This document is a preview generated by EVS

TRÜKITEHNOLOOGIA
Trükieelne digitaalne andmeedastus
PDFi kasutamine
Osa 1: Täielik andmeedastus CYMK värvisüsteemi andmeid kasutades (PDF/X-1 ja PDF/X-1a)

Graphic technology
Prepress digital data exchange
Use of PDF
Part 1: Complete exchange using CMYK data
(PDF/X-1 and PDF/X-1a)

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-ISO 15930-1:2007 "Trükitehnoloogia. Trükieelne digitaalne andmeedastus. PDFi kasutamine. Osa 1: Täielik andmeedastus CYMK värvisüsteemi andmeid kasutades (PDF/X-1 ja PDF/X-1a)" sisaldab rahvusvahelise standardi ISO 15930-1:2001 "Graphic technology - Prepress digital data exchange - Use of PDF - Part 1: Complete exchange using CMYK data (PDF/X-1 and PDF/X-1a)" identset ingliskeelset teksti.	This Estonian Standard EVS-ISO 15930-1:2007 consists of the identical English text of the International Standard ISO 15930-1:2001 "Graphic technology - Prepress digital data exchange - Use of PDF - Part 1: Complete exchange using CMYK data (PDF/X-1 and PDF/X-1a)".
Standard EVS-ISO 15930-1:2007 on kinnitatud Eesti Standardikeskuse 19.06.2009 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 19.06.2009 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from Estonian Centre for Standardisation.

Käsitlusala	**Scope**
Käesolev ISO 15930 osa täpsustab meetodeid, kuidas kasutada portatiivset dokumendiformaati (Portable Document Format - PDF) liidetud CYMK värvisüsteemi digitaalandmete edastamisel ühe korraga nii, et andmed jäävad terviklikuks ja on lõpptrükis taasesitatavad.	This part of ISO 15930 specifies the methods for the use of the Portable Document Format (PDF) for the dissemination of compound CMYK digital data, in a single exchange, that is complete and ready for final print reproduction.

ICS 35.240.30 IT rakendused info- ja dokumenditöös ning kirjastamisel
Võtmesõnad: trükitehnoloogia

Contents

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

ISO 15930-1 was prepared by Technical Committee ISO/TC 130, *Graphic technology*, with the support of ANSI Committee for Graphic Arts Technologies Standards (CGATS).

ISO 15930 consists of the following parts, under the general title *Graphic technology — Prepress digital data exchange — Use of PDF*:

— *Part 1: Complete exchange using CMYK data (PDF/X-1 and PDF/X-1a)*

— *Part 2: Guidelines for partial exchange of printing data (PDF/X-2)*

— *Part 3: Complete exchange suitable for colour managed workflows (PDF/X-3)*

Annexes A to D of this part of ISO 15930 are for information only.

Introduction

ISO 15930 defines methods for the exchange of digital data within the graphic arts industry and for the exchange of files between graphic arts establishments. It is a multi-part document where each part is intended to respond to different workflow requirements. These workflows differ in the degree of flexibility required. However, increasing flexibility can lead to the possibility of uncertainty or error. The goal throughout the various parts of ISO 15930 has been to maintain the degree of flexibility required while minimising the uncertainty.

Many printed documents are assemblies of partial pages and/or pages created at different locations and by different organizations. The merging of these individual elements into the final printing form and the subsequent printing may take place at different locations. Some of these elements may also be routed to multiple sites for incorporation into other documents. Each of these elements is referred to in ISO 15930 as a compound entity.

A variety of data formats and structures are used for the creation of this type of material, but with two prevalent kinds of underlying data structures. These are vector-based data for the encoding of line art and textual information; and raster-based data for the encoding of image information, including previously rasterized line art and textual information. Both kinds of data structures are required along with page description information in an open electronic workflow. The exchange of raster-based data using the TIFF/IT file format is defined in ISO 12639. The subject of ISO 15930 is a format for the exchange of object-based data where individual objects may be in either vector or raster data structures.

Part 1 of ISO 15930 defines a data format and its usage to permit the predictable dissemination of a compound entity to one or more locations as CMYK data, in a form ready for final print reproduction, by transfer of a single file. This file must contain all the content information necessary to process and render the document, as intended by the sender. This exchange requires no prior knowledge of the sending and receiving environments and is sometimes referred to as "blind" exchange. It is platform and transport independent.

These goals are accomplished by defining a specific use of the publicly available *Adobe Portable Document Format* as specified in Version 1.3 In order to achieve a level of exchange that avoids any ambiguity in interpretation of the file, it identifies a limited set of PDF objects which may be used and adds restrictions to the use, or form of use, of those objects, and/or keys within those objects. It includes two compliance levels, PDF/X-1 and PDF/X-1a, that differ only in their allowed use of OPI references, and encryption which are allowed in PDF/X-1 but not in PDF/X-1a.

Whereas PDF/X-1 and PDF/X-1a specify the exchange of complete material, primarily as CMYK data, with all elements present, there are occasions where this is not appropriate. In certain workflows some or all of the referenced elements may be more logically present at the receiving site, or may be exchanged at a different time. These include fonts, high resolution contone image files, or line art files. These exchanges will generally require prior agreement between sender and receiver. Further, evolving colour management capabilities may allow elements to be exchanged more expeditiously in colour spaces other than CMYK. The requirements for such situations are addressed in later parts of ISO 15930.

Although re-purposing of data is not a primary consideration or requirement of this part of ISO 15930, maximum flexibility will be maintained so that future requirements for re-purposing may be accommodated.

It is anticipated that a variety of products will be developed around PDF/X-1, such as readers (including viewers) and writers of PDF/X files, and products that offer combinations of these features. Different products will incorporate various capabilities to prepare, interpret and process conforming files based on the application needs as perceived by the suppliers of the products. However, it is important to note that a conforming reader must be able to read and appropriately process all files conforming to a specified conformance level.

v

The PDF/X-1 conformance level of this part of ISO 15930 is generally similar to ANSI CGATS.12/1-1999, *Graphic technology — Prepress digital data exchange — Use of PDF for composite data — Part 1: Complete exchange (PDF/X-1)*. ANSI CGATS.12/1 is based on *Portable Document Format Reference Manual* Version 1.2 as extended by Adobe Technical Note #5188. This part of ISO 15930 is based on the *Adobe Portable Document Format* Version 1.3.

Users are cautioned that there are currently three different conformance levels that may be associated with PDF/X readers and writers. Two of these are generally referred to as PDF/X-1 and are those compatible with ANSI CGATS.12/1-1999 and the PDF/X-1 compatibility level of this part of ISO 15930. It is recommended that these be referred to as PDF/X-1:1999 and PDF/X-1:2001 respectively. Further this part of ISO 15930 makes provision for a 2nd conformance level which does not allow OPI references or encryption. This should be referred to as PDF/X-1a:2001. While a PDF/X-1:2001 reader should accept and properly read files conforming to both PDF/X-1:2001 and PDF/X-1a:2001 conformance levels, readers meeting the other two conformance levels should not be expected to properly read files outside of their own conformance level.

An ongoing series of Application Notes [1] is maintained for the guidance of developers and users of the ISO PDF/X family of International Standards. They are available from NPES The Association for Suppliers of Printing, Publishing and Converting Technologies in the standards section at http://www.npes.org/standards/workroom.html.

Attention is drawn to the fact that it is claimed that compliance with this part of ISO 15930 may involve the use of a patent concerning data encryption (clause 6.17). ISO takes no position concerning the evidence, validity and scope of this patent right. The holder of this patent right has assured ISO that they are willing to negotiate licenses under reasonable and non-discriminatory terms and conditions with applicants throughout the world. Information may be obtained from: RSA Data Security, Inc., 100 Marine Parkway, Redwood City, CA 94065-1031, USA. Attention is also drawn to the possibility that some of the elements of this part of ISO 15930 may be the subject of patent rights other than those identified above. ISO shall not be held responsible for identifying any or all such patent rights.

Graphic technology — Prepress digital data exchange — Use of PDF —

Part 1:
Complete exchange using CMYK data (PDF/X-1 and PDF/X-1a)

1 Scope

This part of ISO 15930 specifies the methods for the use of the Portable Document Format (PDF) for the dissemination of compound CMYK digital data, in a single exchange, that is complete and ready for final print reproduction.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of ISO 15930. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of ISO 15930 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards.

ISO 12639, *Graphic technology — Prepress digital data exchange — Tag image file format for image technology (TIFF/IT)*

ANSI CGATS.12/1-1999, *Graphic technology — Prepress digital data exchange — Use of PDF for composite data — Part 1: Complete exchange (PDF/X-1)*

ICC.1:1998-09, *File Format for Color Profiles*, International Color Consortium

Adobe Portable Document Format, version 1.3, 2nd Ed., Adobe Systems Incorporated, Dated July 2000, ISBN 0-201-61588-6

Adobe Technical Note #5002 — *Encapsulated PostScript File Format Specification* — Version 3.0, 1 May 1992, Adobe Systems Incorporated

Adobe Technical Note #5044 — *Color Separation Conventions for PostScript Language Programs*, 12 February 1996, Adobe Systems Incorporated

Adobe Technical Note #5413 — *Recording Output Intents for Color Critical Workflows*, 22 January 2001, Adobe Systems Incorporated

Desktop Color Separation Specification 2.0, June 1993, revised May 1995, Quark Inc.

Draft TIFF Technical Note #2, 17 March 95, Tom Lane, the Independent JPEG Group

PostScript Language Reference Manual, third edition, 1999, Adobe Systems Incorporated, ISBN 0-201-37922-8

TIFF, Revision 6.0, June 3, 1992, Adobe Systems Incorporated