

PDF Programming

PDF for developers, Graphics, Imaging, Text, Fonts, Forms, Metadata, Security, Navigation, Project

Portable Document Format (PDF) is a standard representation of pages in a document. It is used for document interchange between document producers (word processors, report generators, CAD programs, specialist editing apps) and document consumers (on-screen viewers, printers, digital signature validators, forms engines, etc).

PDF became popular as the native file format for Adobe Acrobat and has been standardized by ISO, initially as ISO 32000-1:2008 (same as Adobe PDF 1.7) & recently ISO published a major update - [ISO/PRF 32000-2](#).

Pretty much every computing device that has an attached display and/or printer can display/print PDF files. The vast majority of modern document editing environments can output to PDF - hence it is an extremely popular shared representation of a publication.

This course is aimed at developers who wish to gain a low-level technical understanding of PDF and how they can use it programmatically from within their own applications. This course provides an excellent foundation for developers who wish to build their own PDF import/export libraries and those who wish to use one of the existing libraries available for this purpose.

Contents of One-Day Training Course	
<p>Target Audience Developers wishing to produce, transform and consume PDF files from their own applications.</p> <p>Prerequisites Software developers with experience of creating document editing apps, particularly their file formats.</p> <p>Knowledge of graphics programming (e.g. painter's algorithm) is required.</p>	<p>PDF Technical Overview Describing page representations Applying ink to a page Tour of functionality Relationship between PDF and PostScript</p> <p>PDF Concepts Coordinate system Painter's algorithm Imaging model Color management Transparency</p> <p>Document and Page Layout Overall file structure How each page is represented Contents of a page Common data</p> <p>Text And Fonts Typography in PDF Glyphs Fonts Ways to represent text Text objects</p> <p>Graphics PDF supports many 2D diagramming constructs, from line to Bézier curves to various graphical shapes State information Use of 3D Path construction</p> <p>Images Bitmaps and their use in PDF Supported imaging formats Rendering images on the page</p>
	<p>Color and Transparency Precisely specific color requirements CIE Masking Clipping</p> <p>Forms Forms options in PDF Designing forms Accessing form fields after completion Changes in forms for ISO/PRF 32000-2</p> <p>Metadata Attaching additional metadata to PDF Metadata formats Extensibility</p> <p>Digital Signatures Signing what uses can see Digitally signing a PDF file Verifying a digital signature Cryptographic options (algorithms etc.)</p> <p>Navigation Allowing users to easily navigate to pre-determined destinations within a document (hierarchy & thumbnails) Document outline Flexible inter-page navigation</p> <p>Multimedia Embedding video, audio and 3D in a document Formats supported Enabling media playing</p> <p>Project Write a project to programmatically create a PDF document</p>