



ISO/IEC JTC 1/SC 29 "Coding of audio, picture, multimedia and hypermedia information"

Secretariat: JISC

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Liaison letter from SC 29/WG 1 to IETF on JPEG AI [SC 29/WG 1 N 101131]

Document type	Related content	Document date	Expected action
Project / Other		2025-01-16	INFO

Description

In accordance with Recommendation 103 at the 106th WG 1 Meeting, 2025-01-06/10, Virtual, the SC 29 Secretariat sends this liaison statement to IETF. [Requested action: For SC 29's information]



ISO/IEC JTC 1/SC 29/WG 1 "JPEG Coding of digital representations of images"
Convenorship: SNV
Convenor: Ebrahimi Touradj Dr



106-COM-Liaison letter to IETF on JPEG AI

Document type	Related content	Document date	Expected action
Meeting / Other	Meeting: VIRTUAL 6 Jan 2025	2025-01-10	



ISO/IEC JTC 1/SC29/WG1 N101131
106th meeting – Online – 6-10 January 2025

**INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
ORGANISATION INTERNATIONALE DE NORMALISATION**

**ISO/IEC JTC 1/SC 29/WG1
(ITU-T SG21)**

Coding of Still Pictures

JBIG

Joint Bi-level Image
Experts Group

JPEG

Joint Photographic
Experts Group

TITLE: Liaison letter to IETF on JPEG AI

SOURCE: JPEG (ISO/IEC JTC 1/SC 29/WG1)

PROJECT: -

STATUS: Final

REQUESTED

ACTION: SC29 to distribute

DISTRIBUTION: IETF

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JPEG AI has been published as an International Standard

The JPEG Committee (ISO/IEC JTC 1/SC 29/WG 1) is pleased to announce that JPEG AI, the first specification for end-to-end learning-based image coding, has now officially been adopted as an International Standard by ISO, IEC and ITU. This achievement marks a significant milestone in the field of digital imaging and compression, offering a new approach for efficient, high-quality image coding for storage and transmission.

The scope of JPEG AI is the creation of a learning-based image coding standard offering a single-stream, compact compressed domain representation, targeting both human visualization, with significant compression efficiency improvement over image coding standards in common use at equivalent subjective quality, and effective performance for image processing and computer vision tasks, with the goal of supporting a royalty-free baseline.

The JPEG AI standard leverages deep learning algorithms that learn the best way to compress images from vast amounts of image data, allowing them to adapt to a wide range of content, and offering enhanced perceptual visual quality and faster compression capabilities. The key benefits of JPEG AI are:

1. Superior Compression Efficiency: achieves higher compression efficiency leading to reduced storage requirements and faster transmission times compared to other state-of-the-art image coding solutions.
2. Implementation-friendly coding: the codec supports a wide array of devices with different characteristics, including mobile platforms, through optimized coding processes.
3. Compressed domain image processing and computer vision tasks: JPEG AI's architecture enables multi-purpose optimization for both human visualization and machine-driven tasks.

By creating the JPEG AI International Standard, the JPEG Committee has opened the door to more efficient and versatile image compression solutions that will benefit industries ranging from digital media and telecommunications to cloud storage and visual surveillance. This standard provides a framework for image compression to support rapidly growing visual data demands, enabling more



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efficient storage, faster transmission, and higher-quality visual experiences across a wide range of applications, from mobile devices to AI-driven processing technologies.