
**Information technology — Multimedia
application format (MPEG-A) —**

**Part 6:
Professional archival application format**

*Technologies de l'information — Format pour application multimédia
(MPEG-A) —*

Partie 6: Titre de la partie



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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.

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.

ISO/IEC 23000-6 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 23000-6:2009) which has been technically revised. It also incorporates ISO/IEC 23000-6:2009/Cor.1:2010, ISO/IEC 23000-6:2009/Amd.1:2010 and ISO/IEC 23000-6:2009/PDAM 2.

ISO/IEC 23000 consists of the following parts, under the general title *Information technology — Multimedia application format (MPEG-A)*:

- *Part 1: Purpose for multimedia application formats* [Technical Report]
- *Part 2: MPEG music player application format*
- *Part 3: MPEG photo player application format*
- *Part 4: Musical slide show application format*
- *Part 5: Media streaming application format*
- *Part 6: Professional archival application format*
- *Part 7: Open access application format*
- *Part 8: Portable video application format*
- *Part 9: Digital Multimedia Broadcasting application format*
- *Part 10: Video surveillance application format*
- *Part 11: Stereoscopic video application format*

Introduction

The advance of digital multimedia technology has made the creation of digital multimedia content easier. This has resulted in an abundance of digital multimedia contents available for user consumption. It also necessitates ways to manage those digital multimedia contents. Digital multimedia contents should be well-handled and well-preserved in content archives so that part of or all of the contents aggregation can be reused for creation of new contents.

For preserving digital multimedia contents in an archive, one has to provide a packaging mechanism together with preservation technologies for data protection, data integrity, and data compression. In addition, the consumption of the archive can continue long after it has been created; therefore, the context information that describes the context of the archive and digital multimedia contents in it should also be contained in the package. This necessary context information may include information that can answer who, what, where, when, and why questions about the archive and the digital multimedia contents archived in it.

This part of ISO/IEC 23000 is an MPEG standard that specifies component technologies and their integration for digital multimedia content archive. ISO/IEC 23000 (also known as “MPEG-A”), is an MPEG standard defined by selecting readily tested and verified tools taken from the MPEG body of standards and combining them to form a AF (Multimedia Application Format). If a needed piece of technology is not provided within the MPEG, additional technologies originating from other organizations can be included by reference in order to facilitate the envisioned application format. For digital multimedia content archives, MPEG has designated this part of ISO/IEC 23000 “*Part 6: Professional archival application format.*” In other parts of this International Standard, the term “Professional Archival Application Format (PA-AF)” refers to this part of ISO/IEC 23000.

Information technology — Multimedia application format (MPEG-A) —

Part 6: Professional archival application format

1 Scope

This part of ISO/IEC 23000 specifies the professional archival application format (PA-AF). The purpose of the PA-AF is to provide a standardized packaging format for digital files. This packaging format can also serve as an implementation of the information package specified by the reference model of the open archival information system (OAIS). The OAIS reference model is a framework for understanding and applying concepts necessary for long-term digital information preservation (where “long-term” is long enough to be concerned about changing technologies). In addition, PA-AF can also be used as an intermediate or exchange packaging format for any kind of multimedia content.

While a general archival process may include processes starting from creation, to delivery to archival system, and dissemination to consumers, PA-AF is limited in scope as follows. PA-AF does not specify how input content is created. PA-AF does not specify any agreement of how the content should be handled and delivered to the archiving process. PA-AF assumes that input content for the archiving process is available in an appropriate digital format. PA-AF specifies the format of a digital archive produced by the archival process. PA-AF does not specify how the archive output by the archival process is disseminated to end-users.

PA-AF specifies a metadata format to describe the original structure of digital files archived in a PA-AF file. PA-AF specifies a metadata format to describe context information related to a PA-AF file and digital files archived in it. PA-AF specifies a metadata format to describe necessary information to reverse the pre-processing processes applied to digital files prior to archiving them in a PA-AF file. PA-AF specifies a file format for carriage of the metadata formats and digital files.

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 14721:2003, *Space data and information transfer systems — Open archival information system — Reference model*

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

ISO/IEC 14496-12, *Information technology — Coding of audio-visual objects — Part 12: ISO base media file format (technically identical with ISO/IEC 15444-12)*

ISO/IEC 14496-14:2003, *Information technology — Coding of audio-visual objects — Part 14: MP4 file format*

ISO/IEC 21000-2:2005, *Information technology — Multimedia framework (MPEG-21) — Part 2: Digital Item Declaration*

ISO/IEC 23000-6:2012(E)

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