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

## Part 9: Digital Multimedia Broadcasting application format

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

*Partie 9: Format pour application de diffusion générale multimédia numérique*

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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 23000-9 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*.

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 7: Open access application format*

— *Part 8: Portable video application format*

— *Part 9: Digital multimedia broadcasting application format*

— *Part 10: Video surveillance application format*

# Introduction

Digital Multimedia Broadcasting (DMB) is the first global mobile TV service based on a digital radio transmission system. DMB provides people with crystal-clear video, theatre-quality audio, and other data services on the move via in-vehicle terminals or hand-held gadgets like mobile phones so that it makes possible the information acquisition and consumption anywhere. DMB contents on air include audio-visual programs, interactive data, web pages, slideshows, TTI (traffic & travel information), etc.

Most users want to store their preferred DMB contents for consuming the contents at their preferred time and on their preferred device. Many of them also want to share the contents with other people. Contents providers also want to serve their DMB contents not only through broadcast but also through communication networks. Thus a standardized format needs to be specified to guarantee the interoperability of the DMB contents across various devices from different vendors.

DMB AF (Application Format) specification defines a file format that pertains to DMB (more specifically T-DMB and S-DMB) contents and services. It specifies how to combine the variety of DMB contents with associated information for a presentation in a well-defined format that facilitates storage, interchange, management, editing, and presentation of the DMB contents in protected, governed, and interoperable ways.

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

## Part 9:
## Digital Multimedia Broadcasting application format

## 1 Scope

This part of ISO/IEC 23000 specifies a file format that pertains to both terrestrial digital multimedia broadcasting (T-DMB) and satellite digital multimedia broadcasting (S-DMB) contents and services. It integrates the existing DMB contents with appropriate additional information to facilitate storage, interchange, management, editing, and presentation of the contents in protected, governed, and interoperable ways.

This part of ISO/IEC 23000 is applicable both to storage and playback of DMB contents and to acquisition and consumption through communication networks and removable storages. Application examples of this specification include but are not limited to

— scheduled storage and time-shifted playback of DMB contents,

— file casting through DMB data channel,

— IP media service such as DMB content portal,

— rightful interchange of DMB contents between terminals, and

— user editing or creation from DMB contents.

## 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/IEC 14496-12, *Information technology — Coding of audio-visual objects (MPEG-4) — Part 12: ISO base media file format*[1)]

ISO/IEC 14496-14, *Information technology — Coding of audio-visual objects (MPEG-4) — Part 14: MP4 file format*

ISO/IEC 14496-15, *Information technology — Coding of audio-visual objects (MPEG-4) — Part 15: Advanced Video Coding (AVC) file format*

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

1) Technically identical to ISO/IEC 15444-2.

ISO/IEC 21000-4, *Information technology — Multimedia framework (MPEG-21) — Part 4: Intellectual Property Management and Protection Components*

ISO/IEC 21000-5, *Information technology — Multimedia framework (MPEG-21) — Part 5: Rights Expression Language*

ISO/IEC 21000-9, *Information technology — Multimedia framework (MPEG-21) — Part 9: File Format*

ETSI EN 300 401, *Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers*

ETSI TS 102 428, *Digital Audio Broadcasting (DAB); DMB video service; User Application Specification*

ETSI TS 102 822-3-1 V1.4.1:2007, *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 3: Metadata; Sub-part 1: Phase 1 – Metadata schemas*

ETSI TS 102 822-3-3 V1.2.1:2007, *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 3: Metadata; Sub-part 3: Phase 2 – Extended Metadata Schema*

ETSI TS 102 822-4 V1.3.1:2007, *Broadcast and On-line Services: Search, select, and rightful use of content on personal storage systems ("TV-Anytime"); Part 4: Phase 1 – Content Referencing*

TTAS.KO-07.0027, *Standard for Satellite Digital Multimedia Broadcasting (S-DMB) Transmitter/Receiver Interface*

TTAS.KO-07.0032, *Terrestrial Digital Multimedia Broadcasting; Specification of the MOT Slide show service for Terrestrial Digital Multimedia Broadcasting (DMB) to mobile, portable and fixed receivers*

TTAS.ET_TS101498-1, *Radio Broadcasting Systems; Specification of the Broadcast Web Site Service for VHF Digital Multimedia Broadcasting (DMB) to Mobile, Portable and Fixed Receivers*