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

AMENDMENT 1: SAOC conformance

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

AMENDEMENT 1: Conformité SAOC



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The committee responsible for this document is ISO/IEC JTC 1, *Information technology, SC 29, Coding of audio, picture, multimedia and hypermedia information*.

Information technology — MPEG audio technologies —

Part 2: Spatial Audio Object Coding (SAOC)

AMENDMENT 1: SAOC conformance

Add Clause 10, Conformance testing:

10 Conformance testing

10.1 Introduction

This Clause specifies conformance criteria for both bitstreams and decoders compliant with the SAOC standard as defined in Clauses 1 to 9. This is done to assist implementers and to ensure interoperability.

10.2 Terms and definitions

The terms and definitions as stated in Clause 3 apply. Furthermore, the following terms and definitions will be used throughout this Clause.

Bitstream	data encoded according to the SAOC standard
conformance test bitstream	bitstream used for testing the conformance of an SAOC

10.3 SAOC conformance testing

Subclause 5.5 defines the SAOC profiles and levels. Some conformance criteria apply to SAOC in general, while others are specific to the specific SAOC profile and its levels. Conformance shall be tested for the level of the profile with which a given bitstream or decoder/transcoder claims to comply.

10.4 Bitstreams

10.4.1 Characteristics

The SAOC audio object type (AOT) can be used in combination with various AOTs.

10.4.2 Test procedure

10.4.2.1 Introduction

An SAOC bitstream shall have the syntax and semantics as specified in Clauses 1 to 9. The present subclause defines the conformance criteria that shall be fulfilled by a compliant bitstream. These criteria are specified for the syntactic elements of the bitstream and for some parameters decoded from the SAOC bitstream payload.

10.4.2.2 Configuration header

10.4.2.2.1 SAOCSpecificConfig()

bsSamplingFrequencyIndex	Shall be in the range 0x0..0xc or 0xf. For further restrictions, see 10.4.2.5
bsSamplingFrequency	For restrictions, see 10.4.2.5
bsLowDelayMode	For restrictions, see 10.4.2.5
bsFreqRes	Shall not be encoded with a value of 0. For further restrictions, see 10.4.2.5
bsFrameLength	For restrictions, see 10.4.2.5
bsNumObjects	For restrictions, see 10.4.2.5
bsRelatedTo[i][j]	No restrictions apply
bsTransmitAbsNrg	No restrictions apply
bsNumDmxChannels	For restrictions, see 10.4.2.5
bsTttDualMode	No restrictions apply
bsTttBandsLow	Shall not be encoded with a value larger than the value of numBands as given by Table 33
bsPdgFlag	No restrictions apply
bsOneIOC	No restrictions apply
bsDcuFlag	No restrictions apply
bsDcuMandatory	No restrictions apply
bsDcuDynamic	No restrictions apply
bsDcuMode	No restrictions apply
bsDcuParam	No restrictions apply

10.4.2.2.2 SAOCExtensionConfigData()

bsSaocExtType No restrictions apply. Note that in case of values indicated as “Reserved” in Table 43, the parsing function SAOCExtensionConfigData(bsSaocExtType) shall return the value 0, such that possibly present data is read as bsFillBits (i.e., skipped) and correct parsing of the bitstream can continue.

bsSaocExtLen	No restrictions apply
bsSaocExtLenAdd	No restrictions apply
bsSaocExtLenAddAdd	No restrictions apply
bsFillBits	No restrictions apply

10.4.2.2.3 SAOCExtensionConfigData(0)

The syntactic element SAOCExtensionConfigData(0) shall not be present in case of LD profile and baseline profile level 1. Furthermore, this syntactic element shall not be present if the helper variable numSlots

has a value that is not listed in Table 55 in ISO/IEC 23003-1:2007. Furthermore, if this syntactic element is present, the bitstream shall fulfil the requirements outlined in 6.1.13 in ISO/IEC 23003-1:2007. For further restrictions, see 10.4.2.5.

bsDcuFlag2	No restrictions apply
bsDcuMode2	No restrictions apply
bsDcuParam2	No restrictions apply

10.4.2.2.3.1 ResidualConfig()

bsResidualSamplingFrequencyIndex	Shall fulfil the requirements outlined in 6.1.13 and Table 88 in ISO/IEC 23003-1:2007
bsResidualFramesPerSAOCFrame	Shall fulfil the requirements outlined in 6.1.13 and Table 87 in ISO/IEC 23003-1:2007
bsNumGroupsFGO	For restrictions, see 10.4.2.5
bsResidualPresent[i]	No restrictions apply
bsResidualBands[i]	Shall not be encoded with a value larger than the value of bsTtnBandsLow[i]
bsTtnDualMode[i]	No restrictions apply
bsTtnBandsLow[i]	Shall not be encoded with a value larger than the value of num-Bands as given by Table 33

10.4.2.2.4 SAOExtensionConfigData(1)

None

10.4.2.2.5 SAOExtensionConfigData(2)

Shall fulfil the requirements outlined in Table 51.

10.4.2.2.6 SAOExtensionConfigData(3)

None

10.4.2.2.7 SAOExtensionConfigData(8)

10.4.2.2.7.1 ObjectMetaData()

bsNumByteMetaData[i]	No restrictions apply
bsMetaData[i][j]	Shall be encoded in UTF-8 encoding format

10.4.2.2.8 SAOExtensionConfigData(9)