CGATS/ISO 15930-5:2004
(Identical to ISO 15930-5:2003)

AMERICAN NATIONAL STANDARD

Graphic technology — Prepress digital data exchange using PDF —

Part 5:
Partial exchange of printing data using PDF 1.4 (PDF/X-2)

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This standard is an identical adoption of ISO 15930-5:2003, an International Standard that was developed under ISO Technical Committee 130, Graphic Technology.

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Foreword

ANSI CGATS/ISO 15930-4 is an identical adoption of ISO 15930-4:2003. ISO 15930-4 was prepared by ISO Technical Committee 130, *Graphic technology*, with the support of the ANSI Committee for Graphic Arts Technologies Standards (CGATS).

Minor edits have been made to this standard to prepare it as an ANSI CGATS standard. No technical changes have been made.

The CGATS consensus body approved the national adoption of ISO 15930-5 for issuance as CGATS/ISO 15930-5 in accordance with the *ANSI Procedures for the National Adoption of ISO and IEC Standards as American National Standards* and the CGATS Operating Procedures.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ANSI shall not be held responsible for identifying any or all such patent rights. Neither ISO, ANSI nor CGATS shall be held responsible for identifying any or all such patent rights.

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 3: Complete exchange suitable for colour-managed workflows (PDF/X-3);

Part 4: Complete exchange of CMYK and spot colour printing data using PDF 1.4 (PDF/X-1a);

Part 5: Partial exchange of printing data using PDF 1.4 (PDF/X-2)

Part 6: Complete exchange of printing data suitable for colour-managed workflows using PDF 1.4 (PDF/X-3)

Introduction

CGATS/ISO 15930 (all parts) 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 CGATS/ISO 15930 has been to maintain the degree of flexibility required while minimizing 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 CGATS/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 CGATS/ISO 12639. The subject of CGATS/ISO 15930 is a format for the exchange of object-based data where individual objects may be in either vector or raster data structures.

PDF/X-2 (Part 5 of this standard) complements the other parts by defining a data format and its usage to permit the predictable dissemination of a compound entity to one or more locations, as colour-managed data, CMYK data, and/or spot colour data, by transfer of a file with some elements not included, but with provision for unique identification. An exchange identified by this part of this standard will often require communication between sender and receiver to select the mechanism by which elements not included may be identified.

While PDF/X-2 (this part of this standard) defines a data format and its usage to permit the predictable dissemination of a compound entity to one or more locations where some or all of the elements may be more logically present at the receiving site, or may be exchanged at a different time, there are circumstances when this is not appropriate. PDF/X-1a (Parts 1 and 4 of this standard) and PDF/X-3 (Parts 3 and 6 of this standard) specify methods for the exchange of material in which all elements and element resources are present as part of a single exchange and all of the information needed to process the material is either in the file or is specified within the appropriate part of this standard and its normative references.

It is anticipated that a variety of products will be developed around PDF/X, 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.

An ongoing series of Application Notes[2] is maintained for the guidance of developers and users of the PDF/X family of Standards. These Application Notes, and other documents relevant to PDF/X, are available from NPES The Association for Suppliers of Printing, Publishing and Converting Technologies in the NPES Standards Workroom at <http://www.npes.org/standards/tools.html>.

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CGATS/ISO 15930-5:2004

Graphic technology — Prepress digital data exchange using PDF —

Part 4:
Complete exchange of CMYK and spot colour printing data using PDF 1.4 (PDF/X-1a)

1   Scope

This part of ISO 15930 specifies the use of the Portable Document Format (PDF) Version 1.4 for the dissemination of digital data, where all elements necessary for final print reproduction are either included or provision is made for unique identification. Colour-managed, CMYK, and spot colour data are supported in any combination.

2   Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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)*

ISO 15930-3:2002, *Graphic technology — Prepress digital data exchange — Use of PDF — Part 3: Complete exchange suitable for colour-managed workflows (PDF/X-3)*

ISO 15930-4:2003, *Graphic technology — Prepress digital data exchange using PDF — Part 4: Complete exchange of CMYK and spot colour printing data using PDF 1.4 (PDF/X-1a)*

ISO 15930-6:2003, *Graphic technology — Prepress digital data exchange using PDF — Part 6: Complete exchange of printing data suitable for colour-managed workflows using PDF 1.4 (PDF/X-3)*

DCE 1.1: *Remote Procedure Call*. Open Group Technical Standard Document Number C706, August 1997. <http://www.opengroup.org/publications/catalog/c706.htm>

PDF Reference: *Adobe Portable Document Format Version 1.4*, 3rd Ed., Adobe Systems Incorporated (ISBN 0-201-75839-3)

PDF Reference: Adobe Portable Document Format, Version 1.4 errata dated 2003/06/18. Available from Internet <http://partners.adobe.com/asn/acrobat/docs/PDF14errata.txt>

XMP, *Extensible Metadata Platform, Version 1.5*, September 14, 2001, Adobe Systems Incorporated Available from Internet <http://www.npes.org/standards/tools.html>