

Conforming to both PDF/A & PDF/UA Best Practice Guide



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Introduction

This document provides guidance and recommendations for application developers who want to create PDF files that conform to more than one ISO-standardized subset of PDF, specifically PDF/A (ISO 19005) and PDF/UA (ISO 14289). This guidance applies to developers using either PDF 1.7 or PDF 2.0.

This document is informative – it does not change the meaning of ISO standards. When in doubt, consult the text of the respective ISO standard(s).

Background

Modern regulations increasingly specify requirements for accessible documents. Consequently, many applications add PDF/UA support to existing PDF/A output capabilities. These existing capabilities may have been implemented many years ago based on references to old PDF specifications that lack guidance on modern features. For example, PDF/A-1 doesn't allow transparency, a basic feature of modern documents. This, and other limitations, prompted the development of PDF/A-2 and PDF/A-3, which are based on the ISO standard for PDF 1.7 (<u>ISO 32000-1:2008</u>).

The advent of PDF 2.0 (ISO 32000-2:2020) and its "companion" subsets, PDF/A-4 (archival) and PDF/UA-2 (accessibility), has raised the need for industry guidance on using PDF/A and PDF/UA together.

Compatibility guide

The following table summarises the PDF Association's compatibility recommendations for the various editions of PDF/A and PDF/UA. The rest of the document provides technical details and additional guidance.

PDF/A part	PDF/UA part	PDF version	Additional requirements and recommendations
PDF/A-1	Not recommended	1.4	-
PDF/A-2 or PDF/A-3	PDF/UA-1	1.7	The XMP Extension Schema for PDF/UA-1 metadata must be included. PDF/A conformance Level A is recommended.
PDF/A-4	PDF/UA-2	2.0	-

Reference specification

Regardless of the PDF version targeted, any PDF development effort should refer to <u>ISO 32000-</u> <u>2:2020</u> (PDF 2.0). This document, <u>available at no cost</u>, corrects long-standing errors and resolves many ambiguities in the specification of PDF 1.7 and earlier features while keeping track of the differences between PDF 2.0 and earlier versions.

Technical details

Application software should specify either PDF 1.7 or PDF 2.0 as the version in output files. PDF 2.0 is required if PDF 2.0-specific features (as defined by ISO 32000-2:2020) or PDF 2.0 extensions (as defined by various ISO Technical Specifications) are used.

WHY: Helps simplify application output code that creates PDFs, as PDF 1.7 includes features defined in earlier PDF 1.x versions. By versioning as PDF 1.7, developers can generally avoid implementing additional complex logic to correctly juggle included feature sets and PDF versions for each specific PDF file.

WHY: Assists end-users using outdated software since such software <u>should</u> warn users when encountering documents with unsupported PDF versions (such warnings are not guaranteed!). This helps avoid situations where outdated PDF software or assistive technology (AT) might incorrectly process a document because of a newer PDF version or feature mismatch.

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Combining PDF/A-1 and PDF/UA-1 is NOT RECOMMENDED.

WHY: PDF/A-1 (ISO 19005-1:2005) is based on an older specification (Adobe's PDF 1.4), which significantly predates ISO 32000-1:2008, the ISO-standardized PDF 1.7, which is the basis for PDF/UA-1 (ISO 14289-1:2014).

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Some validation software (e.g., those based on the <u>Arlington PDF Model</u>) can verify PDF versions and feature sets in detail.

Always use up-to-date PDF validation software.

WHY: Out-of-date validation software lacks the latest industry-agreed clarifications arising from discussions within the PDF Association's technical working groups.

WHY: Some validators may only check a single ISO-standardized subset of PDF at a time, so be sure that all declared conformance statements are individually validated.

PDF/A (all parts) and PDF/UA-1 define the concept of a "conforming viewer" or "conforming processor". Thus, each standard defines its own requirements for software needed to support these ISO-standardized subsets of PDF.

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