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# Information technology — Dynamic adaptive streaming over HTTP (DASH) —

## Part 2: Conformance and reference software

*Technologies de l'information — Diffusion en flux adaptatif dynamique sur HTTP (DASH) —*

*Partie 2: Conformité et logiciel de référence*



Reference number  
ISO/IEC 23009-2:2017(E)

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## Contents

	Page
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms, definitions, symbols and abbreviated terms</b> .....	<b>1</b>
<b>4 Media presentation conformance</b> .....	<b>1</b>
4.1 Overview.....	1
4.2 Software tools.....	2
<b>5 MPD conformance</b> .....	<b>2</b>
5.1 General.....	2
5.2 Static MPD conformance.....	3
5.3 Dynamic MPD conformance.....	4
5.3.1 General.....	4
5.3.2 Background and requirements.....	4
5.3.3 Dynamic conformance software design.....	6
<b>6 Segment conformance</b> .....	<b>7</b>
6.1 Overview.....	7
6.2 Representation conformance.....	8
6.2.1 ISO base media file format.....	8
6.2.2 MPEG-2 transport stream.....	9
6.3 Adaptation set conformance.....	12
6.3.1 ISO base media file format.....	12
6.3.2 MPEG-2 transport stream.....	14
6.4 Dynamic media presentation conformance.....	15
<b>7 Profile specific conformance</b> .....	<b>15</b>
7.1 ISO base media file format on demand profile.....	15
7.2 ISO base media file format live profile.....	15
7.3 ISO base media file format main profile.....	15
7.4 MPEG-2 transport stream simple profile.....	16
<b>8 Conforming test vectors</b> .....	<b>16</b>
<b>9 Conformance software for ISO/IEC 23009-4</b> .....	<b>16</b>
9.1 General.....	16
9.2 Design limitations and assumptions.....	16
9.3 Usage.....	17
<b>Annex A (normative) MPD conformance checking</b> .....	<b>18</b>
<b>Annex B (normative) Test vectors</b> .....	<b>58</b>
<b>Annex C (normative) DASH access engine reference software</b> .....	<b>61</b>
<b>Annex D (informative) Sample software</b> .....	<b>63</b>
<b>Annex E (informative) Dynamic media presentation emulator</b> .....	<b>66</b>
<b>Annex F (informative) Coverage of DASH features</b> .....	<b>67</b>
<b>Bibliography</b> .....	<b>70</b>

## 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. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (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)).

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For an explanation on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

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

This second edition cancels and replaces the first edition (ISO/IEC 23009-2:2014), which has been technically revised.

The main changes compared to the previous edition are as follows:

- a) Conformance and reference software to cover all the features of ISO/IEC 23009-1:2014, including:
  - Dynamic MPD conformance;
  - Updates to MPEG-2 TS validator include:
    - Added tests for:
      - PES packet validity (complete access units);
      - SAP types when the video stream is MPEG-4 AVC;
      - Single segment index and representation indexes;
      - Subsegment indexes and subsegment validity;
      - Initialization segment information;
      - System-level tests of common encryption;
      - Bitstream switching segment;
      - Segment alignment if @segmentAlignment is true;
      - Subsegment alignment if @subsegmentAlignment is true;

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- Simple profile tests.
- Changes made to usability:
  - The conformance checker runs against an MPD and all of its segments at once;
  - The build system has been replaced with Autotools.
- b) Test vectors to cover the features of ISO/IEC 23009-1:2014.
- c) Feature list and coverage for ISO/IEC 23009-1:2014 is provided in [Annex F](#).

A list of all parts in the ISO/IEC 23009 series can be found on the ISO website.

## **Introduction**

The conformance and reference software of ISO/IEC 23009 serves three main purposes:

- validation of the written specification of the parts of ISO/IEC 23009;
- clarification of the written specification of the parts of ISO/IEC 23009;
- conformance testing for checking interoperability for the various applications against the reference software which aims to be compliant with ISO/IEC 23009.