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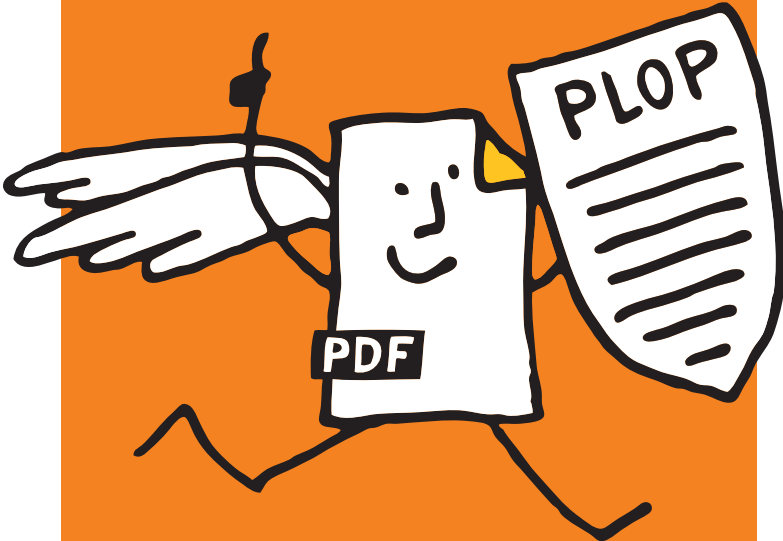
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PDFlib

PLOP 5.3

PDF

*Linearization,
Optimization,
Protection*

What is PDFlib PLOP?

PDFlib PLOP is a versatile tool for linearizing, optimizing, repairing, analyzing, encrypting and decrypting PDF documents. PLOP linearization and optimization features create efficient and small PDF documents for fast Web delivery. PLOP protection features encrypt or decrypt PDF documents and apply or remove permission settings, such as »printing not allowed« or »content extraction not allowed«. PLOP's repair mode automatically detects damaged PDF documents and fixes the problems if possible. PLOP analysis features can be used to query arbitrary properties of a PDF document. Document info entries and XMP metadata can be retrieved and set in a PDF/A and PDF/X conforming manner.

PDFlib PLOP Features

Linearization

With PDFlib PLOP you can linearize a PDF document for fast delivery over the Web (byteserving). Byteserving increases the perceived download speed since the first page is already visible while the remainder of the document is downloaded in the background.

Optimization

PLOP can significantly reduce the file size of a PDF document without affecting quality. It achieves this by removing unnecessary or redundant identical objects, such as repeatedly embedded fonts, images, identical ICC color profiles, etc.

Password Security

PLOP can apply user and master passwords, and set permission restrictions to prevent the document from being printed with Acrobat, disallow text extraction or modification, etc.

PLOP supports strong AES-256 encryption and Unicode passwords. With PLOP you can:

- ▶ encrypt a PDF document with user or master password, or both;
- ▶ remove PDF encryption (if you know the master password);
- ▶ add or remove permission restrictions, e.g. »text extraction not allowed« (if you know the master password).

Certificate Security

PLOP also supports certificate security which works similar to e-mail encryption. PDF documents can be encrypted for a number of recipients, where each recipient is identified with a certificate (public key). Only legitimate recipients can open the document with the corresponding digital ID (private key). Since certificate security is an integral part of the PDF format specification it works in Acrobat and Adobe Reader without the need for any plugin or other custom software.

Certificate security offers several advantages over password security:

- ▶ no passwords must be distributed to the document recipients;
- ▶ individual permission restrictions can be specified for each recipient or groups of recipients;
- ▶ recipients cannot pass on document passwords to unauthorized third parties.

With PLOP you can encrypt PDF documents with certificates, apply permission restrictions, and decrypt documents which are protected with certificate security (provided you have a suitable digital ID).

The advantages of certificate security can be leveraged e.g. for securely distributing transaction documents or commercial content.

Repair Mode

PLOP detects various structural PDF problems and automatically repairs the document. PLOP can also fix certain XMP problems and optionally remove damaged XMP metadata.

PDF Analysis with pCOS

The PLOP library includes the pCOS programming interface for querying details about a PDF document, e.g.

- ▶ extract document info entries and XMP metadata
- ▶ list fonts and other resources
- ▶ query page sizes
- ▶ query security status, encryption scheme, permission settings
- ▶ many more PDF properties (see separate pCOS datasheet).

PLOP also includes the pCOS command-line tool.

XMP Metadata

Metadata («data about data») is an important topic in many areas of application software. XMP (Extensible Metadata Platform) is an XML-based framework with many predefined metadata properties. XMP is integrated in Acrobat/PDF, and much more powerful than simple document info entries. XMP is required for PDF/A and other ISO standards. Many industry groups have published XMP-based recommendations for vertical applications.

With PLOP you can insert XMP metadata in PDF documents and extract XMP from PDF. Inserted XMP is validated to ensure correct and standard-conforming output. If the input document conforms to PDF/A or PDF/X, PLOP ensures the XMP rules set forth in the respective standard.

XMP insertion with PLOP can be used in the following and other situations:

- ▶ Add XMP metadata to PDF/A documents, including support for XMP extension schemas as defined in the PDF/A standard.
- ▶ Add XMP metadata describing the scanning process for digitized legacy documents, also according to PDF/A.
- ▶ Add XMP metadata according to the Ghent Workgroup (GWG) Ad Ticket scheme.
- ▶ Add company-specific XMP metadata.

Document Info Entries

With PLOP you can add new document information entries or replace the values of existing info entries. Both predefined and custom entries can be set. If the input document contains XMP document metadata, all predefined info entries are synchronized to the XMP metadata in order to keep the metadata consistent (this is a requirement of PDF/A).

PDF Versions and Standards

PLOP supports all relevant PDF versions and standards:

- ▶ PLOP processes all PDF versions up to Acrobat DC, i.e. PDF 1.7 (ISO 32000-1) up to extension level 8. PLOP can also process documents according to PDF 2.0 (ISO 32000-2).
- ▶ PLOP is aware of the PDF/A-1/2/3 (ISO 19005) archiving standards: if the input document conforms to PDF/A, the output document is guaranteed to conform as well. PLOP fully supports XMP extension schemas as required by PDF/A.
- ▶ Similarly, PLOP is aware of the PDF/X-1a/3/4/5 (ISO 15930) print production standards, PDF/VT-1/2 (ISO 16612-2) for variable and transactional printing and PDF/UA-1 (ISO 14289) for accessible PDF.

PLOP Library or Command-Line Tool?

PLOP is available as a programming library (component) for various development environments, and as a command-line tool for batch operations. Library and command-line tool offer similar features, but are suitable for different deployment tasks.

The PLOP programming library is used...

...for integration into desktop or server applications. Examples for using the library with all supported language bindings are included in the PLOP package. Since the PLOP library accepts PDF input documents from a disk file or directly in memory, it can easily be combined with other products.

The PLOP programming library also contains the pCOS interface for retrieving a variety of PDF document properties.

The PLOP command-line tool is suited...

...for batch processing PDF documents. It doesn't require any programming, but offers powerful command-line options which can be used to integrate it into complex workflows. The PLOP command-line tool can also be called from environments which do not support the use of the PLOP library.

Supported Development Environments

PDFlib PLOP is everywhere – it runs on practically all computing platforms. We offer 32-bit and 64-bit packages for all common flavors of Windows, macOS, Linux and Unix, as well as for IBM zSeries mainframe systems. Versions for iOS and Android are also available.

The PLOP core is written in highly optimized C and C++ for maximum performance and small overhead. Via a simple API (Application Programming Interface) the PLOP functionality is accessible from a variety of development environments:

- ▶ COM for use with VB, ASP, etc.
- ▶ C and C++
- ▶ Java
- ▶ .NET for use with C#, VB.NET, ASP.NET, etc.
- ▶ Objective-C
- ▶ Perl
- ▶ PHP
- ▶ Python
- ▶ Ruby

PLOP DS for digitally signing PDF

The extended version PLOP DS supports all features of PLOP plus the ability to apply digital signatures to PDF documents. Please refer to the separate PLOP DS datasheet for more information.

Benefits of using PDFlib Software

Rock-solid Products

Tens of thousands of programmers worldwide successfully use our software. PDFlib products meet all quality and performance requirements for server deployment. All products are suitable for robust 24x7 server deployment and unattended batch processing.

Speed and Simplicity

PDFlib products are incredibly fast – up to thousands of pages per second. The programming interface is straightforward and easy to learn.

PDFlib Products all over the World

Our products support all international languages as well as Unicode. They are used by customers in all parts of the world.

Professional Support

If there's a problem, we will try to help. We offer commercial support to meet the requirements of your business-critical applications. By adding support you will have access to the latest versions, and have guaranteed response times should any problems arise.

Licensing

We offer various licensing options for server licenses, integration and site licenses, and source code licenses. Support contracts for extended technical support with short response times and free updates are also available.

About PDFlib GmbH

PDFlib GmbH is completely focused on PDF technology. Customers worldwide use PDFlib products since 1997. The company closely follows development and market trends, such as ISO standards for PDF. PDFlib GmbH products are distributed all over the world with major markets in North America, Europe, and Japan.

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Fully functional evaluation versions including documentation and samples are available on our Web site. For more information please contact:



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pCOS

PDF

Information Retrieval Interface

What is the pCOS Interface?

pCOS provides a simple and elegant facility for retrieving any information from a PDF document which is not part of the page contents (page contents can be extracted with PDFlib TET). The pCOS interface is not a standalone product, but an integrated part of the following products:

- ▶ PDFlib+PDI and PDFlib Personalization Server (PPS) (pCOS is not included in the base PDFlib product)
- ▶ Text and Image Extraction Toolkit (PDFlib TET)
- ▶ In PDFlib TET PDF IFilter you can use pCOS to retrieve information from PDF documents and use it for indexing and search.
- ▶ PDFlib PLOP and PLOP DS

These products include the pCOS programming interface. PLOP and PLOP DS packages also include the pCOS command-line tool.

With pCOS you can extract a variety of interesting items and create output for different purposes. By processing multiple PDF documents with a single call you can easily create summaries of document info entries, page formats, fonts, or any other property. Combined with tabular output this provides a powerful PDF administration tool.

There are many application scenarios for using pCOS within PDF workflows, but you can also use pCOS as a tool for learning or debugging PDF. Here are some typical situations:

- ▶ Check incoming documents for predefined criteria
- ▶ Identify problem files in a large collection
- ▶ Create metadata summaries for document management
- ▶ quality assurance before publishing documents
- ▶ document retrieval and repository workflows
- ▶ summarize the bookmarks
- ▶ extract components of PDF documents, e.g. ICC profiles
- ▶ Check PDFs for security problems (JavaScript etc.)

pCOS Cookbook

The pCOS Cookbook is a collection of programming examples which demonstrate the use of pCOS for various PDF retrieval tasks. The Cookbook is available on the PDFlib Web site and includes code, input documents and pCOS output.

pCOS Features

Information Retrieval

With pCOS you can extract a variety of interesting items, such as:

- ▶ document info entries and XMP metadata
- ▶ general information: linearization and tagged PDF status, encryption details and permission settings, number of pages and fonts
- ▶ fonts with name, embedding status, etc.
- ▶ image data, such as bit depth, color space, compression, XMP
- ▶ color space details
- ▶ target URLs and coordinates of Web links
- ▶ bookmarks and the corresponding page numbers, e.g. to create a table of contents
- ▶ form field data: full field names, contents, position, etc.
- ▶ page size, CropBox, page rotation
- ▶ status of ISO standards: PDF/A, PDF/E, PDF/UA, PDF/VCR, PDF/VT and PDF/X
- ▶ geospatial reference information
- ▶ list or extract file attachments
- ▶ layer names, page labels, article threads
- ▶ annotation details
- ▶ list comments along with the reviewer's name
- ▶ digital signature details: name of signature field, signed/unsigned, name of signer, PAdES
- ▶ extract ICC output intent profiles from PDF/X or PDF/A documents
- ▶ Block properties for PDFlib Personalization Server (PPS)
- ▶ JavaScript on document, page, annotation, or field level
- ▶ retrieve XML invoice data from ZUGFeRD documents
- ▶ properties of PDF Packages/Portfolios

Supported Input

pCOS supports all flavors of PDF input:

- ▶ all PDF versions up to Acrobat DC, i.e. PDF 1.7 (ISO 32000-1) up to extension level 8 as well as PDF 2.0 (ISO 32000-2)
- ▶ encrypted documents (password may be required)
- ▶ damaged PDF input documents are repaired if possible

Output Formats

pCOS can create output for different purposes:

- ▶ plain text output
- ▶ Unicode text output in UTF-8 or UTF-16 formats
- ▶ tabular output for processing with a spreadsheet or database
- ▶ binary data, e.g. ICC profiles or file attachments
- ▶ user-defined output formats for custom post-processing

pCOS Paths: Simple Syntax for PDF Objects

Instead of getting bogged down by complex tree structures, e.g. for bookmarks or form fields, you can easily access PDF objects by using the simple pCOS path syntax. It offers convenient shortcuts for accessing commonly used PDF objects, such as pages, fonts, bookmarks, form fields etc.

pCOS Library or Command-Line Tool?

pCOS is available as a programming library (component) for many development environments, and as a command-line tool for batch operations. Note that the pCOS command-line tool is included only in the PDFlib PLOP and PLOP DS product packages. Programming interface and command-line tool offer similar features, but are suitable for different deployment tasks.

The pCOS Programming Interface is used...

...for integration into desktop or server applications. Simple examples for using the library with all supported language bindings are included in the product packages. Many more examples are available in the pCOS Cookbook.

The pCOS Command-Line Tool is suited...

...for batch processing PDF documents. It doesn't require any programming, but offers powerful command-line options which can be used to integrate it into complex workflows. The pCOS command-line tool extends the features of the library:

- ▶ simple retrieval of common PDF elements, such as bookmarks, annotations, metadata, form fields, etc.
- ▶ extended mode for querying more complex objects and customizing the output format
- ▶ extract data items such as file attachments, ICC profiles, etc.
- ▶ emit information as comma-separated values or a user-defined format for import into a spreadsheet or database
- ▶ recursion feature for dumping composite PDF objects such as dictionaries and arrays

Evaluation

All products which contain the pCOS interface are available for evaluation. Fully functional evaluation versions including documentation and samples are available on our Web site.

Benefits of using PDFlib Software

Rock-solid Products

Tens of thousands of programmers worldwide are working with our software. PDFlib meets all quality and performance requirements for server deployment. All PDFlib products are suitable for robust 24x7 server deployment and unattended batch processing.

Speed and Simplicity

PDFlib products are incredibly fast – up to thousands of pages per second. The programming interface is straightforward and easy to learn.

PDFlib all over the World

Our products support all international languages as well as Unicode. They are used by customers in all parts of the world.

Professional Support

If there's a problem, we will try to help. We offer commercial support to meet the requirements of your business-critical applications. By adding support you will have access to the latest versions, and have guaranteed response times should any problems arise.

Licensing

We offer various licensing programs for server licenses, integration and site licenses, and source code licenses. Support contracts for extended technical support with short response times and free updates are also available.

About PDFlib GmbH

PDFlib GmbH is completely focused on PDF technology. Customers are using our products since 1997. In 2006 we were one of the founding members of the PDF Association (formerly PDF/A Competence Center). The company closely follows development and market trends such as ISO standards for PDF. PDFlib GmbH products are distributed all over the world with major markets in Europe, North America and Japan.

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