INTERNATIONAL STANDARD

**ISO/IEC 14496-4**

Second edition
2004-12-15

**AMENDMENT 15**
2007-08-15



# Information technology — Coding of audio-visual objects —

## Part 4: Conformance testing

## AMENDMENT 15: Lossless coding of oversampled audio

*Technologies de l'information — Codage des objets audiovisuels*

*Partie 4: Essai de conformité*

*AMENDEMENT 15: Codage sans perte d'acoustique suréchantillonnée*

Reference number
ISO/IEC 14496-4:2004/Amd.15:2007(E)



ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

 

# 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.

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.

Amendment 15 to ISO/IEC 14496-4:2004 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

# Information technology — Coding of audio-visual objects —

## Part 4:
## Conformance testing

## AMENDMENT 15: Lossless coding of oversampled audio

*In subclause 6.5.1 File name conventions, insert the following row into Table 29 after the row for SSC*:

**Table 29 — File name conventions**

| | | |
|---|---|---|
| DST | dst_<tool>_<nchan>[_sig<sig>] | dst_<mode>_<tool>_<nchan>[_sig<sig>][_<chan>] |

*After subclause 6.6.19 SSC, add the following subclauses:*

### 6.6.20 DST (Lossless coding of oversampled audio)

#### 6.6.20.1 Compressed data

##### 6.6.20.1.1 Characteristics

Conformant DST compressed MPEG-4 data shall have the DST data stored as outlined in ISO/IEC 14496-3:2005.

##### 6.6.20.1.2 Test procedure

Each compressed data shall meet the syntactic and semantic requirements specified in ISO/IEC 14496-3. The decoded data shall also meet the requirements defined in ISO/IEC 14496-3. If a syntactic element is not listed below, no restrictions apply to that element. The **reserved** element shall be encoded with the value zero.

###### 6.6.20.1.2.1 Compressed MPEG-4 data payload

###### 6.6.20.1.2.1.1 AudioSpecificConfig

**audioObjectType:** Shall be encoded with the value 35.

**samplingFrequencyIndex:** Shall be encoded with the value 0xf.

**SamplingFrequency:** Shall be encoded with the value 64*44100 or 128*44100 or 256*44100.

**channelConfiguration:** Shall be encoded with the value 0.

###### 6.6.20.1.2.1.2 DSTSpecificConfig

**N_Channels:** Shall not be encoded with the value 0.

#### 6.6.20.1.2.1.3 DST

**DST_X_Bit:** Shall be encoded with the value '0'.

#### 6.6.20.1.2.1.4 Channel_Segmentation

*Nr_Of_Segments*: Shall not exceed the value of 4 for the Filter_Segmentation and the Filter_And_Ptable_Segmentation, and shall not exceed the value of 8 for the Ptable_Segmentation.

**Resolution:** Shall be encoded with a value in the range of [1 Frame_length-MINSEGLEN], with MINSEGLEN as defined in ISO/IEC 14496-3:2005/Amd.6, 10.6.1.3.2.5.2.2.2.

**Scaled_Length**[*Nr_Of_Segments*]: Shall be encoded with a value in the range of [1 Range], with Range as defined in ISO/IEC 14496-3:2005/Amd.6, 10.6.1.3.2.5.2.2.3.

#### 6.6.20.1.2.1.5 Filter_Coef_Sets

**CC_Method:** Shall not be encoded with the value '11'.

**CCM:** Shall not be encoded with the value 7.

#### 6.6.20.1.2.1.6 Probability_Tables

**PC_Method:** Shall not be encoded with the value '11'.

**PCM:** Shall be encoded with a value in the range of [0 4].

### 6.6.20.2 Decoders

#### 6.6.20.2.1 Characteristics

The object type DST has the Object Type ID 35, and the compressed MPEG-4 data syntax is defined in ISO/IEC 14496-3. The Audio Object Type DST contains the DST tool.

#### 6.6.20.2.2 DST conformance test procedure

Test compressed data and reference decoder output signals are provided to apply the conformance criterion using the procedure described in the following sub clause.

The conformance of the DST decoder tool can be checked with compressed data for the DST object type.

For lossless compressed data the conformance criterion is bit exact reproduction of the reference decoder output, this means that all bits in the output of the test decoder are identical to the corresponding bits in the output of the reference decoder.

To be called a conforming DST decoder, the required conformance criterion must be met for all test compressed data listed in subclause 6.6.20.2.3.