INTERNATIONAL STANDARD

ISO/IEC 23000-17

First edition
2018-10

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

Part 17: Multiple sensorial media application format

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

Partie 17: Format pour application multimédia sensorielle

Reference number
ISO/IEC 23000-17:2018(E)

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Published in Switzerland

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Foreword

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This document was prepared by Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

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Introduction

Along with the sensation associated with the 3D film industry, the development of MulSeMedia (multiple sensorial media), or 4D media, has received much attention from the public. 4D movies generally add sensory effects to 3D and/or IMAX movies, allowing audiences to immerse themselves more deeply in the movie viewing experience. Along with the two human senses of sight and hearing, sensory effects such as wind, vibration, scent and others can stimulate other senses, such as the tactile and olfaction senses.

The multiple sensorial media application format (MSMAF) defines a file format for multiple sensorial media services. It specifies core structures of multiple sensorial media application format being organized by the combination of related information for multiple sensorial media applications.

Services using the MSMAF can be realized in two ways: offline and online. The offline services include DVDs and movie plays in theatres, whereas the online services include streaming services on IP-TV or broadcasting with MPEG-2 transport streams.

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

Part 17: Multiple sensorial media application format

1 Scope

This document specifies a file format which is capable of storage, interchange, management, editing and presentation of multiple sensorial media contents based on the ISO base media file format. The file format provides the overall structure for storing multiple sensorial media contents.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at https://www.electropedia.org/

— ISO Online browsing platform: available at https://www.iso.org/obp

3.1
sensory effect metadata
record that defines the description schemes and descriptors to represent sensory effects

3.2
sensory effect
effect to augment perception by stimulating human senses in a particular scene of a multimedia application

Note 1 to entry: Combinations of tactile display may also provide directional, shape information.

EXAMPLE Scent, wind, light, haptic (kinesthetic-force, stiffness, weight, friction, texture, widget (button, slider, joystick), tactile: air-jet, suction pressure, thermal, current and vibration.

4 Abbreviations

BiM binary MPEG format for XML (ISO/IEC 23001-1)

DIA digital item adaptation (ISO/IEC 21000-7)

MPEG-21 multimedia framework (ISO/IEC 21000)

MPEG-7 multimedia content description interface (ISO/IEC 15938)

SEDL sensory effects description language (ISO/IEC 23005-3)

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