
**Information technology — High
efficiency coding and media delivery
in heterogeneous environments —**

**Part 9:
3D Audio conformance testing**

*Technologies de l'information — Codage à haut rendement et
fourniture de supports dans les environnements hétérogènes —*

Partie 9: Essais de conformité 3D Audio

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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.

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

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.

Introduction

This document specifies how tests can be designed to verify whether bitstreams and decoders meet the requirements as specified in ISO/IEC 23008-3 and allow interoperability with remote terminals in interactive, broadcast, streaming and local (with stored contents) sessions. These tests can be used for various purposes, such as:

- manufacturers of encoders, and their customers, can use the tests to verify whether the encoder produces bitstreams compliant with ISO/IEC 23008-3,
- manufacturers of decoders and their customers can use the tests to verify whether the decoder meets the requirements specified in ISO/IEC 23008-3 for the claimed decoder capabilities,
- manufacturers and customers of terminals supporting interactive, broadcast, streaming, and local sessions over a multitude of transport protocols and networks, can use the tests to verify whether the claimed functionalities are compliant with ISO/IEC 23008-3,
- manufacturers of test equipment, and their customers can use the tests to verify compliance with ISO/IEC 23008-3.

Information technology — High efficiency coding and media delivery in heterogeneous environments —

Part 9: 3D Audio conformance testing

1 Scope

This document specifies conformance criteria for both bitstreams and decoders compliant with the MPEG-H 3D audio standard as defined in ISO/IEC 23008-3. This is done to assist implementers and to ensure interoperability.

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 23003-1:2007/Amd.1:2008, *Information technology — MPEG audio technologies — Part 1: MPEG Surround — Amendment 1: Conformance testing*

ISO/IEC 23003-2:2010/Amd.4:2016, *Information technology — MPEG audio technologies — Part 2: Spatial Audio Object Coding (SAOC) — Amendment 4: SAOC Conformance*

ISO/IEC 23003-3:2012, *Information technology — MPEG audio technologies — Part 3: Unified speech and audio coding*

ISO/IEC 23003-4:—¹⁾, *Information technology — MPEG audio technologies — Part 4: Dynamic range control*

ISO/IEC 23008-3:—²⁾, *Information technology — High efficient coding and media delivery in heterogeneous environments — Part 3: 3D audio*

ISO/IEC 23091-3, *Information technology — Coding-independent code points — Part 3: Audio*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1.1

bitstream

encoded audio data

1) Under preparation. Stage at the time of publication: ISO/IEC FDIS 23003-4:2018.

2) Under preparation. Stage at the time of publication: ISO/IEC FDIS 23008-3:2018.