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

Developed by



Where IT all begins



INCITS/ISO/IEC 15444-1:2016 (2019)

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword - Supplementary information](#)

This third edition cancels and replaces the second edition of ISO/IEC 15444-1:2004 which has been technically revised. It also incorporates ISO/IEC 15444-1:2004/Cor.1:2007, ISO/IEC 15444-1:2004/Cor.2:2008, ISO/IEC 15444-1:2004/Cor.3:2015, ISO/IEC 15444-1:2004/Cor.4:2015, ISO/IEC 15444-1:2004/Amd.1:2006, ISO/IEC 15444-1:2004/Amd.2:2009, ISO/IEC 15444-1:2004/Amd.3:2010, ISO/IEC 15444-1:2004/Amd.4:2013, ISO/IEC 15444-1:2004/Amd.5:2013, ISO/IEC 15444-1:2004/Amd.6:2013, ISO/IEC 15444-1:2004/Amd.7:2015 and ISO/IEC 15444-1:2004/Amd.8:2015.

ISO/IEC 15444-1:2016 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 800 (11/2015).

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1	Scope	1
2	References	1
2.1	Identical Recommendations International Standards	1
2.2	Additional references	1
3	Definitions	2
4	Abbreviations and symbols	6
4.1	Abbreviations	6
4.2	Symbols	7
5	General description	8
5.1	Purpose	8
5.2	Codestream	8
5.3	Coding principles	9
6	Encoder requirements	10
7	Decoder requirements	10
7.1	Codestream syntax requirements	11
7.2	Optional file format requirements	11
8	Implementation requirements	11
Annex A	– Codestream syntax	12
A.1	Markers, marker segments, and headers	12
A.2	Information in the marker segments	14
A.3	Construction of the codestream	15
A.4	Delimiting markers and marker segments	19
A.5	Fixed information marker segment	20
A.6	Functional marker segments	23
A.7	Pointer marker segments	32
A.8	In-bit-stream marker and marker segments	36
A.9	Informational marker segments	37
A.10	Codestream restrictions conforming to this Recommendation International Standard	39
Annex B	– Image and compressed image data ordering	55
B.1	Introduction to image data structure concepts	55
B.2	Component mapping to the reference grid	55
B.3	Image area division into tiles and tile-components	57
B.4	Example of the mapping of components to the reference grid (informative)	58
B.5	Transformed tile-component division into resolution levels and sub-bands	61
B.6	Division of resolution levels into precincts	62
B.7	Division of the sub-bands into code-blocks	63
B.8	Layers	64
B.9	Packets	65
B.10	Packet header information coding	66
B.11	Tile and tile-parts	71
B.12	Progression order	72
Annex C	– Arithmetic entropy coding	77
C.1	Binary encoding (informative)	77
C.2	Description of the arithmetic encoder (informative)	78
C.3	Arithmetic decoding procedure	89
Annex D	– Coefficient bit modelling	97
D.1	Code-block scan pattern within code-blocks	97
D.2	Coefficient bits and significance	97
D.3	Decoding passes over the bit-planes	98
D.4	Initializing and terminating	102
D.5	Error resilience segmentation symbol	103

This is a preview of "INCITS/ISO/IEC 15444...". [Click here to purchase the full version from the ANSI store.](#)

D.7	Vertically causal context formation	104
D.8	Flow diagram of the code-block coding	105
Annex E	– Quantization	107
E.1	Inverse quantization procedure	107
E.2	Scalar coefficient quantization (informative)	108
Annex F	– Discrete wavelet transformation of tile-components	110
F.1	Tile-component parameters	110
F.2	Discrete wavelet transformations	110
F.3	Inverse discrete wavelet transformation	110
F.4	Forward transformation (informative)	121
Annex G	– DC level shifting and multiple component transformations	131
G.1	DC level shifting of tile-components	131
G.2	Reversible multiple component transformation (RCT)	132
G.3	Irreversible multiple component transformation (ICT)	132
G.4	Chrominance component sub-sampling and the reference grid	133
Annex H	– Coding of images with regions of interest	134
H.1	Decoding of ROI	134
H.2	Description of the Maxshift method	134
H.3	Remarks on region of interest coding (informative)	135
Annex I	– JP2 file format syntax	138
I.1	File format scope	138
I.2	Introduction to the JP2 file format	138
I.3	Greyscale/Colour/Palettized/multi-component specification architecture	140
I.4	Box definition	142
I.5	Defined boxes	144
I.6	Adding intellectual property rights information in JP2	159
I.7	Adding vendor-specific information to the JP2 file format	159
I.8	Dealing with unknown boxes	162
Annex J	– Examples and guidelines	163
J.1	Software conventions adaptive entropy decoder	163
J.2	Selection of quantization step sizes for irreversible transformations	164
J.3	Filter impulse responses corresponding to lifting-based irreversible filtering procedures	165
J.4	Example of discrete wavelet transformation	166
J.5	Row-based wavelet transform	169
J.6	Scan-based coding	178
J.7	Error resilience	178
J.8	Implementing the Restricted ICC method outside of a full ICC colour management engine	179
J.9	An example of the interpretation of multiple components	183
J.10	An example of decoding showing intermediate steps	183
J.11	Visual frequency weighting	187
J.12	Encoder sub-sampling of components	189
J.13	Rate control	190
J.14	Guidelines on handling YCC codestream	194
J.15	Guidelines for digital cinema applications	195
Annex K	– Bibliography	211
K.1	General	211
K.2	Quantization and entropy coding	211
K.3	Wavelet transformation	211
K.4	Region of interest coding	212
K.5	Visual frequency weighting	212
K.6	Error resilience	212
K.7	Scan-based coding	213

This is a preview of "INCITS/ISO/IEC 15444...". [Click here to purchase the full version from the ANSI store.](#)

K.9	Guidelines for digital cinema applications	213
Annex L	– Patent statement	215
Annex M	– Elementary stream for broadcast applications	216
M.1	Introduction	216
M.2	Definitions.....	216
M.3	Access unit construction.....	216
M.4	Elementary stream marker box (superbox)	217

This is a preview of "INCITS/ISO/IEC 15444...". [Click here to purchase the full version from the ANSI store.](#)

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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 colour, 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.

NOTE – As this specification was first published as common text only after ISO/IEC JTC1 had approved the first edition in 2000, edition numbers in the ITU and ISO/IEC versions are offset by one. This is the second edition of ITU-T T.800 and the third edition of ISO/IEC 15444-1.

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.

2.1 Identical Recommendations | International Standards

- 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.84 (1996) | ISO/IEC 10918-3:1997, *Information technology – Digital compression and coding of continuous-tone still images: Extensions.*
- Recommendation ITU-T 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.*
- 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, *Lossless and near-lossless compression of continuous-tone still images – Baseline.*
- Recommendation ITU-T T.88 (2000) | ISO/IEC 14492:2001, *Information technology – Lossy/lossless coding of bi-level images.*
- Recommendation ITU-T T.810 (2006) | ISO/IEC 15444-11:2007, *Information technology – JPEG 2000 image coding system: Wireless.*
- 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.*

2.2 Additional references

- Recommendation ITU-R BT.601-6 (2007), *Studio encoding parameters of digital television for standard 4:3 and wide screen 16:9 aspect ratios.*