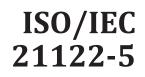
INTERNATIONAL STANDARD



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Information technology — JPEG XS low-latency lightweight image coding system —

Part 5: **Reference software**

Technologies de l'information — Système de codage d'images léger à fk G XS .el de réféi faible latence JPEG XS —

Partie 5: Logiciel de référence



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Foreword

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see <u>www.iso.org/</u><u>iso/foreword.html</u>.

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*.

A list of all parts in the ISO/IEC 21122 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at <u>www.iso.org/members.html</u>.

Introduction

This document is part of a series of standards for a low-latency lightweight image coding system, denoted JPEG XS.

In many use cases during production or transmission of a movie, limiting the latency and the recompression loss is a more important aspect than the compression efficiency. The JPEG XS coding system offers compression and recompression of image sequences with very moderate computational resources while remaining robust under multiple compression and decompression cycles and mixing of content sources, e.g. embedding of subtitles, overlays or logos. Typical target compression ratios ensuring visually lossless quality are in the range of 2:1 to 10:1, depending on the nature of the source material. The end-to-end latency can be confined to a fraction of a frame, typically between a small number of lines down to below a single line.

This document provides the reference software of the ISO/IEC 21122 series. It has been successfully compiled and tested on Linux^{®1} and Windows^{TM1} operating systems at the time of writing.

1) Linux® and WindowsTM are examples of suitable products available commercially. This information is given for the convenience of users of this document and does not constitute an endorsement by ISO or IEC of these products. this document is a preview demendence of the document is a preview demendence of the document of the document

Information technology — JPEG XS low-latency lightweight image coding system —

Part 5: **Reference software**

1 Scope

This document contains the reference software of the ISO/IEC 21122 series. It acts as a guideline for implementation and as a reference for conformance testing.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO/IEC 21122-1, Information technology — JPEG XS low-latency lightweight image coding system — Part 1: Core coding system

ISO/IEC 21122-2, Information technology — JPEG XS low-latency lightweight image coding system — Part 2: Profiles and buffer models

ISO/IEC 21122-4, Information technology — JPEG XS low-latency lightweight image coding system — Part 4: Conformance testing

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 21122-1, ISO/IEC 21122-2, ISO/IEC 21122-4 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at https://www.iso.org/obp
- IEC Electropedia: available at <u>http://www.electropedia.org/</u>

3.2 Abbreviated terms

MSE mean square error

PSNR peak signal to noise ratio

4 Conventions

4.1 **Operators**

NOTE Many of the operators used in this document are similar to those used in the C programming language.

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