

FINAL DRAFT Amendment

ISO/IEC 23001-17:2024/ FDAM 1

ISO/IEC JTC 1/SC 29

Secretariat: JISC

Voting begins on:

2025-02-19

Information technology — MPEG systems technologies —

Part 17:

Carriage of uncompressed video and images in ISO base media file format

AMENDMENT 1: High precision timing

tagging <u>ISO/IEC 23001-17:2024/FD/ md 1</u> https://standards.iteh.ai/catalog/standards/iso/420b4995-0952-4f2c-bfb2-78cf5f88fad9/iso-iec-23001-17-2024-fdamd-1

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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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<u>ISO/IEC 23001-17:2024/FDAmd</u>

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Information technology — MPEG systems technologies —

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

AMENDMENT 1: High precision timing tagging

Terms and definitions

Add the following terms and definitions:

3.12

TAI

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

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

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3.14

receptor clock 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 clock

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

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

satellite system providing global positioning, navigation, and timing services

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

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3.18 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

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 second

International System of Units (SI) base unit for measuring time

6.1.4.2

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;
    } [level_count];
}
```

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Replace the text with the following:

level_count indicates the number of components for which levels are described

 $\texttt{component_index}\ indicates\ the\ index\ of\ the\ N^{th}\ component\ listed\ in\ the\ associated\ \texttt{ComponentDefinitionBox}.$

- $\texttt{clip}_\texttt{range} \ indicates if the levels indicate a clip range or an affine transformation of the N^{th} component values$
- ${\tt black_level}$ indicates the black level for the N^{th} component. This value shall be coded using the two's-complement representation.
- white_level indicates the white level for the Nth component; this value shall be greater than the black_ level value and shall be coded using the two's-complement representation.

Clause 8

Add the following new clause, after Clause 7 and before the bibliography:

8 Labeling of Samples and Items

8.1 High Precision Time Tagging