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Part 2: Spatial Audio Object Coding (SAOC)

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Foreword

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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 ISO documents 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).

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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 23003-2:2010), which has been technically revised. It also incorporates the Amendments ISO/IEC 23003-2:2010/Amd 1:2015, ISO/IEC 23003-2:2010/Amd 2:2015, ISO/IEC 23003-2:2010/Amd 3:2015, ISO/IEC 23003-2:2010/Amd 4:2016 and ISO/IEC 23003-2:2010/Amd 5:2016 and the Technical Corrigenda ISO/IEC 23003-2:2010/Cor 1:2012 and ISO/IEC 23003-2:2010/Cor 2:2014.

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

— clarifications on SAOC-DE profile description;

— corrections to SAOC-DE profile specification;

— corrections to SAOC-DE profile;

— corrections to MPEG SAOC IS text;

— corrections to the low power mode.

A list of all parts in the ISO/IEC 23003 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.

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Introduction

In the preferred modes of operating, the SAOC system, the transmitted signal can be either mono, stereo or 3-channel. The audio objects can be represented by a mono, stereo, or 3-channel 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).

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