



Release Notes

3-Heights™ and Classic PDF Tools

Version 4.0

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1 Overview

The 3-Heights™ PDF tools represent the most recent 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, digitally signing, validation, repairing, and optimization.

The Classic PDF Tools (formerly known as GLANCE Tools) represent the original product line from PDF Tools AG. Similar to the 3-Heights™ product line the Classic PDF Tools are available as programming libraries (APIs) and command line shell versions but not Windows services. The tools are packaged in two products, the Command Line Suite and the Prep Tool Suite.

2 How to Download the Trial Software

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>

3 Technical Support

Please report problems by contacting our support team by mail:

pdfsupport@pdf-tools.com

4 System Requirements

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

- Windows 2000
- Windows XP
- Windows Vista
- Windows 7
- Windows Server 2003
- Windows Server 2003 R2
- Windows Server 2008
- Windows Server 2008 R2

Most of the tools are also available for:

- IBM AIX 5.1
- Sun Solaris / SPARC 5.8
- HP-UX 11i incl. IA64
- SunSolaris / Intel 5.10

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- Linux 2.4 (RedHat)
- Linux 2.6 (SuSE)
- Mac OS X 10.4 x86 / x64

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

5 Compiler Versions

The release kits are generated with the following compiler versions for C/C++ (for Java, version 1.2 is required as a minimum):

Platform	C/C++
Windows	MSVC 8.0
MAC OS/X 10.5 x86	gcc 4.0.1
SuSE Linux/Intel	gcc 3.2
Redhat Linux/Intel	gcc 3.2.2
FreeBSD	gcc 3.4.2
Sun Solaris 2.8/SPARC	gcc 3.4.6
Sun Solaris 2.8/Intel	gcc 3.4.6
IBM AIX 5.1	gcc 4.2.4
HP UX 11.i (11.23)	gcc 4.1.2
HP UX 11.23 IA64	gcc 4.3.3

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6 New Products and Tools

- New API for the 3-Heights™ PDF Producer: This new component makes it easier to integrate the PDF Producer into applications. It provides an interface to set the port monitor parameters, such as the path and file name of the output file. The parameters can be set for the current user only in order to properly support multi-user environments such as the Windows Terminal Server or the Citrix server.
- New set of command line tools to process TIFF files has been developed as part of our document conversion solution.
 1. tiff2pdf: A specialized tool to convert a tiff into an equivalent PDF/A file.
 2. tiffcompress: A tool to apply various compression methods including mixed raster content compression (MRC).
 3. tiffimp: A tool to import JPEG images into a TIFF container.
 4. tiffmerge: A tool to merge multiple TIFF input files into a multi-page output file.
 5. tiffocr: A tool to apply optical character recognition (OCR) to a TIFF file and store the resulting text in a proprietary tag which can be processed by the 'tiff2pdf' tool.
 6. tiffsplit: A tool to split a multi-page TIFF file into multiple single-page TIFFs.
- The "Tesseract" OCR plugin now supports Tesseract v 3.01 (Windows only). Available for all products that support OCR.
- LicenseManager.exe: A graphical tool for managing and installing license keys for all products (Windows only).
- licmgr: A command line version of the license manager.

7 New Features to all Products

The following enhancements affect all components and solutions unless otherwise noted.

7.1 Enhancements to all Products

- This release introduces a new license management using license keys for its 3-Heights™ and Classic product family. It is a well known and widely accepted technology in the commercial software market. The licensing model itself does

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not change. However, the use of the license management will simplify the licensing process for the customer.

See <http://www.pdf-tools.com/pdf/Support/License-Keys.aspx> and <http://www.pdf-tools.com/pdf/Support/OEM-License-Keys.aspx> for more information.

- As a consequence to the above the downloadable software kits for evaluation and production purposes are the same. There is no special evaluation version available anymore. The software can now be used for evaluation using a suitable evaluation license key. After evaluation the software doesn't need to be replaced anymore. It can be transformed to a productive version by using an appropriate license key.
- The Classic and 3-Heights™ family of products have been merged into a single product line. The common version number is now 4.0 in order to avoid conflicts with previous version numbers of the Classic products (3.7) and the 3-Heights™ products (2.1).
- The main icons of all shell and service executables have been replaced with the pdf-tools.com logo.

7.2 Enhancements to all 3-Heights™ Products

- The conversion of Type 1 fonts to CFF fonts reduces the file size in various tools such as the PDF to PDF/A Converter and the PDF Optimizer.
- XMP metadata: Improved parsing and repair of date values.
- The BMP image codec can now read 16 bit grayscale images.
- The default setting of the 'Producer' and 'ModDate' fields in the info object and metadata can now be over-written in various products such as the Image to PDF Converter and others.
- General improvements of code stability:
 1. The fragmentation of the memory has been reduced by using separate heaps for specific purposes.
 2. Damaged page trees are now being repaired on-the-fly.
- The JPEG2000 software library has been upgraded to version 2.1.0.11.
- The lcms software library (www.littlecms.com) has been upgraded to version 2.3.
- The libpng software library (www.libpng.org) has been upgraded to version 1.5.9.

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7.3 Enhancements to all Classic Products

- The Classic products are now produced at the same time with the 3-Heights™ products using the same compiler versions, settings, runtime libraries and 3rd party libraries such as libgif, libjpeg, libpng, and zlib.
- Possibility to remove specific document information attributes (while copying).
- Possibility to override the modification date attribute.
- Removal of the "Perms" document entry (reader extension rights not being valid any more).
- More robust parsing of PDF files having invalid stream length entries.

7.4 Enhancements to the 3-Heights™ PDF Rendering Engine

The following enhancements affect all components that use the rendering engine such as PDF Viewer, PDF Printer, PDF to Image Converter, PDF to EMF Converter unless stated otherwise.

- The shading Type 7 (tensor product patch meshes) is now supported.
- If the text rendering mode is 'fill' then the text rendering function of GDI are used. All other text rendering modes use a filled and / or stroked path. However if 'UseUnicode' is set, then the text rendering function of GDI is used in all cases in order to pass the Unicode code points of the text string to GDI.
- The clipping of degenerated bounding boxes has been improved.
- The rendering of transparency groups has been optimized.
- Improved unembedding of fonts when using Unicodes instead of GlyphIds for text rendering.

8 New Features to Specific Products

8.1 3-Heights™ Document Assembler

- Support for sending a document to an existing instance of the Document Assembler instead of opening a new one. (Command line option '-a')

8.2 3-Heights™ AFP to TIFF Conversion Utility

- No functional changes.

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8.3 3-Heights™ Font to PDF Utility

- The program now supports the import of Type 1 and CFF fonts.

8.4 3-Heights™ Image to PDF Converter

- New switches `ocs` and `oci`: These switches allow for controlling of the replacement of images with the output of the OCR engine (de-skewed image).
- New switch `ax`: By means of this switch a XMP metadata stream can be embedded into to the output file.
- New property `Recompress`: If the property is true then the image data is decompressed and compressed again before it is embedded in the output file. Otherwise, image data such as JPEG and JPEG2000 are copied without any loss of image quality.
- New properties `OCREmbedOCRImage`: This property allows for controlling of the replacement of images with the output of the OCR engine (de-skewed image).
- New interface objects `ImgOcr` and `OcrText` allow OCR recognition and text extraction of images.

8.5 3-Heights™ Image Compare Utility

- No functional changes.

8.6 3-Heights™ JPM to PDF Converter

- No functional changes.

8.7 3-Heights™ Document Converter

- Direct Text to PDF and TIFF conversion. This feature obsoletes the conversion via MS Word. For detailed options available, see TXT2PDF section.
- Mixed Raster Content compression is now available to achieve high compression rates for certain types of TIFF documents converted to PDF.
- Several new configuration options are available to support the tuning of the conversion process, such as
 1. TIFF.UNPACK to convert indexed image compression into continuous compression, permitting later down-sampling to reduce the size of the resulting PDF

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2. PDFA.TOUNICODE to supply Unicode information for fonts which have incorrect or no such information
 3. SIGFIELDS to recognize signature placeholders during the PDF/A conversion and replace these by signature fields
 4. OCR.ROTATEPAGE to control if pages should be rotated automatically according to the reading direction if OCR text is found
 5. PDFA.OCRMODE to control OCR processing depending on whether an OCR text layer is already present (e.g. replace or remove existing text, or perform OCR only when text is missing).
 6. SIGPROXYURL + SIGPROXYCRED to supply HTTP proxy information needed to access HTTP resources during signing (e.g. time stamp server)
 7. PDFA.WARNOCSP to control whether a PDF/A conversion error shall be raised when the OCSP response cannot be obtained during signing
 8. SkipUnusedInline controls whether unused inline attachments in mails shall be converted as regular attachments (or be left away)
- Several improvements to achieve more reliability and stability in the control of MS Office applications such as Word, Excel and Powerpoint
 - Improvements with regard to PDF to TIFF conversion at high resolutions:
 1. Signaling of problems during the process of page rendering to propagate this as a document conversion failure
 2. Possibility to configure out-of-process conversion to overcome resource limitations
 - Minor changes of the Watched Folder Service:
 1. The "hidden" flag of output folders will always be cleared after all output documents are stored
 2. Jobs returning zero pages are treated as failed
 - Several improvements of the Watched Mail Folder Service:
 1. Improvement of error handling; new option "-ow" permitting to ignore warnings
 2. Improved handling of converter service un-availability (or worker session unavailability)

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3. More detailed logging
 4. Support for per-attachment conversion
 5. Configuration of custom completion actions for file system output
- Improvements of the dispatcher service for improved control over worker sessions
 1. Automatic restart of blocked sessions (WorkerTimeLimit configuration)
 2. Forced session LOGOFF on service termination and to restart blocked sessions
 3. Work-around for security policies that interfere with the automatic RDP login to start worker sessions
 4. Automatic disconnect feature to free RDP session connections and thus permit an unlimited number of worker sessions on Server 2008 or later even without terminal services enabled in application mode ("RunDisconnected" configuration).
 - Samples: new PHP sample illustrating the use of the web service

8.8 3-Heights™ OCR Add-on

- Some plug-ins such as the ABBYY plug-in supports now the rotation attribute which is used to rotate the page before being embedded in the resulting PDF.
- Some tools, such as the PDF to PDF/A Converter now provide new modes how OCR text is treated.

8.9 3-Heights™ PDF Compare Utility

- New switch `i': When set, this switch causes the program to ignore volatile data like ModDate.
- New switch `m': This switch activates the use of the XMP comparator instead of the stream comparator for metadata streams
- New switch `e': This switch enables the recursive comparison of embedded files.

8.10 3-Heights™ PDF to EMF Converter

- No functional changes.

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8.11 3-Heights™ PDF to Image Converter R2

- No functional changes.

8.12 3-Heights™ PDF to Image Converter

- New switch `cms`: The switch allows for specifying a color management engine.
- The copy of links annotations in pdf2pdfimg.exe has been optimized.
- The retain text feature in pdf2pdfimg.exe has been improved.

8.13 3-Heights™ PDF to PDF/A Converter

- New switch `ocm`: This switch controls the way how existing OCR text is treated.
- New switch `oci`: This switch is used in conjunction with `ocs` to allow for de-skewing the OCR text only.
- New switch `uf`: This switch updates the Unicode information in fonts according to the directives contained in a file.
- New switch `cff`: This switch instructs the converter to embed Type 1 fonts in the CFF font format.
- New property `EmbedT1asCFF`: This property instructs the converter to embed Type 1 fonts in the CFF font format.
- New property `SerialNumber`: This property is used to select a certificate by issuer name and serial number.
- New property `Fingerprint`: This property is used to select a certificate by its SHA1 hash value (fingerprint).
- New property `NoCache`: This property controls the use of the OCSP and CRL cache.
- New property `ImageFileName`: This property allows to use a raster image as the visible signature field content.
- New property `OCRMode`: This property controls the way OCR text is treated.
- New property `ToUnicodeFile`: This property updates the Unicode information in fonts according to the directives contained in a file.
- The Converter can now repair corrupt streams.

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- Please refer to the notes regarding the PDF Validator and the PDF Security Tool as these functions are included in this component.

8.14 3-Heights™ PDF Annotation API

- No functional changes.

8.15 3-Heights™ PDF Creator Library

- New Method 'CreateSeparationColorSpace': This method creates a spot color of a given name. It receives a CMYK color parameter to specify the fully saturated color equivalent.

8.16 3-Heights™ PDF Extractor

- New property 'ExpandLigatures': This property instructs the extractor to expand ligatures such as 'fi' into separate characters.
- New property 'RawString': This property provides access to the string of CIDs.
- New property 'Compression': This property returns the compression type of the image.
- New property 'SpaceWidth': This property returns the width of the space character.
- New property 'AttachedFile': This property returns the file which is attached to an annotation.
- The heuristics to recover the Unicode from unknown glyph names has been extended to several new strategies in order to improve the text extraction process.
- Ligatures such as fi, ff etc. can now optionally be expanded into separate characters.
- The various space characters
- Improved calculation of bounding box of text when associated font has invalid bounding box.

8.17 3-Heights™ PDF Optimizer

- New switch 'cff': This switch instructs the optimizer to convert Type 1 fonts to the CFF font format.
- New property 'ConvertToCFF': This property instructs the optimizer to convert Type 1 fonts to the CFF font format.

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- The algorithm to remove redundant objects has been improved with respect to throughput.

8.18 3-Heights™ PDF Producer

- New driver features:
 1. The user name is now stored in the 'Author' metadata field.
 2. The default page size for the US and Canada is set to 'Letter'.
 3. The matching of font characteristics and the text accuracy has been improved.
 4. The interoperability with legacy applications has been further improved.
- New port monitor features:
 1. The output file name can now optionally be specified.
 2. The output file name can now optionally be prefixed by the user name.
- Office Add-In: no changes
- Installer features:
 1. The port monitor properties can now be set via parameters when installing the MSI via the command line
 2. The ACLs of the printer object are now set such that the "Run as administrator" button is enabled on Windows 7 operation systems.
- There exists now an API to program the properties of the port monitor (see new products)

8.19 3-Heights™ PDF Printer

- New switch 'sxy': This switch scales the page by a given factor.
- New switch 'jw': This switch instructs the PDF printer software to wait before exiting until the print job is complete.
- Enhanced switch 'oi': This switch still uses fast mode for images in accurate mode. However, if already in fast mode then the switch now provides a workaround for banded bitmaps if legacy printer drivers cannot handle banded bitmaps.
- New property 'ScaleXY': This property scales the page by a given factor.

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- New property 'ShrinkPage': This property scales the page to fit the paper size similar to the 'FitMode' property but doesn't scale if the page size is smaller than the paper size.
- Changed method 'Escape': The escape string is now stored and sent to the printer after the 'StartPage' call.
- The 'UseUnicode' mode has been improved by enforcing a bijective relation between glyph ids and Unicodes.
- The 'UseUnicode' mode has been extended to Type 1 and CFF fonts.

8.20 3-Heights™ PDF Repair

- No functional changes.

8.21 3-Heights™ PDF Security

- New switch 'id': This switch is used to set various entries in the documents info object and metadata.
- New switches 'mdp' and 'dap': The first switch instructs the tool to create a DocMDP signature type. The latter switch is used to control the document access permissions.
- New switch 'p2f': This switch is used to replace a special placeholder image with a digital signature.
- New switch 'vs': This switch verifies the signatures in the input document.
- Modified switch 'co': See property 'EmbedRevocationInfo' below.
- New property 'SerialNumber': This property is used to select a certificate by issuer name and serial number.
- New property 'NoCache': This property controls the use of the OCSP and CRL cache.
- Modified property 'Fingerprint': This property is used to select a certificate by its SHA1 hash value (fingerprint).
- Modified property 'EmbedRevocationInfo': If set to true the revocation information of issuer certificates other than the root certificate is embedded as well. This implies that both OCSP responses and CRLs can be present in the same message.

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- Some hash functions such as SHA1 are now executed in the component instead be the cryptographic provider's function in order to speed up execution and reduce network traffic to HSMs.
- The reading of HTTP responses has now been extended to data chunks.
- The proxy URLs and proxy credentials are now in effect for CRLs too.
- During signature creation all OCSP, CRL and TSP responses, regardless whether the origin from a server or the cache, are checked for validity before being embedded in the signature message.
- The initialization (and finalization) of the PKCS#11 interface is performed upon the opening of the first (resp. closing of the last) session.
- Signature verification now checks the validity of the certificates based on the signing time.

8.22 3-Heights™ PDF Page Split Tool

- The splitting now updates 'BleedBox', 'TrimBox' and 'ArtBox' as well.

8.23 3-Heights™ PDF Merge / Split

- New properties 'PageLayout', 'PageMode', 'OpenAction' and 'ViewerPreference': With these properties the behavior of the viewer can be controlled when it opens the document.
- The memory usage and execution time used to process huge input documents have been reduced.

8.24 3-Heights™ PDF Studio Utility

- Descendant fonts are not listed as separate fonts anymore.

8.25 3-Heights™ Text to PDF Converter

- No functional changes.

8.26 3-Heights™ PDF Thumbnail Utility

- No functional changes.

8.27 3-Heights™ PDF Uncompress Utility

- No functional changes.

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8.28 3-Heights™ PDF Validator

- The validation process is now based on the "Technical Corrigendum 2" of PDF/A-1.
- The detection of corrupt compressed streams has now been improved.

8.29 3-Heights™ Java Document Viewer

- New property 'PageNo': This property returns the number of the page.
- New method 'getTextExtractor': This method returns a text extractor object for the page.
- New method 'getTextFinder': This method returns a text finder object for the page.
- New method 'getPageFinder': This method returns a page finder object.
- New interface 'PdfTextExtractor': The interface is used to enumerate the text words in the page.
- New interface 'PdfTextFinder': The interface is used to enumerate all text words which match a given pattern.
- New Interface 'PdfPageFinder': The interface is used to enumerate all pages which contain text words which match a given pattern.
- New interface 'PdfText': Returns the properties of a text word including the ability to mark the text on the page.
- The matching of non-embedded fonts with installed fonts has been improved.

8.30 3-Heights™ PDF Viewer

- Support to create and edit text and highlight annotations has been added.
- The message queue is polled during the drawing of the page content in order to be able to abort an obsolete drawing operation. This increases the response time to user input significantly.
- The detection of links has been extended to widget annotations and the URI actions have been extended to JavaScript launch statements.
- The new property 'Modified' indicates, whether the document contains unsaved modifications.
- The new method 'PrintDocumentDlg' opens a printer dialog window and prints the document using the printer, page range and settings chosen by the user.

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- The new properties 'AnnotProperties' and 'AnnotPropertiesStr' can be used to define non-overridable default values for the creation of new annotations.
- Viewer Shell: The values of the RenderingOptions, ViewerOptions, RenderingMode and LayoutMode are stored in the current user's registry upon termination and loaded upon the initialization of the program.
- Viewer Shell: The print dialog now supports the selection of a page range.

8.31 3-Heights™ XMP Generator

- New switch '-mx': Exclude specific fields from the input metadata.
- New switch '-mcr': Process CSV input as records (one record by line, field names on the first line). This generates multiple output files.
- Support for including metadata entries in the output XMP filename. This is needed for the '-mcr' switch, to generate multiple output files.

8.32 Classic Command Line Suite

- pdcat:
 1. New switch '-pl': This switch sets the page layout.
 2. New switch '-vp': This switch sets the viewer preferences.
 3. File attachments coming from different input files are now merged with automatic resolution of name conflicts.
- pdstamp:
 1. New switch '-ao': This switch performs an automatic rotation according to the layout.

8.33 Classic PDF Prep Tool Suite

- New method 'SetFormLineSpacing': Defines the spacing between lines in a form field.
- New property 'FontName': Returns the name of a font in a form field.
- Enhanced method 'GetFormBox': parameter name changed to reflect that a distinct ID is now returned for custom fonts (instead of PTffUndefined). This font ID can be used to retrieve the textual name of the font using GetFontName.

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- Modified method 'SetFormFont': parameter name changed in COM interface (BaseFontName)
- The propagation of exceptions in the Java interface has been changed.
- The 'fnt2pdf' utility program now supports the import of Type 1 and CFF fonts.

8.34 Classic PDF Image Compare Tool

- The libtiff software library (www.libtiff.org) has been upgraded to version 4.0.0.
- The following legacy image formats are not supported anymore: JPEG-LS, SSC, JBIG 1, DIB.

9 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.