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Information technology — JPEG AI learning-based image coding system —

Part 5: File format

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This document was prepared by ITU-T (as Rec. ITU-T T.840.5) and drafted in accordance with its editorial rules, in collaboration with 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 6048 series can be found on the ISO and IEC websites.

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 www.iso.org/members.html and www.iec.ch/national-committees.

Summary

Recommendation ITU-T T.840.5 | ISO/IEC 6048-5 specifies the container file format for the JPEG AI learning-based image coding technology as defined in Rec. ITU-T T.840.1 | ISO/IEC 6048-1.

This Recommendation | International Standard was developed collaboratively by ITU-T Study Group 21 and ISO/IEC JTC 1/SC 29, and is published as common text Rec. ITU-T T.840.5 | ISO/IEC 6048-5.

History*

Edition	Recommendation	Approval	Study Group	Unique ID
1.0	ITU-T T.840.5	2026-01-13	21	11.1002/1000/16660

Keywords

Decoder, file format, ISOBMFF integration, JPEG AI, learning based image coding.

* To access the Recommendation, type the URL https://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID.

FOREWORD

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The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

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INTERNATIONAL STANDARD
ITU-T RECOMMENDATION

Information technology – JPEG AI learning-based image coding system: File format

1 Scope

This Recommendation | International Standard specifies container file formats for JPEG AI codestreams as specified in Rec. ITU-T T.840.1 | ISO/IEC 6048-1 and Rec. ITU-T T.840.2 | ISO/IEC 6048-2. It defines file formats for working with image and motion sequence files on computer platforms, allowing Internet-based and other communications.

This Recommendation | International Standard uses already existing specifications for file formats and extends them for the embedding of JPEG AI codestreams.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

– Rec. ITU-T T.840.1 (2025) | ISO/IEC 6048-1:2025 – *Information technology – JPEG AI learning-based image coding system: Core coding system.*

– Rec. ITU-T T.840.2 (2026) | ISO/IEC 6048-2:2026 – *Information technology – JPEG AI learning-based image coding system: Profiling.*

2.2 Paired Recommendations | International Standards equivalent in technical content

– Rec. ITU-T H.273 (2024) | ISO/IEC 23091-2:2025, *Coding-independent code points for video signal type identification.*

2.3 Additional references

– ISO/IEC 14496-12:2022, *Information technology – Coding of audio-visual objects – Part 12: ISO base media file format.*

– ISO/IEC 23008-12:2025, *Information technology – High efficiency coding and media delivery in heterogeneous environments – Part 12: Image File Format.*

Bibliography

[1] IETF RFC 6838 (2013), *Media Type Specifications and Registration Procedures*.