INTERNATIONAL STANDARD

ISO/IEC 14496-3

Third edition
2005-12-01

AMENDMENT 8
2008-04-15

Information technology — Coding of audio-visual objects —

Part 3: **Audio**

AMENDMENT 8: MP4FF box for original audio file information

Technologies de l'information — Codage des objets audiovisuels —

Partie 3: Codage audio

AMENDEMENT 8: Boîte MP4FF pour information de fichier audio originale

Reference number
ISO/IEC 14496-3:2005/Amd.8:2008(E)

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Foreword

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Amendment 8 to ISO/IEC 14496-3:2005 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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Information technology — Coding of audio-visual objects —

Part 3:
Audio

AMENDMENT 8: MP4FF box for original audio file information

1 Scope

After 1.6.7, add the following subclause:

1.6.8. Definition of the Original Audio File Information for the ISO Base Media file format

1.6.8.1 Introduction

The Original Audio File Information Box permits the storage of the ancillary (non-audio) data of an original audio file in an ISO Base Media File format file. This file would typically also contain the compressed audio data of the original audio file. This box is particularly useful in combination with lossless audio coding (e.g. MPEG-4 ALS, SLS) when restoration of the original input audio file is of interest.

1.6.8.2 Definition

Container: Meta box ('meta')

Mandatory: No

Quantity: Zero or one

The original audio file information provides information about an original audio file, including a file type, and provides the OriginalHeader(), OriginalTrailer() and AuxData() blocks via the item location box.

The OriginalHeader() block stores the header part of the original audio file and it is referenced from an entry of the item location box. The header part includes all bytes prior to the first audio data sample in the original file.

The OriginalTrailer() block stores the trailer part of the original audio file and it is referenced from an entry of the item location box. The trailer part includes all bytes after the last audio data sample in the original file.

The AuxData() block stores additional information added by the encoder related to the original audio file and is referenced from an entry of the item location box. The contents of AuxData() are not used in reconstructing original file.

The original audio file information is stored as meta-data in a MetaBox. The handler type for this MetaBox is ‘oafi’, and such a MetaBox must contain a DataBox containing a OrigAudioFileInfoRecord, or identify a primary item whose data is an OrigAudioFileInfoRecord.

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1.6.8.3 Syntax

The syntax of the Original Audio File Information Box is as follows:

```
aligned(8) class DataBox extends FullBox('data', version=0, 0) {

}

aligned(8) class OrigAudioFileInfoRecord {

    unsigned int(4) file_type;

    unsigned int(4) reserved;

    unsigned int(16) header_item_ID;

    unsigned int(16) trailer_item_ID;

    unsigned int(16) aux_item_ID;

    if (file_type == "1111") string original_MIME_type;

}
```

The syntax of OriginalHeader(), OriginalTrailer() and AuxData() is shown in Tables AMD8.1, AMD8.2, and AMD8.3. The original_MIME_type is a Null-terminated string in UTF-8 characters identifying the original file type.

Table AMD8.1 — Syntax of OriginalHeader()

Syntax	No. Of bits	Mnemonic

OriginalHeader()
{
header_length
orig_header[];
}
	
	64
	header_length * 8
		
		bslbf
		bslbf

Table AMD8.2 — Syntax of OriginalTrailer()

Syntax	No. Of bits	Mnemonic

OriginalTrailer()
{
trailer_length;
orig_trailer[];
}
	
	64
	trailer_length * 8
		
		bslbf
		bslbf

Table AMD8.3 — Syntax of AuxData()

Syntax	No. Of bits	Mnemonic

AuxData()
{
aux_length;
aux_data[];
}
	
	64
	aux_length * 8
		
		bslbf
		bslbf

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1.6.8.4 Semantics

`file_type` describes the type of the original input file (see Table AMD8.4 for a description of possible values).

Table AMD8.4 — file_type values

Field	#Bits	Description / Values
file_type	4	0000 = unknown / raw file 0001 = wave file 0010 = aiff file 0011 = bwf file 0100 = Sony Wave64 file (.w64) 0101 = bwf with RF64 1111 = “escape” for MIME type (other values are reserved)

`header_item_ID` is the ID that references the OriginalHeader() entry in the item location box. If this value is 0, there is no OriginalHeader() information. If the OriginalHeader() was empty (of zero length) then an explicitly empty OriginalHeader() item should be supplied.

`trailer_item_ID` is the ID that references the OriginalTrailer() entry in the item location box. If this value is 0, there is no OriginalTrailer() information. If the OriginalTrailer() was empty (of zero length) then an explicitly empty OriginalTrailer () item should be supplied.

`aux_item_ID` is the ID that references the AuxData() entry in the item location box. If this value is 0, there is no AuxData() information. If the AuxData() was empty (of zero length) then an explicitly empty AuxData () item should be supplied.

The elements of OriginalHeader, OriginalTrailer and AuxData are shown in Tables AMD8.5, AMD8.6, and AMD8.7.

Table AMD8.5 — Elements of OriginalHeader()

Field	#Bits	Description / Values
header_length	64	Size of the original header field in bytes.
orig_header[]	header_length*8	Header of original audio file

Table AMD8.6 — Elements of OriginalTrailer()

Field	#Bits	Description / Values
trailer_length	64	Size of the original trailer field in bytes.
orig_trailer[]	trailer_length*8	Trailer of original audio file

Table AMD8.7 — Elements of AuxData()

Field	#Bits	Description / Values
aux_length	64	Size of the auxiliary data field in bytes.
aux_data	aux_length*8	Auxiliary data (not required for decoding)

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1.6.8.5 Informative: Example MP4 file

An example MP4 file containing original header, original trailer and auxiliary data is shown in Figure AMD8.1.

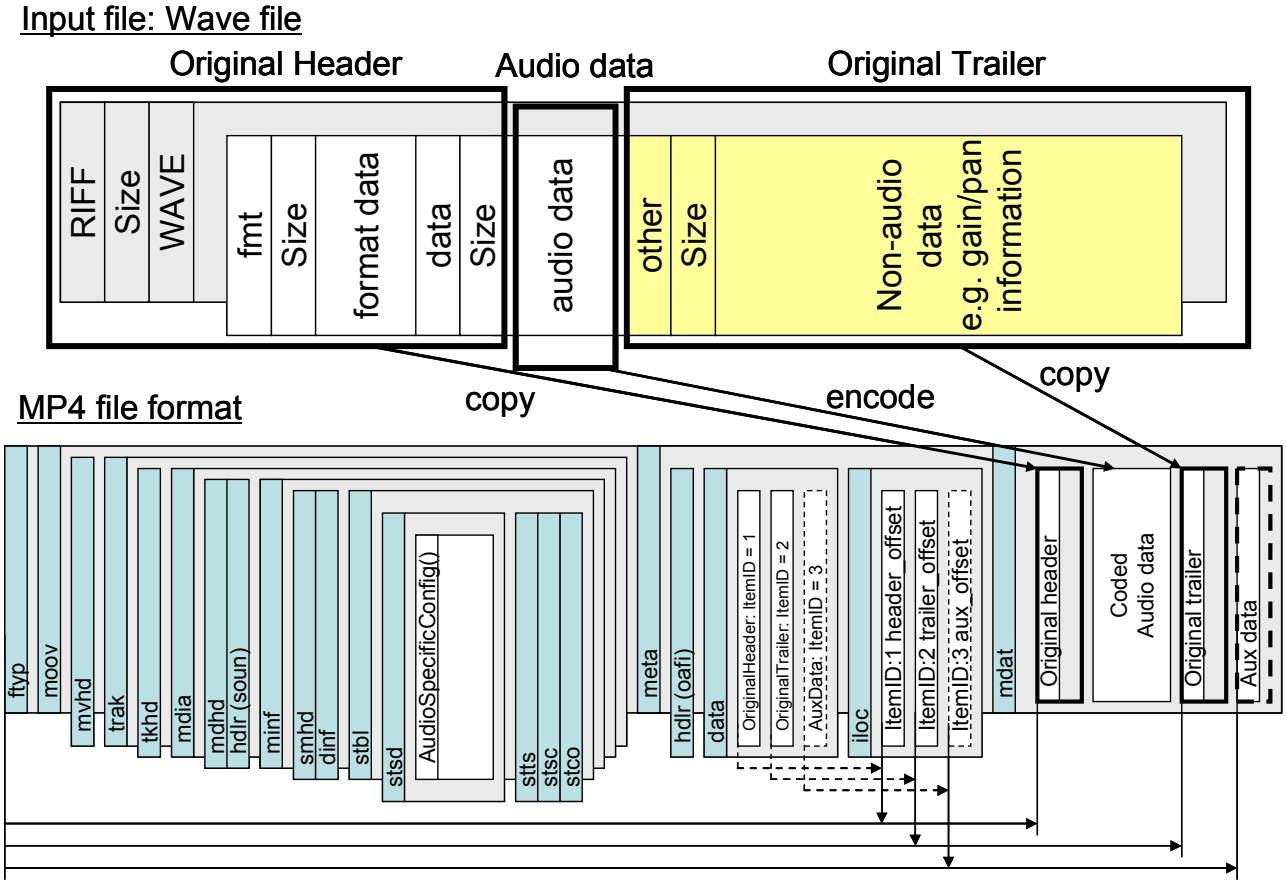


Figure AMD8.1 — Possible order of blocks

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