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

**Part 14:
XML representation and reference**

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

Partie 14: Représentation et référence XML



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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.

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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 representation and reference*

INTERNATIONAL STANDARD**RECOMMENDATION ITU-T**

**Information technology – JPEG 2000 image coding system –
XML representation and reference**

1 Scope

This Recommendation | International standard specifies an XML document, referred to as JPXML, which is designed primarily for representing JPEG 2000 file format and marker segments in the codestream, and a referring method for embedding internal data in a JPEG 2000 image.

This Recommendation | International Standard

- specifies JPXML conversion rules for general box file formats;
- specifies JPXML conversion rules for JPEG 2000 family file formats and codestream segments;
- specifies a complete referring location path to address to exact box or codestream data in an image;
- provides guidance on processes for converting source image data to an XML structural document;
- provides guidance on how to implement these processes in practice.

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 Recommendation | International Standards

- 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.802 (2005) | ISO/IEC 15444-3:2007, *Information technology – JPEG 2000 image coding system: Motion JPEG 2000*.
- Recommendation ITU-T T.805 (2012) | ISO/IEC 15444-6 (2013), *Information technology – JPEG 2000 image coding system: Compound image file format*.
- Recommendation ITU-T T.807 (2006) | ISO/IEC 15444-8:2007, *Information technology – JPEG 2000 image coding system: Secure JPEG 2000*.
- Recommendation ITU-T T.808 (2005) | ISO/IEC 15444-9:2005, *Information technology – JPEG 2000 image coding system: Interactivity tools, APIs and protocols*.
- Recommendation ITU-T T.809 (2011) | ISO/IEC 15444-10:2011, *Information technology – JPEG 2000 image coding system: Extensions for three-dimensional data*.
- Recommendation ITU-T T.810 (2006) | ISO/IEC 15444-11:2007, *Information technology – JPEG 2000 image coding system: Wireless*.
- Recommendation ITU-T T.812 (2007) | ISO/IEC 15444-13:2008, *Information technology – JPEG 2000 image coding system: Wireless*.

2.2 Paired Recommendations | International Standards equivalent in technical content

- Recommendation ITU-T T.832 (2009), *Information technology – JPEG XR image coding system: An entry level JPEG 2000 encoder*.
ISO/IEC 29199-2:2009, *Information technology – JPEG XR image coding system – Part 2: Image coding specification*.

- Recommendation ITU-T T.833 (2010), *Information technology – JPEG XR image coding system – Motion JPEG XR*
ISO/IEC 29199-3:2010, *Information technology – JPEG XR image coding system – Part 3: Motion JPEG XR*.
- ISO 12639:1998, *Graphic technology – Prepress digital data exchange – Tag image file format for image technology (TIFF/IT)*.

2.3 Additional references

- ISO/IEC 646:1991, *Information technology – ISO 7-bit coded character set for information interchange*.
- ISO/IEC 15444-12:2012, *Information technology – JPEG 2000 image coding system – Part 12: ISO base media file format*.
- IETF RFC 2045 (1996), *Multipurpose Internet Mail Extensions (MIME) Part One*.
- IETF RFC 2279 (1998), *UTF-8, A transformation format of ISO 10646*.
- IETF RFC 4648 (2006), *The Base16, Base32, and Base64 Data Encodings*.
- W3C Recommendation (2009), *Namespaces in XML 1.0 (Third Edition)*.
- W3C Recommendation (2008), *Extensible Markup Language (XML), Version 1.0 (Fifth Edition)*.
- W3C Recommendation (2004), *XML Schema Part 0: Primer*.
- W3C Recommendation (2004), *XML Schema Part 1: Structures*.
- W3C Recommendation (2004), *XML Schema Part 2: Datatypes*.
- W3C Recommendation (2010), *XML Path Language (XPath) 2.0*.