

SLOVENSKI STANDARD
SIST ISO 12639:2004/Dodatek 1:2010
01-maj-2010

Grafična tehnologija - Izmenjava digitalnih podatkov v grafični pripravi - Slikovna tehnologija; slikovni format TIFF/IT - DODATEK 1: Uporaba kompresije JBIG2-Amd2 v slikovnem formatu TIFF/IT

Graphic technology - Prepress digital data exchange - Tag image file format for image technology (TIFF/IT) - AMENDMENT 1: Use of JBIG2-Amd2 compression in TIFF/IT

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Technologie graphique — Échange de données numériques de préimpression — Format de fichier d'image d'étiquette pour la technologie d'image - AMENDEMENT 1: Utilisation de la compression JBIG2-Amd2 dans le format de fichier d'image d'étiquette pour la technologie d'image

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37.100.99	Drugi standardi v zvezi z grafično tehnologijo	Other standards related to graphic technology

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Graphic technology — Prepress digital data exchange — Tag image file format for image technology (TIFF/IT)

AMENDMENT 1: Use of JBIG2-Amd2
compression in TIFF/IT

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*Technologie graphique — Échange de données numériques de
préimpression — Format de fichier d'image d'étiquette pour la
technologie d'image*

*SIST AMENDEMENT 1: Utilisation de la compression JBIG2-Amd2 dans le
format de fichier d'image d'étiquette pour la technologie d'image*
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Foreword

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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 technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member 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 shall not be held responsible for identifying any or all such patent rights.

Amendment 1 to ISO 12639:2004 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

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Graphic technology — Prepress digital data exchange — Tag image file format for image technology (TIFF/IT)

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Page 13, 7.2.6, Data format

At the end of the unnumbered list, add the following additional bullet:

— the JBIG2-Amd2-encoding scheme for the BP and SD formats (value 34715), see Annex L".

Page 14, Table 1, fourth column ("Compression"), row beginning with "Binary picture (BP)"

Replace "1,4 or 8" with "1, 4, 8 or 34715".

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Page 14, Table 1, fourth column ("Compression"), row beginning with "Screened data (SD)"

Replace "1,4 or 8" with "1, 4, 8 or 34715".
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Add the following Annex L before the Bibliography.

Annex L (informative)

Incorporating JBIG2-Amd2 compressed data into TIFF/IT

L.1 Incorporating JBIG2-Amd2 compressed data into TIFF/IT

This annex defines JBIG2-Amd2 compressed data that may be included in TIFF/IT-BP and TIFF/IT-SD images or files. The images described in this annex belong to TIFF/IT-BP or TIFF/IT-SD image types.

JBIG2-Amd2 compression may be used in TIFF/IT-BP and TIFF/IT-SD.

JBIG2-Amd2 compression shall not be used in TIFF/IT-BP/P1, -BP/P2, -SD/P1 or -SD/P2. JBIG2-Amd2 compression shall not be used in TIFF/IT-CT, -LW, -HC, -MP or -BL.

Unless other specifications are indicated in this annex, the compliant file, reader and writer for TIFF/IT-BP or TIFF/IT-SD with JBIG2-Amd2 compressed data shall accept the conforming level for TIFF/IT-BP or TIFF/IT-SD respectively.

In specifications of TIFF/IT-BP and TIFF/IT-SD for the JBIG2-Amd2 compressed data, classification marks and values of TIFF/IT fields basically conform to those of TIFF/IT-BP or TIFF/IT-SD images or files (see Tables 12 and 14).

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L.2 Requirement for incorporating JBIG2-Amd2 compressed data into TIFF/IT-BP or TIFF/IT-SD

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L.2.1 General

JBIG2-Amd2 compressed data in this annex are based on Amendment 2 to JBIG2 (JBIG2-Amd2), described in ISO/IEC 14492:2001/Amd.2:2003, which is a common text with ITU-T Rec. T.88/Amd.2. JBIG2-Amd2 may be based on sequential coding of the image pixels using arithmetic coding, which is specified in Annex E of ISO/IEC 14492:2001, which is a common text with ITU-T Rec. T.88, and a template to determine the coding state. This technique was used in ISO/IEC 11544 (JBIG), which is a common text with ITU-T Rec. T.82. JBIG2-Amd2 provides effective lossless compression for bi-level images, like the halftones used in printing.

A TIFF/IT-BP or TIFF/IT-SD image or file with the JBIG2-Amd2 compressed data shall have Compression field with the value of 34715.

259 Compression SHORT = 34715

TIFF/IT JBIG2-Amd2 compression procedure may be applied to TIFF/IT-BP and TIFF/IT-SD images. TIFF/IT JBIG2-Amd2 compression procedure shall not be applied to TIFF/IT images with the other compressed data.

NOTE JBIG2-Amd2 (ISO/IEC 14492:2001/Amd.2:2003, which is a common text with ITU-T Rec. T.88/Amd.2) was developed by ISO/IEC JTC 1/SC 29/WG 1 and published in 2003.

L.2.2 Usage of JBIG2-Amd2 compressed codestream for TIFF/IT-BP

In a TIFF/IT-BP file with the JBIG2-Amd2 compressed data, the TIFF/IT tag fields that are related to the JBIG2-Amd2 compressed data strip are StripOffsets and StripByteCounts (see Table 12). The counts of StripOffsets and StripByteCounts shall be 1. Other tag fields are not related to the descriptions of compressed strip format, and specify information related to the original (or uncompressed) TIFF/IT file format or image types to be reconstructed from the compressed image.

A JBIG2-Amd2 compressed codestream for TIFF/IT-BP in this annex has the following restrictions.

NOTE The term "Codestream" in this annex corresponds to "compressed strip data".

- a) A JBIG2-Amd2 compressed codestream contains four types of segments; profiles segment, page-information segment, immediate-lossless-generic-region segment, and end-of-page segment.
- b) A JBIG2-Amd2 compressed codestream consists of at least five segments; a profiles segment, a page-information segment, at least two immediate-lossless-generic-region segments, and an end-of-page segment as shown in Figure L.1.
- c) The referred-to-segment-count-and-retention-flags of the segment-headers of all segments shall be 0.
- d) All segments have no referred-to-segment number fields in their segment-headers.
- e) The segment-page-association in the segment-headers of all segments, except the profiles segment, shall be 1.
- f) The region-segment-bitmap-X-location in the all region-segment-information-fields shall be 0.
- g) The first segment in the codestream shall be a profiles segment.
 - 1) The segment-header-flags is 0x34.
 - 2) The segment-page-association in the segment-header shall be 0.
 - 3) The profiles-segment-data-part contains only one profile of 0x00000008.
- h) The second segment shall be a page-information segment.
 - 1) The segment-header-flags is 0x30.
 - 2) A value contained in a page-bitmap-width field in the page-information segment shall be the smallest multiple of 8 which is equal to or larger than ImageWidth field (256) of TIFF/IT (i.e. each line of the image is aligned to the byte boundary before compression and inserted bits are discarded at decompression).
 - 3) A value of the page-bitmap-height field in the page-information-segment shall be larger than the value of the ImageLength field (257) of TIFF/IT-BP by 1.
 - 4) The bit-1 in a page-stripping-information field shall be 0, to indicate that no refinement region segment is associated with the page.
- i) From the third segment to the segment that is followed by the last segment, the segments shall be immediate-lossless-generic-region segments.
 - 1) The segment-header-flags is 0x27.
 - 2) The value of the region-segment-bitmap-width field in the region-segment-data-header shall be equal to the values of page-bitmap-width field in the page-information segment.

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