

# TECHNICAL SPECIFICATION

# IEC TS 62312-2

First edition  
2007-06

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## Guideline for synchronization of audio and video – Part 2: Methods for synchronization of audio and video systems



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**GUIDELINE FOR SYNCHRONIZATION OF AUDIO AND VIDEO –****Part 2: Methods for synchronization of audio and video systems**

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Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC 62312-2, which is a technical specification, has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
100/1195/DTS	100/1226/RVC

Full information on the voting for the approval of this technical specification can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The list of all the parts of IEC 62312, under the general title *Guideline for synchronization of audio and video*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- transformed into an International standard,
- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

Witholdrawn

## INTRODUCTION

Audio, video and multimedia systems and equipment have begun to use digital technologies. Digital systems or equipment may cause delay of audio and video signals because digital signal processing causes latency and delay. The unevenness of the delay between audio and video may cause synchronization problems.

For instance, a digital broadcasting system uses signal compression of audio and video. A receiver has signal decoders, and this may cause unevenness of the delay between audio and video. Digital video signal processing of display causes a significant delay in the reproduction time of the video image. Another example is an audio video system consisting of a digital media player, an audio amplifier and display. A digital media player outputs audio and video signals separately to the amplifier and display through digital interfaces. This may cause synchronization problems of audio and video when each processing time of the equipment is different.

To solve synchronization problems, this technical specification gives guidelines for general methods for the synchronization of audio and video.

Withdrawing

# GUIDELINE FOR SYNCHRONIZATION OF AUDIO AND VIDEO –

## Part 2: Methods for synchronization of audio and video systems

### 1 Scope

The IEC 62312 series gives guidelines for methods of synchronization of audio and video.

This part of IEC 62312 describes the system model and general methods for the synchronization of audio and video. The methods exclude the synchronization of the signal source and the spatial delay of audio reproduction.

### 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.

IEC 60958-1, *Digital audio interface – Part 1: General*

IEC 60958-3, *Digital audio interface – Part 3: Consumer applications*

IEC 61883-6, *Consumer audio/video equipment – Digital interface – Part 6: Audio and music data transmission protocol*

### 3 Terms and definitions

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

#### 3.1

##### **latency**

inevitable delay of signal that is caused by principle or unavoidable signal processing

#### 3.2

##### **delay**

general meaning of delay other than latency, including delay that is caused by functional signal processing and delay that is set intentionally

#### 3.3

##### **latency information**

information of the sum value of latency and delay

#### 3.4

##### **time stamp**

quantized timing in which an event occurs on the basis of a reference clock