



Release Notes

3-Heights™ PDF Tools

Version 1.91

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1 Overview

The 3-Heights™ PDF tools represent the newest product line from PDF Tools AG. The 3-Heights™ PDF tools are available as programming libraries (APIs), command line tools and Windows Services. The tools allow for a wide variety of manipulation of PDF files including viewing, printing, extraction of information, conversion, validation, repairing, and optimization.

2 Technical Support

Please report problems by contacting our support department by mail:

pdfsupport@pdf-tools.com

3 How to Download

The 3-Heights™ PDF tools can be downloaded from the product description pages on our website. There is no charge for downloading evaluation versions (valid for a 30 day period).

<http://www.pdf-tools.com/pdf/products-pdf-pdfa.aspx>

4 System Requirements

All of the 3-Heights™ PDF tools are available for:

- Windows 7
- Windows Vista
- Windows XP
- Windows 2008
- Windows 2003
- Windows 2000

Most of the tools are also available for:

- IBM AIX
- Sun Solaris (2.7 and later)
- HP-UX 11.0 incl. IA64
- Free BSD
- Linux
- Mac OS X

Other platforms are available on request. Please refer to the individual product pages to obtain information on supported operating system platforms.

5 New Products

5.1 3-Heights™ PDF Merge Split API

The 3-Heights™ PDF Merge Split API is a component intended for splitting and merging pages of PDF and PDF/A compliant documents with valuable additional features. Besides the main functionality splitting and merging, pages can be rotated, metadata and other document attributes, such as bookmarks, form fields, color profiles for the output intent, etc. can be copied or added. Optionally form fields can be flattened. The component supports working with multiple input and output document concurrently. A special feature is the ability to maintain compliance with PDF/A when processing and creating documents.

5.2 3-Heights™ PDF Creator Library

The 3-Heights™ PDF Creator Library is a component to create PDF/A-1 compliant documents. The interface is based on a comprehensible object model, which reflects the functional range of PDF/A-1. The interface is designed in a way that it can be easily enhanced. It will continuously be adopted to new requirements, such as the evolvement of the PDF/A standard. The component ensures that all PDF/A provisions are enforced, such as file formatting rules, the embedding of fonts and color profiles, and many more.

6 New Features to all Products

6.1 Enhancements to all 3-Heights™ Products

- The creation and verification of digital signatures has been significantly enhanced. It is now possible to embed revocation information such as online certificate status (OCSP) responses and certificate revocation lists (CRL) in the signature message as well as cryptographic time stamps (TSP). In addition to the Microsoft CryptAPI interface the kernel now supports the Cryptoki (PKCS#11) interface as well. This allows for using hardware security modules (HSM) in signature workflows. This major enhancement is an important step towards full compliance with the new PDF advanced electronic signatures (PadES) standard. These new features are available for the 3-Heights™ Security Tool and the 3-Heights™ PDF to PDF/A Converter.
- The embedding of XMP Metadata streams has been enhanced. The streams are now validated before they are stored in the output file. If the validation fails the metadata stream is rejected. The XMP validation itself has been extended to not only check the document's metadata but also all other corresponding entries in fonts, images, pages etc.

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- A new OCR plug-in is now available to support the 'Tesseract' OCR engine. The plug-in, which is distributed with the OCR enabled products such as the Image to PDF Converter, PDF to PDF/A Converter and PDF Document Converter Service.
- All products are now fully compatible with the Windows 7 and Windows Server 2008 operating systems. This is particularly important for the 3-Heights™ Document Converter Service and the 3-Heights™ PDF Producer.
- The Kernel now supports the reading and writing of FDF files. This capability is used in conjunction with the new annotation editing feature in the 3-Heights™ PDF Viewer.
- Some of the APIs have been enhanced to support application defined streams to read and write documents and images. These specific custom stream interfaces are exposed through C, Java and .NET.
- The import of images has been improved. Some TIFF image formats with embedded JPEG streams can now be imported without re-compressing the image samples as this already was the case with pure JPEG images.
- The library for reading and writing TIFF files has been enhanced to support a wider range of TIFF formats, notably some specific TIFF dialects with embedded JPEG streams (Compression 6, also known as 'old' JPEG). The library is used in the Image to PDF Converter, PDF to Image Converter, TIFF Producer, PDF Extractor, Viewer, Printer and all other tools that read or write image files.
- The encoding of the command line in UNIX environments now depends on the respective settings (e.g. UTF-8) and is no longer 'CP 1251' as with the same tools on Windows.
- The reading of http streams via the Internet Explorer control has now been replaced by an own implementation in order to improve the performance.

6.2 Enhancements to the 3-Heights™ PDF Rendering Engine

- New option 'eOptionEnableAnnotEdit': If this option is set the viewer's user interface offers commands to add, delete and edit text annotations (sticky notes).
- Enhanced option 'eOptionUseUnicode': The option now functions as follows:
 - If 'eOptionUseUnicode' is set then all glyphs are selected by their Unicode value (PUA for symbolic fonts) and the temporarily installed TrueType fonts contain a 'cmap' which contain a mapping to the correct glyphs.

- If 'OptionUseUnicode' is not set (which is the default) then all glyphs are selected by their glyph number, i.e. the 'cmap' in the temporarily installed TrueType fonts is not used for glyph selection.
- Improved CJK font rendering: The renderer now supports fonts that have special vertical writing mode rules about how to rotate characters, such as parenthesis.
- Improved matching of replacement fonts: Non-embedded fonts will be replaced by fonts that are installed in the operating system. The font matcher now supports symbolic fonts too.
- Improved blending of N-Channel colors: In the conversion to CMYK and RGB the implicit (not very well defined) blending of colors has been improved to produce a better visual result.
- Improved drawing of annotations: The drawing of annotations with missing appearance streams has been improved. This capability is used in conjunction with the new annotation editing feature in the 3-Heights™ PDF Viewer.

7 New Features to Specific Products

7.1 3-Heights™ Image to PDF Converter

- New switch 'fu': This switch instructs the converter to unpack images with bits per sample of less than 8 to exactly 8 bits.
- New switches 'ocr', 'ocl', 'ocp': The said switches already existed in the shell tool and have now been added to the service program as well.
- New Method 'SetMetadata': This method adds XMP-formatted metadata to the output document.
- New property 'Recompress': This property has been added to the Codec interface in order to control the re-compression of JPEG and JPEG2000 streams.
- New properties 'ResolutionDPI' and 'ThresholdDPI': These two properties control the re-sampling of imported images.

7.2 3-Heights™ PDF to Image Converter

- New methods 'SetWatermarkImage' and 'RepeatWatermark': These properties already existed in the COM interface and have now been added to the C, Java and .NET interfaces as well.

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- New behavior with 'PDF' output file format: If the input and output file format is 'PDF' then the attributes 'OpenAction', 'PageLayout', 'PageMode', 'ViewerPreferences', 'Outlines', 'PageLabels', 'Metadata', 'Annots' and 'Info' are copied from the input to the output document.

7.3 3-Heights™ PDF to PDF/A Converter

- New switch 'ci': This switch allows for specifying the common name of the issuer of a certificate and is used in conjunction with 'cn'. It provides a means to select among certificates which have same subject but distinct issuers.
- New switch 'co': This switch inhibits the embedding of revocation information such as online certificate status response (OCSP – RFC 2560) and certificate revocation lists (CRL – RFC 3280).
- New switch 'cp': This switch allows for selecting the cryptographic provider such as the Windows CryptAPI CSP name or the DLL which implements the Cryptoki (PKCS#11) interface and, optionally, the slot numbers and PINs.
- New switch 'csn': This switch allows for selecting the certificate store such as MY, CA, ROOT, etc.
- New switch 'csl': This switch is used in conjunction with 'csn' and allows for selecting the certificate store location such as local system und current user.
- New switch 'tsu': This switch instructs the converter to embed a cryptographic timestamp according to RFC 3161 in the digital signature message.
- New switch 'tsc': This switch is used in conjunction with 'tsu' and provides the credentials to access the time server (TSA).
- New switch 'ocs': This switch inhibits the re-embedding of images that have been pre-processed (e.g. de-skewing) by an OCR engine.
- New switch 'q': This switch provides a means to control the quality of the lossy compression algorithms such as JPEG, JPEG2000 und JBIG2 from 1 (lowest) to 100 (highest). A quality of 100 for JPEG2000 and JBIG2 means lossless compression.
- New switches 'ocr', 'ocl', 'ocp': The said switches already existed in the shell tool and have now been added to the service program as well.
- New switches 'ofn' and 'ow': The said switches already existed in the shell tool and have now been added to the service program as well.
- New property 'Issuer': see switch 'ci'.
- New property 'Provider': see switch 'cp'.

- New property 'Store': see switch 'csn'.
- New property 'TimeStampURL': see switch 'tsu'.
- New property 'TimeStampCredentials': see switch 'tsc'.
- New property 'OCRReembedImages': see switch 'ocs'.
- New property 'ImageQuality': see switch 'q'.
- New property 'InfoEntry': This property allows for adding key / value pairs such as Author, Subject, Keyword, etc. to the document's metadata.
- New method 'GetCategoryText': This method receives the category code as a parameter and returns a comprehensible text in English.
- Changed method 'SetColorSpaceProfile' and 'SetOutputIntentProfile': The methods now return a Boolean value which indicates if the profile was found and is a valid color profile. This change applies to the C and Java interfaces only.

7.4 3-Heights™ PDF Extractor

- New methods 'OpenStream', 'StoreToStream': These methods allow for reading documents and writing images using application defined streams. These methods are available for the C and Java interfaces only.
- New properties 'ConvertPathToImage', 'PathImageAntiAlias', 'PathImageBGColor', 'PathImageResolution': This series of properties is meant to convert graphical paths to raster images. The first property enables or disables the conversion. The following properties are used to control the rendering process, which is the anti-aliasing, the color of the initial background and the resolution of the resulting image.

7.5 3-Heights™ PDF Optimizer

- New method 'linearize': This method instructs the optimizer to linearize the output file, i.e. to prepare the file for fast web viewing.

7.6 3-Heights™ PDF Producer

- New document setting 'N-Up': This setting allows for placing multiple pages (1, 2, 4, 6, 9, 16) on one sheet.
- New document setting 'Background stamp file': This setting allows for specifying a XML file containing stamping instructions in the same format as

they are used with the setting 'Stamp file'. In contrast to the latter setting, the new instructions are applied before the page content is produced.

- Changed port monitor option 'prompt for file name': If the option is checked, then a 'Save File' dialog box pops up. This dialog box is now executed in the process context of the printing user instead of the spooler's process context.
- Changed port monitor option 'execute command': If this option is active then the specified command line executable now has access to environment variables of the printing user's session.
- New and changed XML stamping language features: The properties to select the page (first, even, odd, last) have been improved.
- New operating system support: The driver has been enhanced to support Windows 7 and Windows Server 2008.

7.7 3-Heights™ OCR Add-on

- A new OCR plug-in is now available to support the 'Tesseract' OCR engine. The plug-in, which is distributed with the OCR enabled products such as the Image to PDF Converter, PDF to PDF/A Converter and PDF Document Converter Service.

7.8 3-Heights™ PDF Printer

- New switch 'f2': This switch instructs the printer to conditionally insert a filler page before the next document is printed in order to start the next document on an even page number (service only).
- New switch 'fo': This switch allows for encoding the printer options in the file name of the document to be printed (service only).
- New switch 'z': This switch instructs the printer to wait for job completion in order to check the final status.
- New properties 'PJL', 'DevMode': The said properties already existed in the COM interface and have now been added to the C, Java and .NET interfaces as well.
- New CITRIX platform support: The printer has been enhanced to support CITRIX virtual printer drivers.
- Improved EMF spooling support: If a document is printed to a local print device using EMF spooling then the temporarily installed fonts are not embedded in the EMF print stream by Windows. In such situations the deletion of these fonts is delayed until the spooler reports the end of the print process. This

allows for accessing and processing the fonts in the printer driver and the print processor.

- Improved PJL support: Now a wider range of PJL commands are supported, specifically all types of SET commands.
- Improved matching of paper formats: The automatic selection of the paper format has been improved to match both the portrait and landscape variants of the same format.

7.9 3-Heights™ PDF Repair

- New method 'GetDiagnosis': This method returns a code which indicates which essential parts of the file must be recovered: Cross Reference Table, Objects, Pages.
- New properties 'ErrorLevel' and 'ReportingLevel': The said properties already existed in the C interface and have now been added to the Java interface as well
- New menu items 'Rebuild Streams', 'Rebuild Fonts' and 'Rebuild Fonts as Type1': These items already existed in the shell tool and now have been added to the desktop's user interface as well.

7.10 3-Heights™ PDF Security

- New switch 'ci': This switch allows for specifying the common name of the issuer of a certificate and is used in conjunction with 'cn'. It provides a means to select among certificates which have same subject but distinct issuers.
- New switch 'co': This switch inhibits the embedding of revocation information such as online certificate status response (OCSP – RFC 2560) and certificate revocation lists (CRL – RFC 3280).
- New switch 'cp': This switch allows for selecting the cryptographic provider such as the Windows CryptAPI CSP name or the DLL which implements the Cryptoki (PKCS#11) interface and, optionally, the slot numbers and PINs.
- New switch 'csn': This switch allows for selecting the certificate store such as MY, CA, ROOT, etc.
- New switch 'csl': This switch is used in conjunction with 'csn' and allows for selecting the certificate store location such as local system and current user.
- New switch 'tsu': This switch instructs the converter to embed a cryptographic timestamp according to RFC 3161 in the digital signature message.

- New switch 'tsc': This switch is used in conjunction with 'tsu' and provides the credentials to access the time server (TSA).
- New property 'Issuer': see switch 'ci'.
- New property 'Provider': see switch 'cp'.
- New property 'Store': see switch 'csn'.
- New property 'TimeStampURL': see switch 'tsu'.
- New property 'TimeStampCredentials': see switch 'tsc'.
- New property 'OCRReembedImages': see switch 'ocs'.
- New property 'InfoEntry': This property allows for adding key / value pairs such as Author, Subject, Keyword, etc. to the document's metadata.
- New methods 'OpenStream' and 'SaveAsStream': These methods allow for reading and writing documents using application defined streams.
- New properties 'RevisionCount' and 'Revision': The said properties already existed in the C interface and have now been added to the Java interface as well.
- Deprecated method 'GetRevisionLength': This method has been replaced by the enhancement of the existing property 'Revision'.

7.11 3-Heights™ PDF Validator

- New method 'OpenStream': This method allow for reading documents using application defined streams.

7.12 3-Heights™ Java Document Viewer

- New constructors 'PdfDocument', 'PdfViewer', 'PdfDifferenceViewer': These constructors allow for reading documents using application defined streams.
- New method 'transformViewportToWindow': This method provides a means to transform viewport coordinates, such as of the mouse cursor, into document coordinates, e.g. to place annotation rectangles.

7.13 3-Heights™ PDF Viewer

- Changed Method 'MarkRectangle': This method offers a new parameter 'Width' which controls whether the mark rectangle is drawn with line strokes or a filled figure.

- New option 'eOptionEnableAnnotEdit': If this option is set the user interface offers commands to add, delete and edit text annotations (sticky notes).
- New support for 'FDF' file format: The viewer now allows for reading and writing FDF files.

7.14 3-Heights™ Document Converter Service

- New option THUMBS to generate thumbnails.
- New option OCR.REEMBIMAGE to control the re-embedding of preprocessed images.
- New signature related options: SIGTSURL, SIGTSCRED, SIGEMBEDOCSP, SIGISSUER, SIGSTORELOCATION, SIGSTORE.
- New option TIFF.UNPACK to convert packed image samples to the unpacked format.
- New option CMRQUAL to control the quality for lossy image compression.
- Additional options for controlling MS Office 'ExportAsFixedFormat' (UseISO19005_1, BitmapMissingFonts, DocStructureTags).
- New option PRINTMARKUPS for controlling MS Word document items being converted.
- New support for converting web pages from URL lists.
- New option MAILPARTS to control which items of mail messages are included in a conversion (body and / or attachments).
- New Web Service (including Java application sample).
- New fonts and color profiles directories for PDF/A conversion.
- Plug-in interface extended to support file and job related processing actions.
- Plug-in support for .NET based custom plug-ins, based on packaged NetPlugin.dll (C# sample available on request).
- Installer: client installation includes registration of O2PProxyNET in Global Assembly Cache.
- New API function 'O2PJobSetDocMetadataFile' to provide XMP metadata to be embedded during PDF/A conversion.
- New accounting support to enable conversion statistics ('Log Page Counts' checkbox on service configuration form).

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- New service and AdHoc server termination handling (close MS Office applications unless there are documents opened by the interactive user). Configuration option for this: TerminateApps in Options section of O2PWSC.ini file.

8 About PDF Tools AG

PDF Tools AG (www.pdf-tools.com) is a world leader in PDF (Portable Document Format) software, delivering reliable PDF products to international customers in all market segments.

PDF Tools AG provides server-based software products designed specifically for developers, integrators, consultants, customizing specialists and IT-departments. Thousands of companies worldwide use our products directly and hundreds of thousands of users benefit from the technology indirectly via a global network of OEM partners. The tools can be easily embedded into application programs and are available for a multitude of operating system platforms.