

INTERNATIONAL STANDARD

ISO/IEC 23003-2

First edition
2010-10-01

Information technology — MPEG audio technologies — Part 2: Spatial Audio Object Coding (SAOC)

*Technologies de l'information — Technologies audio MPEG —
Partie 2: Codage d'objet audio spatial (SAOC)*

Withhold

Reference number
ISO/IEC 23003-2:2010(E)



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Published in Switzerland

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

ISO/IEC 23003-2 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology, Subcommittee SC 29, Coding of audio, picture, multimedia and hypermedia information*.

ISO/IEC 23003 consists of the following parts, under the general title *Information technology — MPEG audio technologies*:

- *Part 1: MPEG Surround*
- *Part 2: Spatial Audio Object Coding (SAOC)*

Introduction

The International Organization for Standardization (ISO) and 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 — MPEG audio technologies —

Part 2: Spatial Audio Object Coding (SAOC)

1 Scope

This part of ISO/IEC 23003 specifies the reference model of the Spatial Audio Object Coding (SAOC) technology that is capable of recreating, modifying and rendering a number of audio objects based on a smaller number of transmitted channels and additional parametric data. In the preferred modes of operating the SAOC system, the transmitted signal can be either mono or stereo. The audio objects can be represented by a mono and stereo signal or have the MPEG Surround (MPS) Multi-channel Background Object (MBO) format. The additional parametric data exhibits a significantly lower data rate than required for transmitting all objects individually, making the coding very efficient. At the same time this ensures compatibility of the transmitted signal with legacy devices.

When a multi-channel rendering setup (e.g. a 5.1 loudspeaker setup) is required, the SAOC system acts as a transcoder, converting the additional parametric data to MPS parameters, and interfaces to the MPS decoder that acts as rendering device. For certain rendering setups (e.g. a binaural or plain stereo setup), the SAOC system behaves as a decoder, using its own rendering engine. Another key feature is that the SAOC parametric data from different streams can be merged at parameter level to allow for the combination of SAOC streams, similar to the functionality of a Multi-point Control Unit (MCU).

2 Normative references

The following referenced documents are indispensable for the application 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 13818-7:2006, *Information technology — Generic coding of moving pictures and associated audio information — Part 7: Advanced Audio Coding (AAC)*

ISO/IEC 14496-3:2009, *Information technology — Coding of audio-visual objects — Part 3: Audio*

ISO/IEC 23003-1:2007, *Information technology — MPEG audio technologies — Part 1: MPEG Surround*