1
2 Normative references	1
3 Terms, definitions, and abbreviated terms	1
3.1 Terms and definitions	1
3.2 Abbreviated terms	2
3.3 Schema documents	3
3.4 Use of prefixes	3
4 APIs	4
4.1 General.....	4
4.2 APIs for IoMT sensors	5
4.2.1 General.....	5
4.2.2 MSensor class.....	6
4.2.3 API for IoMT microphone	7
4.2.4 API for IoMT camera.....	10
4.2.5 API for IoMT RFID reader	12
4.2.6 API for IoMT compass sensor	14
4.2.7 API for IoMT orientation sensor	16
4.2.8 API for IoMT position sensor	17
4.2.9 API for IoMT global positioning sensor	19
4.2.10 API for IoMT distance sensor	21
4.2.11 API for IoMT light sensor	23
4.2.12 API for IoMT ambient noise sensor	24
4.2.13 API for IoMT temperature sensor	25
4.2.14 API for IoMT humidity sensor.....	27
4.2.15 API for IoMT atmospheric pressure sensor	28
4.2.16 API for IoMT velocity sensor	30
4.2.17 API for IoMT acceleration sensor	31
4.2.18 API for IoMT angular acceleration sensor	33
4.2.19 API for IoMT angular velocity sensor	34
4.2.20 API for IoMT force sensor.....	36
4.2.21 API for IoMT torque sensor.....	37
4.2.22 API for IoMT pressure sensor	39
4.2.23 API for IoMT motion sensor.....	40
4.2.24 API for IoMT intelligent camera sensor	42
4.2.25 API for IoMT multi interaction point sensor.....	43
4.2.26 API for IoMT gaze tracking sensor	45
4.2.27 API for IoMT wind sensor	46
4.2.28 API for IoMT altitude sensor	48
4.2.29 API for IoMT gas sensor.....	49
4.2.30 API for IoMT dust sensor	50
4.2.31 API for IoMT bend sensor	52
4.2.32 API for IoMT body height sensor.....	53
4.2.33 API for IoMT body weight sensor	55
4.2.34 API for IoMT body temperature sensor.....	56
4.2.35 API for IoMT body fat sensor.....	57
4.2.36 API for IoMT blood type sensor	59
4.2.37 API for IoMT blood pressure sensor	60

4.2.38	API for IoMT blood sugar sensor	62
4.2.39	API for IoMT blood oxygen sensor	63
4.2.40	API for IoMT heart rate sensor	65
4.2.41	API for IoMT electrograph sensor	66
4.2.42	API for IoMT EEG sensor	68
4.2.43	API for IoMT ECG sensor	69
4.2.44	API for IoMT EMG sensor	71
4.2.45	API for IoMT EOG sensor	72
4.2.46	API for IoMT GSR sensor	74
4.2.47	API for IoMT bio sensor	75
4.2.48	API for IoMT weather sensor	77
4.2.49	API for IoMT facial expression sensor	78
4.2.50	API for IoMT facial morphology sensor	80
4.2.51	API for IoMT facial expression characteristics sensor	81
4.2.52	API for IoMT geomagnetic sensor	83
4.2.53	API for IoMT proximity sensor	84
4.2.54	API for IoMT switch sensor	86
4.2.55	API for IoMT spectrum camera sensor	87
4.2.56	API for IoMT colour camera sensor	89
4.2.57	API for IoMT depth camera sensor	90
4.2.58	API for IoMT stereo camera sensor	92
4.2.59	API for IoMT thermographic camera sensor	93
4.2.60	API for IoMT engine oil temperature sensor	95
4.2.61	API for IoMT intake air temperature sensor	96
4.2.62	API for IoMT tire pressure monitor system sensor	98
4.2.63	API for IoMT distance travelled sensor	99
4.2.64	API for IoMT speed sensor	101
4.2.65	API for IoMT vehicle speed sensor	102
4.2.66	API for IoMT mass airflow sensor	104
4.2.67	API for IoMT percentage sensor	105
4.2.68	API for IoMT fuel level sensor	106
4.2.69	API for IoMT manifold absolute pressure sensor	108
4.2.70	API for IoMT engine RPM sensor	109
4.2.71	API for IoMT Center of Mass sensor	111
4.2.72	API for IoMT RADAR sensor	112
4.2.73	API for IoMT array camera sensor	114
4.2.74	API for IoMT e-nose sensor	115
4.3	APIs for IoMT actuators	117
4.3.1	General	117
4.3.2	MActuator class	117
4.3.3	API for IoMT speaker	118
4.3.4	API for IoMT display	121
4.3.5	API for IoMT camera actuator	125
4.3.6	API for IoMT hand gesture actuator	127
4.3.7	API for IoMT vibrator	129
4.3.8	API for IoMT sprayer	130
4.3.9	API for IoMT light	133
4.3.10	API for IoMT heater	136
4.3.11	API for IoMT cooler	138
4.3.12	API for IoMT fan	139
4.3.13	API for IoMT motion chair	141
4.3.14	API for IoMT tactile generator	142
4.3.15	API for IoMT 3D printer	144

4.4	APIs for IoMT analysers	146
4.4.1	General.....	146
4.4.2	MAnalyser class	146
4.4.3	API for IoMT time synchroniser.....	148
4.4.4	API for IoMT social event detector.....	149
4.4.5	API for IoMT hand gesture detector.....	150
4.4.6	API for IoMT hand gesture recogniser	152
4.4.7	API for IoMT healthcare information generator	153
4.4.8	API for IoMT speech recogniser	155
4.4.9	API for IoMT text to speech converter	156
4.4.10	API for IoMT question analyser.....	158
4.4.11	API for IoMT odour image to scent converter.....	159
4.4.12	API for IoMT direction guider	161
4.4.13	API for IoMT collision coordinator	163
4.4.14	API for IoMT people counter	165
4.4.15	API for IoMT music frequency analyser.....	167
4.4.16	API for IoMT light colour converter	169
4.4.17	API for IoMT video content class generator.....	170
4.4.18	API for IoMT face region detector	172
4.4.19	API for IoMT face verifier.....	173
4.4.20	API for IoMT security alert generator.....	175
4.4.21	API for IoMT security title generator.....	176
4.5	APIs for IoMT storages.....	178
4.5.1	General.....	178
4.5.2	MStorage class.....	178
4.6	APIs for IoMT managers	180
4.6.1	General.....	180
4.6.2	MManager class.....	180
4.7	APIs for IoMT aggregators.....	182
4.7.1	General.....	182
4.7.2	MAggregator class.....	183
4.8	Return type class	185
4.8.1	General.....	185
4.8.2	MPEGVCapabilityType	185
4.8.3	MPEGVSensedDataType.....	188
4.8.4	MPEGVCommandType.....	191
4.8.5	IoMT SensedDataType	194
4.8.6	IoMT ActuationDataType.....	197
4.8.7	IoMT AnalysedDataType.....	200
4.8.8	IoMT CapabilityListType.....	203
4.8.9	IoMT MThingInfoType	206
5	Media thing description language	209
5.1	General.....	209
5.2	Schema wrapper	209
5.3	Mnemonics for binary representations	210
5.4	Base data types and elements	211
5.4.1	General.....	211
5.4.2	Syntax.....	211
5.4.3	Binary Representation	212
5.4.4	Semantics.....	214
5.5	Root element.....	217
5.5.1	General.....	217
5.5.2	Syntax.....	217
5.5.3	Binary Representation	218

5.5.4	Semantics.....	218
5.6	Media sensor description language.....	219
5.6.1	General.....	219
5.6.2	Syntax.....	219
5.6.3	Binary Representation	220
5.6.4	Semantics.....	221
5.6.5	Example.....	222
5.7	Media actuator description language	223
5.7.1	General.....	223
5.7.2	Syntax.....	223
5.7.3	Binary Representation	224
5.7.4	Semantics.....	225
5.7.5	Example.....	226
5.8	Media analyser description language	227
5.8.1	General.....	227
5.8.2	Syntax.....	227
5.8.3	Binary Representation	228
5.8.4	Semantics.....	229
5.8.5	Example.....	230
5.9	Media storage description language	230
5.9.1	General.....	230
5.9.2	Syntax.....	231
5.9.3	Binary Representation	231
5.9.4	Semantics.....	233
5.9.5	Example.....	234
5.10	Media manager description language.....	234
5.10.1	General.....	234
5.10.2	Syntax.....	235
5.10.3	Binary Representation	235
5.10.4	Semantics.....	236
5.10.5	Example.....	238
5.11	Media aggregator description language	238
5.11.1	General.....	238
5.11.2	Syntax.....	238
5.11.3	Binary Representation	239
5.11.4	Semantics.....	241
5.11.5	Example.....	243
6	Media sensor output vocabulary	246
6.1	General.....	246
6.2	Schema wrapper.....	246
6.3	IoMT sensed data captured time	247
6.3.1	General.....	247
6.3.2	Syntax.....	247
6.3.3	Binary Representation	247
6.3.4	Semantics.....	247
6.3.5	Example.....	247
7	Media actuator command vocabulary	248
7.1	General.....	248
7.2	Schema wrapper.....	248
7.3	IoMT speaker	249
7.3.1	General.....	249
7.3.2	Syntax.....	249
7.3.3	Binary Representation	250

7.3.4	Semantics.....	251
7.3.5	Example.....	252
7.4	IoMT display.....	252
7.4.1	General.....	252
7.4.2	Syntax.....	252
7.4.3	Binary Representation.....	253
7.4.4	Semantics.....	254
7.4.5	Example.....	255
7.5	IoMT camera actuator.....	255
7.5.1	General.....	255
7.5.2	Syntax.....	255
7.5.3	Binary Representation.....	256
7.5.4	Semantics.....	257
7.5.5	Example.....	257
7.6	IoMT light.....	258
7.6.1	General.....	258
7.6.2	Syntax.....	258
7.6.3	Binary Representation.....	258
7.6.4	Semantics.....	259
7.6.5	Example.....	259
8	Media analyser output vocabulary.....	260
8.1	General.....	260
8.2	Schema wrapper.....	261
8.3	IoMT time synchroniser.....	261
8.3.1	General.....	261
8.3.2	Syntax.....	261
8.3.3	Binary Representation.....	262
8.3.4	Semantics.....	262
8.3.5	Example.....	263
8.4	IoMT social event detector.....	263
8.4.1	General.....	263
8.4.2	Syntax.....	263
8.4.3	Binary Representation.....	263
8.4.4	Semantics.....	264
8.4.5	Example.....	264
8.5	IoMT hand gesture detector.....	264
8.5.1	General.....	264
8.5.2	Syntax.....	264
8.5.3	Binary Representation.....	265
8.5.4	Semantics.....	267
8.5.5	Example.....	270
8.6	IoMT hand gesture recogniser.....	274
8.6.1	General.....	274
8.6.2	Syntax.....	274
8.6.3	Binary Representation.....	275
8.6.4	Semantics.....	275
8.6.5	Example.....	277
8.7	IoMT hand gesture command generator.....	277
8.7.1	General.....	277
8.7.2	Syntax.....	277
8.7.3	Binary Representation.....	277
8.7.4	Semantics.....	278
8.7.5	Example.....	278

8.8	IoMT healthcare information generator.....	278
8.8.1	General.....	278
8.8.2	Syntax.....	278
8.8.3	Binary Representation.....	279
8.8.4	Semantics.....	281
8.8.5	Examples.....	285
8.9	IoMT odour image to scent converter.....	286
8.9.1	General.....	286
8.9.2	Syntax.....	286
8.9.3	Binary Representation.....	287
8.9.4	Semantics.....	287
8.9.5	Example.....	288
8.10	IoMT question analyser.....	289
8.10.1	General.....	289
8.10.2	Syntax.....	289
8.10.3	Binary Representation.....	290
8.10.4	Semantics.....	290
8.10.5	Examples.....	291
8.11	IoMT music frequency analyser.....	292
8.11.1	General.....	292
8.11.2	Syntax.....	292
8.11.3	Binary Representation.....	293
8.11.4	Semantics.....	293
8.11.5	Examples.....	294
8.12	IoMT video content class generator.....	294
8.12.1	General.....	294
8.12.2	Syntax.....	294
8.12.3	Binary Representation.....	295
8.12.4	Semantics.....	295
8.12.5	Examples.....	295
8.13	IoMT face region detector.....	295
8.13.1	General.....	295
8.13.2	Syntax.....	295
8.13.3	Binary Representation.....	296
8.13.4	Semantics.....	297
8.13.5	Example.....	297
8.14	IoMT face verifier.....	298
8.14.1	General.....	298
8.14.2	Syntax.....	298
8.14.3	Binary Representation.....	298
8.14.4	Semantics.....	299
8.14.5	Example.....	299
8.15	IoMT security title generator.....	299
8.15.1	General.....	299
8.15.2	Syntax.....	299
8.15.3	Binary Representation.....	300
8.15.4	Semantics.....	300
8.15.5	Example.....	301
8.16	IoMT light colour converter.....	301
8.16.1	General.....	301
8.16.2	Syntax.....	301
8.16.3	Binary Representation.....	302
8.16.4	Semantics.....	302
8.16.5	Example.....	302

Annex A (normative) Classification scheme.....	303
Bibliography	445

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.

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. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives or www.iec.ch/members_experts/refdocs).

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This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

This second edition cancels and replaces the first edition (ISO/IEC 23093-3:2019), which has been technically revised.

The main changes are as follows:

- Addition of APIs for new MSensors, MActuators, and MAnalysers;
- Addition of data types for new MSensors, MActuators, and MAnalysers;
- Provide APIs to describe MPEG-V sensors and actuators;
- Addition of binary representation and its semantics.

A list of all parts in the ISO/IEC 23093 series can be found on the ISO and IEC websites.

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 and www.iec.ch/national-committees.

Introduction

The ISO/IEC 23093 series provides an architecture and specifies APIs and compressed representation of data flowing between media things.

The APIs for the media things facilitate discovering other media things in the network, connecting and efficiently exchanging data between media things. The APIs also support transaction tokens to access valuable functionalities, resources, and data from media things.

Media things related information consists of characteristics and discovery data, setup information from a system designer, raw and processed sensed data, and actuation information. The ISO/IEC 23093 series specifies input and output data formats for media sensors, media actuators, media storages, media analysers, etc. In addition, media analysers can process sensed data from media sensors to produce analysed data, and the media analysers can be cascaded to extract semantic information.

This document contains the tools to describe data exchanged between media things (e.g., media sensors, media actuators, media analysers, media storages) and their APIs. It addresses the normative aspects of the data and APIs for media things and also illustrates non-normative examples.

The International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this document may involve the use of patents.

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Information technology — Internet of media things —

Part 3: Media data formats and APIs

1 Scope

This document specifies the syntax and semantics of description schemes to represent data exchanged by media things (e.g., media sensors, media actuators, media analysers, media storages). Moreover, it specifies the APIs to exchange these data between media things.

This document does not specify how sensing and analysing is carried out but defines the interfaces between the media things.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 15938-3, *Information technology — Multimedia content description interface — Part 3: Visual*

ISO/IEC 15938-5, *Information technology — Multimedia content description interface — Part 5: Multimedia description schemes*

ISO/IEC 23005-2, *Information technology — Media context and control — Part 2: Control information*

ISO/IEC 23005-5, *Information technology — Media context and control — Part 5: Data formats for interaction devices*

ISO/IEC 23093-1, *Information technology — Internet of media things — Part 1: Architecture*

ISO/IEC 23093-2, *Information technology — Internet of media things — Part 2: Discovery and communication API*