

Guideline for synchronization of audio and video —

Part 2: Methods for synchronization of audio and video systems

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National foreword

This Draft for Development is the UK implementation of IEC/TS 62312-2:2007.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It should be applied on this provisional basis, so that information and experience of its practical application can be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the international organization responsible for its conversion to an international standard. A review of this publication will be initiated not later than 3 years after its publication by the international organization so that a decision can be taken on its status. Notification of the start of the review period will be made in an announcement in the appropriate issue of *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into an international Standard, to extend the life of the Technical Specification or to withdraw it. Comments should be sent to the Secretary of the responsible BSI Technical Committee at British Standards House, 389 Chiswick High Road, London W4 4AL.

The UK participation in its preparation was entrusted to Technical Committee EPL/100, Audio, video and multimedia systems and equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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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.

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