

# American National Standard

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*Information technology - JPEG 2000 image coding system - Part 6: Compound image file format*

**Developed by**



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## INCITS/ISO/IEC 15444-6:2013[2014]

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**Adopted by INCITS (InterNational Committee for Information Technology Standards) as an American National Standard.**

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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*

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## 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*.