~~2024-11-01~~

ISO/IEC 23001-17:2024/~~DAM~~FDAmd 1~~:2024(en)~~

ISO/IEC JTC 1/SC 29

Secretariat: JISC

Date: 2025-01-31

Information technology — MPEG systems technologies —

Part 17:
Carriage of uncompressed video and images in ISO base media file format~~—~~
~~Amendment~~

AMENDMENT 1: High precision timing tagging

FDIS stage

Published in Switzerland

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This document was prepared by Joint 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 — MPEG systems technologies —

Part 17: Carriage of uncompressed video and images in ISO base media file format —
Amendment

AMENDMENT 1: High precision timing tagging

Terms and definitions

Add the following terms and definitions:

3.12
TAI
International Atomic Time

international atomic time
high-precision continuous scale of time derived from hundreds of precise atomic clocks from around the world and maintained as closely as possible to the International System (SI) second.

Note 1 to entry: Current practice achieves a maximum deviation of approximately one second every 100 million years.

Note 2 to entry: The abbreviated term comes from the French "Temps Atomique International".

3.13
TAI clock
clock capable of synchronizing to a source of TAI time and generating TAI timestamps.

3.14 Receptor
receptor clock
A clock located where measurements are made (e.g., local to a sensor) and capable of synchronizing to a source of time from a remote clock.

3.15 Remote
remote clock
A clock capable of transmitting time over significant distances, and usually highly accurate (e.g., GPS system or PTP Grand Master).)

3.16 Coordinated Universal Time (UTC)
An
coordinated universal time
UTC
international standard for regulating clocks and time, forming a basis for civil time.

Note 1 to entry: UTC is based on TAI but includes irregularly inserted leap second additions or subtractions to account for variation in the earth's rotation.

3.17 Global Positioning System (GPS)

~~A~~
global positioning system
GPS
satellite system providing global positioning, navigation, and timing services~~.~~

Note 1 to entry: Timing services are based on TAI time.

~~**3.18 Precision Time Protocol (PTP)**~~
~~**The IEEE 1588-2008 standard defines the Precision Time Protocol**~~
precision time protocol
PTP
protocol for synchronizing clocks to a source of TAI time across computer networks~~.~~

Note 1 to entry: IEEE 1588-2008 defines the precision time protocol.

Note 2 to entry: PTP systems can achieve measurement uncertainties below a microsecond.

~~**3.19 Network Time Protocol (NTP)**~~
~~**RFC 5905 defines the Network Time Protocol**~~
network time protocol
NTP
protocol for synchronizing clocks to UTC time across computer networks~~.~~

Note 1 to entry: RFC 5905 defines the Network Time Protocol.

Note 2 to entry: Systems using NTP typically achieve measurement uncertainties in the range of milliseconds.

~~**3.20**~~
SI ~~Seconds~~second
~~The~~ International System of Units (SI) base unit for measuring time~~.~~

~~*Clause 6*~~
~~**6.1.4 Component Reference Level**~~

6.1.4.2 ~~Syntax~~

Replace the text with the following:

```
aligned(8) class ComponentReferenceLevelBox extends FullBox('clev', 0, 0) {
    unsigned int(32) level_count;
    ~~{~~
    {
        unsigned int(32) component_index;
        unsigned int(1) clip_range;
        bits(7) reserved = 0;
        signed int(32) black_level;
        signed int(32) white_level;
```