
**Information technology — JPEG 2000
image coding system —**

**Part 6:
Compound image file format**

*Technologies de l'information — Système de codage d'images
JPEG 2000 —*

Partie 6: Format de fichier d'image de composant



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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 15444-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 29, *Coding of audio, picture, multimedia and hypermedia information*, in collaboration with ITU-T. The identical text is published as Rec. ITU-T T.805 (01/2012).

This second edition is a consolidation of the first edition (ISO/IEC 15444-6:2003) and ISO/IEC 15444-6:2003/Amd.1:2007.

ISO/IEC 15444 consists of the following parts, under the general title *Information technology — JPEG 2000 image coding system*:

- *Part 1: Core coding system*
- *Part 2: Extensions*
- *Part 3: Motion JPEG 2000*
- *Part 4: Conformance testing*
- *Part 5: Reference software*
- *Part 6: Compound image file format*
- *Part 8: Secure JPEG 2000*
- *Part 9: Interactivity tools, APIs and protocols*
- *Part 10: Extensions for three-dimensional data*
- *Part 11: Wireless*
- *Part 12: ISO base media file format*
- *Part 13: An entry level JPEG 2000 encoder*
- *Part 14: XML structural representation and reference*

INTERNATIONAL STANDARD

RECOMMENDATION ITU-T

**Information technology – JPEG 2000 image coding system:
Compound image file format**

1 Scope

This Recommendation | International Standard defines a normative but optional file format for storing compound images using the JPEG 2000 file format family architecture. This format is an extension of the JP2 file format defined in Rec. ITU-T T.800 | ISO/IEC 15444-1 Annex I and uses boxes defined for both the JP2 file format and the JPX file format defined in Rec. ITU-T T.801 | ISO/IEC 15444-2 Annex M. This Recommendation | International Standard is useful for applications storing multiple pages, images with mixed content, and/or images that need more structure than provided in JP2.

Applications that implement this file format shall implement it as described in this Recommendation | International Standard. This Recommendation | International Standard:

- specifies a binary container for multiple bi-level and continuous-tone images used to represent a compound image;
- specifies a mechanism by which multiple images can be combined into a single compound image, based on the mixed raster content (MRC) model;
- specifies a mechanism for grouping multiple images in a hierarchy of layout objects, pages and page collections;
- specifies a mechanism for storing JPEG 2000 and other compressed image data formats;
- specifies a mechanism by which metadata can be included in files specified by this Recommendation | International Standard.

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

- Recommendation ITU-T T.44 (1999) | ISO/IEC 16485/Amd 1:2000, *Information technology – Mixed Raster Content (MRC)*.
- Recommendation ITU-T T.44 Amd.1 (1999) | ISO/IEC 16485:2000 Amd 1, *Accommodation of new Annex B*.
- Recommendation ITU-T T.45 (2000), *Run-length Colour Encoding*.
- Recommendation ITU-T T.50 (1992) | ISO/IEC 646:1991, *International Reference Alphabet (IRA) (Formerly International Alphabet No. 5 or IA5) – Information technology – 7-bit coded character set for information interchange*.
- Recommendation ITU-T T.81 (1992) | ISO/IEC 10918-1:1994, *Information technology – Digital compression and coding of continuous-tone still images: Requirements and guidelines*.
- Recommendation ITU-T T.82 (1993) | ISO/IEC 11544:1993, *Information technology – Coded representation of picture and audio information – Progressive bi-level image compression*.
- Recommendation ITU-T T.83 (1994) | ISO/IEC 10918-2:1995, *Information technology – Digital compression and coding of continuous-tone still images: Compliance testing*.
- Recommendation ITU-T T.84 (1996) | ISO/IEC 10918-3:1997, *Information technology – Digital compression and coding of continuous-tone still images: Extensions*.

- Recommendation ITU-T T.84 Amendment 1 (1999) | ISO/IEC 10918-3:1997/Amd 1:1999, *Provisions to allow registration of new compression types and versions in the SPIFF header.*
- Recommendation ITU-T T.86 (1998) | ISO/IEC 10918-4:1999, *Information technology – Digital compression and coding of continuous-tone still images: Registration of JPEG Profiles, SPIFF Profiles, SPIFF Tags, SPIFF colour Spaces, APPn Markers, SPIFF Compression types and Registration authorities (REGAUT).*
- Recommendation ITU-T T.87 (1998) | ISO/IEC 14495-1:2000, *Information technology – Lossless and near-lossless compression of continuous-tone still images – Baseline.*
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- Recommendation ITU-T T.800 (2002) | ISO/IEC 15444-1:2004, *Information technology – JPEG 2000 image coding system: Core coding system.*
- Recommendation ITU-T T.801 (2002) | ISO/IEC 15444-2:2004, *Information technology – JPEG 2000 image coding system: Extensions.*
- Recommendation ITU-T T.803 (2002) | ISO/IEC 15444-4:2004, *Information technology – JPEG 2000 image coding system: Conformance testing.*

2.2 ITU, IEC and ISO references

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- Recommendation ITU-T T.6 (1988), *Facsimile coding schemes and coding control functions for Group 4 facsimile apparatus.*
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- ISO 8601:2000, *Data elements and interchange formats – Information interchange – Representation of dates and times.*
- ISO/IEC 8859-1:1998, *Information technology – 8-bit single-byte coded graphic character sets – Part 1: Latin alphabet No. 1.*
- ISO/IEC 11578:1996, *Information technology – Open Systems Interconnection – Remote Procedure Call (RPC).*

2.3 Additional references

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