BRITISH STANDARD

BS ISO 32000-1:2008

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Document management — Portable document format —

Part 1: PDF 1.7

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This British Standard is the UK implementation of ISO 32000-1:2008.

The UK participation in its preparation was entrusted by Technical Committee IDT/1, Document management applications, to Subcommittee IDT/1/2, Applications issues.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

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Document management — Portable document format —

Part 1: **PDF 1.7**

Gestion de documents — Format de document portable —

Partie 1: PDF 1.7

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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 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.

ISO 32000 was prepared by Adobe Systems Incorporated (as PDF Reference, sixth edition: Adobe Portable Document Format version 1.7, November 2006) and and was adopted, under a special “fast-track procedure”, by Technical Committee ISO/TC 171, *Document management application*, Subcommittee SC 2, *Application issues*, in parallel with its approval by the ISO member bodies.

ISO 32000 consists of the following parts, under the general title *Document Management — Portable document format*:

— *Part 1: PDF 1.7*

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Introduction

ISO 32000 specifies a digital form for representing documents called the Portable Document Format or usually referred to as PDF. PDF was developed and specified by Adobe Systems Incorporated beginning in 1993 and continuing until 2007 when this ISO standard was prepared. The Adobe Systems version PDF 1.7 is the basis for this ISO 32000 edition. The specifications for PDF are backward inclusive, meaning that PDF 1.7 includes all of the functionality previously documented in the Adobe PDF Specifications for versions 1.0 through 1.6. It should be noted that where Adobe removed certain features of PDF from their standard, they too are not contained herein.

The goal of PDF is to enable users to exchange and view electronic documents easily and reliably, independent of the environment in which they were created or the environment in which they are viewed or printed. At the core of PDF is an advanced imaging model derived from the PostScript® page description language. This PDF Imaging Model enables the description of text and graphics in a device-independent and resolution-independent manner. To improve performance for interactive viewing, PDF defines a more structured format than that used by most PostScript language programs. Unlike Postscript, which is a programming language, PDF is based on a structured binary file format that is optimized for high performance in interactive viewing. PDF also includes objects, such as annotations and hypertext links, that are not part of the page content itself but are useful for interactive viewing and document interchange.

PDF files may be created natively in PDF form, converted from other electronic formats or digitized from paper, microform, or other hard copy format. Businesses, governments, libraries, archives and other institutions and individuals around the world use PDF to represent considerable bodies of important information.

Over the past fourteen years, aided by the explosive growth of the Internet, PDF has become widely used for the electronic exchange of documents. There are several specific applications of PDF that have evolved where limiting the use of some features of PDF and requiring the use of others, enhances the usefulness of PDF. ISO 32000 is an ISO standard for the full function PDF; the following standards are for more specialized uses. PDF/X (ISO 15930) is now the industry standard for the intermediate representation of printed material in electronic prepress systems for conventional printing applications. PDF/A (ISO 19005) is now the industry standard for the archiving of digital documents. PDF/E (ISO 24517) provides a mechanism for representing engineering documents and exchange of engineering data. As major corporations, government agencies, and educational institutions streamline their operations by replacing paper-based workflow with electronic exchange of information, the impact and opportunity for the application of PDF will continue to grow at a rapid pace.

PDF, together with software for creating, viewing, printing and processing PDF files in a variety of ways, fulfils a set of requirements for electronic documents including:

- preservation of document fidelity independent of the device, platform, and software,
- merging of content from diverse sources—Web sites, word processing and spreadsheet programs, scanned documents, photos, and graphics—into one self-contained document while maintaining the integrity of all original source documents,
- collaborative editing of documents from multiple locations or platforms,
- digital signatures to certify authenticity,
- security and permissions to allow the creator to retain control of the document and associated rights,
- accessibility of content to those with disabilities,
- extraction and reuse of content for use with other file formats and applications, and
- electronic forms to gather data and integrate it with business systems.

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The International Organization for Standardization (ISO) draws attention to the fact that it is claimed that compliance with this document may involve the use of patents concerning the creation, modification, display and processing of PDF files which are owned by the following parties:

- Adobe Systems Incorporated, 345 Park Avenue, San Jose, California,95110-2704, USA

ISO takes no position concerning the evidence, validity and scope of these patent rights.

The holders of these patent rights have assured ISO that they are willing to negotiate licenses under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statements of the holders of these patent rights are registered with ISO. Information may be obtained from those parties listed above.

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Document management — Portable document format —

Part 1:
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IMPORTANT — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should therefore consider printing this document using a colour printer.

1 Scope

This International Standard specifies a digital form for representing electronic documents to enable users to exchange and view electronic documents independent of the environment in which they were created or the environment in which they are viewed or printed. It is intended for the developer of software that creates PDF files (conforming writers), software that reads existing PDF files and interprets their contents for display and interaction (conforming readers) and PDF products that read and/or write PDF files for a variety of other purposes (conforming products).

This standard does not specify the following:

- specific processes for converting paper or electronic documents to the PDF format;
- specific technical design, user interface or implementation or operational details of rendering;
- specific physical methods of storing these documents such as media and storage conditions;
- methods for validating the conformance of PDF files or readers;
- required computer hardware and/or operating system.

2 Conformance

2.1 General

Conforming PDF files shall adhere to all requirements of the ISO 32000-1 specification and a conforming file is not obligated to use any feature other than those explicitly required by ISO 32000-1.

NOTE 1 The proper mechanism by which a file can presumptively identify itself as being a PDF file of a given version level is described in 7.5.2, "File Header".

2.2 Conforming readers

A conforming reader shall comply with all requirements regarding reader functional behaviour specified in ISO 32000-1. The requirements of ISO 32000-1 with respect to reader behaviour are stated in terms of general functional requirements applicable to all conforming readers. ISO 32000-1 does not prescribe any specific technical design, user interface or implementation details of conforming readers. The rendering of conforming files shall be performed as defined by ISO 32000-1.

2.3 Conforming writers

A conforming writer shall comply with all requirements regarding the creation of PDF files as specified in ISO 32000-1. The requirements of ISO 32000-1 with respect to writer behaviour are stated in terms of general functional requirements applicable to all conforming writers and focus on the creation of conforming files. ISO 32000-1 does not prescribe any specific technical design, user interface or implementation details of conforming writers.