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**Information technology — MPEG  
systems technologies —**

**Part 12:  
Sample Variants in the ISO base  
media file format**

*Technologies de l'information — Technologies des systèmes MPEG —  
Partie 12: Variantes d'échantillon dans le format ISO de base pour les  
fichiers médias*

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ISO copyright office  
Ch. de Blandonnet 8 • CP 401  
CH-1214 Vernier, Geneva, Switzerland  
Tel. +41 22 749 01 11  
Fax +41 22 749 09 47  
copyright@iso.org  
www.iso.org

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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.

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 document 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](http://www.iso.org/directives)).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

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

ISO/IEC 23001 consists of the following parts, under the general title *Information technology — MPEG systems technologies*:

- *Part 1: Binary MPEG format for XML*
- *Part 2: Fragment request units*
- *Part 3: XML IPMP messages*
- *Part 4: Codec configuration representation*
- *Part 5: Bitstream Syntax Description Language (BSDL)*
- *Part 7: Common encryption in ISO base media file format files*
- *Part 8: Coding-independent code points*
- *Part 9: Common encryption of MPEG-2 transport streams*
- *Part 10: Carriage of timed metadata metrics of media in ISO base media file format*
- *Part 11: Energy-efficient media consumption (green metadata)*
- *Part 12: Sample Variants in the ISO base media file format*

# Information technology — MPEG systems technologies —

## Part 12:

### Sample Variants in the ISO base media file format

#### 1 Scope

This part of ISO/IEC 23001 defines the carriage of Sample Variants in the ISO base media file format (ISO/IEC 14496-12).

#### 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 14496-12:2015<sup>1)</sup>, *Information technology — Coding of audio-visual objects — Part 12: ISO base media file format*

ISO/IEC 23001-7:2015, *Information technology — MPEG systems technologies — Part 7: Common encryption in ISO base media file format files*

#### 3 Terms, definitions and abbreviated terms

##### 3.1 Terms and definitions

###### 3.1.1

###### **Double Encrypted**

Sample Variant byte range data encrypted by first a Media Key (as part of the encryption of the complete Sample Variant) and then second a Variant Byte Range key

Note 1 to entry: See [6.1](#).

###### 3.1.2

###### **Media Key**

encryption key associated with one or more media samples

###### 3.1.3

###### **Media KID**

encryption KID associated with one or more media samples

###### 3.1.4

###### **Sample Variant**

assembled media sample replacing an original sample

###### 3.1.5

###### **Variant Byte Range**

location of a sequence of bytes that might constitute a portion of a Sample Variant

1) ISO/IEC 14496-12 is technically identical to ISO/IEC 15444-12.