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2004-09-15

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

*Technologies de l'information — Système de codage d'image JPEG
2000: Système de codage de noyau*

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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.

The International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) draw attention to the fact that it is claimed that compliance with this document may involve the use of patents, as indicated in Table L.1.

This part of ISO/IEC 15444 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 ITU-T Rec. T.800.

This second edition cancels and replaces the first edition (ISO/IEC 15444-1:2000), of which it constitutes a minor revision. It also incorporates the Amendment ISO/IEC 15444-1:2000/Amd.1:2002 and the Technical Corrigenda ISO/IEC 15444-1:2000/Cor.1:2002 and ISO/IEC 15444-1:2000/Cor.2:2002.

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 9: Interactivity tools, APIs and protocols*

The following part is under preparation:

- *Part 8: Secure JPEG 2000*

**INTERNATIONAL STANDARD
ITU-T RECOMMENDATION**

Information technology – JPEG 2000 image coding system: Core coding system

1 Scope

This Recommendation | International Standard defines a set of lossless (bit-preserving) and lossy compression methods for coding bi-level, continuous-tone grey-scale, palletized color, or continuous-tone colour digital still images.

This Recommendation | International Standard:

- specifies decoding processes for converting compressed image data to reconstructed image data;
- specifies a codestream syntax containing information for interpreting the compressed image data;
- specifies a file format;
- provides guidance on encoding processes for converting source image data to compressed image data;
- provides guidance on how to implement these processes in practice.

2 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.

(standards.iteh.ai)

2.1 Identical Recommendations | International Standards

- ITU-T Recommendation T.81 (1992) | ISO/IEC 10918-1:1994, *Information technology – Digital compression and coding of continuous-tone still images: Requirements and guidelines*.
- ITU-T Recommendation T.88 (2000) | ISO/IEC 14492:2001, *Information technology – Lossy/lossless coding of bi-level images*.
- ISO/IEC 646:1991, *Information technology – ISO 7-bit coded character set for information interchange*.
- ISO 8859-15:1999, *Information technology – 8-bit single-byte coded graphic character sets – Part 15: Latin alphabet No. 9*.
- ITU-T Recommendation T.84 (1996) | ISO/IEC 10918-3:1997, *Information technology – Digital compression and coding of continuous-tone still images: Extensions*.
- ITU-T Recommendation T.84 (1996)/Amd.1 (1999) | ISO/IEC 10918-3:1997/Amd.1:1999, *Information technology – Digital compression and coding of continuous-tone still images: Extensions – Amendment 1: Provisions to allow registration of new compression types and versions in the SPIFF header*.
- ITU-T Recommendation 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)*.
- ITU-T Recommendation T.87 (1998) | ISO/IEC 14495-1:1999, *Lossless and near-lossless compression of continuous-tone still images – Baseline*.

2.2 Additional references

- Specification ICC.1:1998-09, *File format for Color Profiles*.
- IEC 61966-2-1:1999, *Multimedia systems and equipment – Colour measurement and management – Part 2-1: Colour management – Default RGB colour space – sRGB*.
- W3C REC-xml-19980210, *Extensible Markup Language (XML 1.0)*.
- IETF RFC 2279 (1998), *UTF-8, a transformation format of ISO 10646*.