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Information technology — Coding of audio-visual objects —

Part 15: Carriage of network abstraction layer (NAL) unit structured video in the ISO base media file format

Technologies de l'information — Codage des objets audiovisuels —

Partie 15: Transport de vidéo structurée en unités NAL sur la couche réseau au format ISO de base pour les fichiers médias

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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*.

This seventh edition cancels and replaces the sixth edition (ISO/IEC 14496-15:2022), which has been technically revised. It also incorporates the Amendment ISO/IEC 14496-15:2022/Amd 1:2023.

The main changes are as follows:

— support for the Low Complexity Enhancement Video Coding (ISO/IEC 23094-2);

— addition of the supplementary track reference and the picture region replacement sample group, for support of picture-in-picture services.

A list of all parts in the ISO/IEC 14496 series can be found on the ISO and IEC websites.

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This document defines a storage format based on, and compatible with, the ISO Base Media File Format (ISO/IEC 14496-12), which is used by the MP4 file format (ISO/IEC 14496-14) and the Motion JPEG 2000 file format (ISO/IEC 15444-3) among others. This document enables video streams formatted as Network Adaptation Layer Units (NAL Units) to

a) be used in conjunction with other media streams, such as audio,

b) be used in an MPEG-4 systems environment, if desired,

c) be formatted for delivery by a streaming server, using hint tracks, and

d) inherit all the use cases and features of the ISO Base Media File Format on which MP4 and MJ2 are based.

This document may be used as a standalone document; it specifies how NAL unit structured video content shall be stored in an ISO Base Media File Format compliant format. However, it is normally used in the context of a specification, such as the MP4 file format, derived from the ISO Base Media File Format, that permits the use of NAL unit structured video such as AVC (ISO/IEC 14496-10) video and High Efficiency Video Coding (HEVC, ISO/IEC 23008-2) video.

The ISO Base Media File Format is becoming increasingly common as a general-purpose media container format for the exchange of digital media, and its use in this context should accelerate both adoption and interoperability.