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AMENDMENT 1
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**Information technology — Open Document
Architecture (ODA) and Interchange
Format: Raster graphics content
architectures**

AMENDMENT 1

*Technologies de l'information — Architecture de document ouverte (ODA)
et format de transfert: Architecture de contenu graphique en points*

AMENDEMENT 1



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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. 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.

Amendment 1 to ISO/IEC 8613-7:1994 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in collaboration with ITU-T. The identical text is published as ITU-T Rec. T.417/Amd.1.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

**INFORMATION TECHNOLOGY –
OPEN DOCUMENT ARCHITECTURE (ODA) AND INTERCHANGE FORMAT:
RASTER GRAPHICS CONTENT ARCHITECTURES**

AMENDMENT 1

1) Subclause 2.1

Add by numerical order:

- CCITT 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.82 (1993) | ISO/IEC 11544:1993, *Information technology – Coded representation of picture and audio information – Progressive bi-level image compression.*

2) Subclause 2.3

Add at the end of this subclause:

- ITU-T Recommendation T.42 (1994), *Continuous-tone colour representation method for facsimile.*

3) Clause 3

Replace the paragraph by:

For the purpose of this Recommendation | International Standard, the definitions given in ITU-T Rec. T.411 | ISO/IEC 8613-1 apply.

For the purposes of this Recommendation | International Standard, the following definitions also apply.

3.1 JPEG definitions

The terms defined in CCITT Rec. T.81 | ISO/IEC 10918-1 apply.

3.2 JBIG definitions

The terms defined in ITU-T Rec. T.82 | ISO/IEC 11544 apply.

3.3 Additional definitions

The following terms are defined in this Specification.

3.3.1 (adaptive) (binary) arithmetic decoding: An entropy decoding procedure which recovers the sequence of symbols from the sequence of bits produced by the arithmetic encoder.

3.3.2 (adaptive) (binary) arithmetic encoding: An entropy encoding procedure which codes by means of a recursive subdivision of the probability of the sequence of symbols coded up to that point.

3.3.3 baseline (sequential): A particular sequential DCT-based encoding and decoding process specified in CCITT Rec. T.81 | ISO/IEC 10918-1, and which is required for all DCT-based decoding processes.

3.3.4 block-interleaved: The descriptive term applied to the repetitive multiplexing in a specific order of small groups of 8×8 blocks from each component in a scan.

3.3.5 component: One of the two-dimensional arrays which comprise an image.

- 3.3.6 entropy decoding:** A lossless procedure which recovers the sequence of symbols from the sequence of bits produced by the entropy encoder.
- 3.3.7 entropy encoding:** A lossless procedure which converts a sequence of input symbols into a sequence of bits such that the average number of bits per symbol approaches the entropy of the input symbols.
- 3.3.8 hierarchical:** A mode of operation for coding an image in which the first frame for a given component is followed by frames which code the differences between the source data and the reconstructed data from the preceding frame for that component. Resolution changes are allowed between frames.
- 3.3.9 Huffman encoding:** An entropy encoding procedure which assigns a variable length code to each input symbol. The more probable symbols are assigned shorter codes.
- 3.3.10 Huffman table:** The set of variable length codes required in a Huffman encoder and Huffman decoder.
- 3.3.11 interleaved:** The descriptive term applied to the repetitive multiplexing of small groups of data units from each component in a scan in a specific order.
- 3.3.12 JBIG:** The abbreviation of Joint Bi-level Image Experts Group. It is used as the synonym for ITU-T Rec. T.82 | ISO/IEC 11544.
- 3.3.13 JPEG:** JPEG is the abbreviation of Joint Photographic Experts Group. It is used as a synonym for CCITT Rec. T.81 | ISO/IEC 10918-1.
- 3.3.14 lossless:** A descriptive term for encoding and decoding processes and procedures in which the output of the decoding procedure(s) is identical to the input to the encoding procedure(s).
- 3.3.15 lossy:** A descriptive term for encoding and decoding processes which are not lossless.
- 3.3.16 non-information preserving:** See lossy.
- 3.3.17 non-interleaved:** The descriptive term applied to the data unit processing sequence when the scan has only one component.
- 3.3.18 progressive (coding):**
- a) One of the DCT-based processes defined in CCITT Rec. T.81 | ISO/IEC 10918-1 in which each scan typically improves the quality of the reconstructed image. [T.81 | ISO/IEC 10918-1].
 - b) A method of coding an image in which the image may be segmented into stripes, and then the entire image is first coded as a lowest resolution layer image and then is successively increased in resolution by means of differential layer images. This is compatible, by stripe/layer data reordering with progressive coding. [T.82 | ISO/IEC 11544].
- 3.3.19 quantization (uniform):** The procedure by which Discrete Cosine Transform (DCT) coefficients are linearly scaled in order to achieve compression.
- 3.3.20 quantization table:** The set of 64 quantization values used to quantize the DCT coefficients.
- 3.3.21 sample:** One element in the two-dimensional array which comprises a component.
- 3.3.22 sequential coding:** One of the lossless or DCT-based coding processes defined in the JPEG standard in which each component of the image is encoded within a single scan.
- 3.3.23 stripe:** A fixed vertical size region of an image which encompasses the entire horizontal width of that image.

4) Clause 4

Replace the existing abbreviations by:

AAH	Horizontal dimension of available area
AAV	Vertical Dimension of available area
BDH	Horizontal Block Dimension
BDV	Vertical Block Dimension
DL	Differential Layer
DP	Deterministic Prediction
EOFB	End-of-Facsimile-Block
JBIG	Joint Bi-level Image experts Group