
**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*

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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 —

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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.

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

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
<code>file_type</code>	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
<code>header_length</code>	64	Size of the original header field in bytes.
<code>orig_header[]</code>	<code>header_length*8</code>	Header of original audio file

Table AMD8.6 — Elements of `OriginalTrailer()`

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

Table AMD8.7 — Elements of `AuxData()`

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

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.

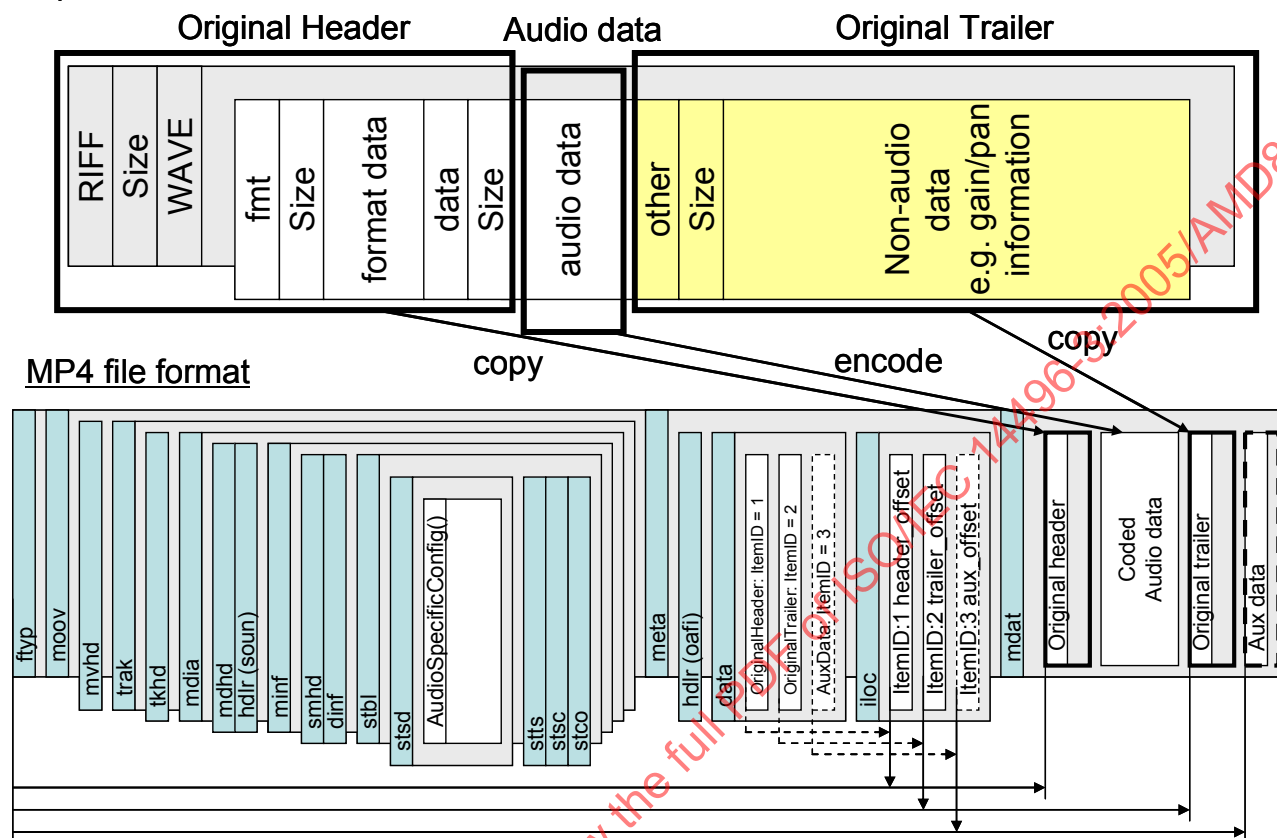
Input file: Wave file

Figure AMD8.1 — Possible order of blocks