



Release Notes

3-Heights™ and Classic PDF Tools

Version 4.2

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Table of Contents

| | | |
|----------|---|----------|
| 1 | Overview | 4 |
| 1.1 | How to Download the Trial Software..... | 4 |
| 1.2 | Technical Support | 4 |
| 1.3 | System Requirements | 4 |
| 1.4 | Compiler Versions | 5 |
| 2 | New Products..... | 6 |
| 2.1 | Signature Creation and Verification Service | 6 |
| 2.2 | PDF Viewer as a new .NET WPF Control..... | 6 |
| 3 | New Features to all Products | 7 |
| 3.1 | Enhancements to all 3-Heights™ Products..... | 7 |
| 3.2 | Enhancements to all Classic Products | 8 |
| 4 | New Features to Specific Products | 9 |
| 4.1 | 3-Heights™ AFP to TIFF Conversion Utility | 9 |
| 4.2 | 3-Heights™ Document Assembler | 9 |
| 4.3 | 3-Heights™ Document Converter..... | 9 |
| 4.4 | 3-Heights™ Font to PDF Utility | 9 |
| 4.5 | 3-Heights™ Image Compare Utility | 9 |
| 4.6 | 3-Heights™ Image to PDF Converter | 9 |
| 4.7 | 3-Heights™ Java Document Viewer | 10 |
| 4.8 | 3-Heights™ JPM to PDF Converter..... | 10 |
| 4.9 | 3-Heights™ OCR Enterprise Add-on..... | 10 |
| 4.10 | 3-Heights™ PDF Analysis & Repair | 10 |
| 4.11 | 3-Heights™ PDF Annotation API..... | 11 |
| 4.12 | 3-Heights™ PDF Compare Utility | 11 |
| 4.13 | 3-Heights™ PDF Creator Library | 11 |
| 4.14 | 3-Heights™ PDF Extract | 11 |
| 4.15 | 3-Heights™ PDF Merge Split | 11 |
| 4.16 | 3-Heights™ PDF Optimization..... | 12 |
| 4.17 | 3-Heights™ PDF Page Split Tool..... | 12 |
| 4.18 | 3-Heights™ PDF Printer | 12 |
| 4.19 | 3-Heights™ PDF Producer | 13 |
| 4.20 | 3-Heights™ PDF Security..... | 14 |
| 4.21 | 3-Heights™ PDF Studio Utility | 14 |
| 4.22 | 3-Heights™ PDF Thumbnail Utility | 14 |
| 4.23 | 3-Heights™ PDF to EMF Converter | 14 |
| 4.24 | 3-Heights™ PDF to Image Converter | 15 |
| 4.25 | 3-Heights™ PDF to Image Converter R2..... | 15 |
| 4.26 | 3-Heights™ PDF to PDF/A Converter..... | 15 |
| 4.27 | 3-Heights™ PDF Uncompress Utility | 15 |
| 4.28 | 3-Heights™ PDF Validator..... | 15 |
| 4.29 | 3-Heights™ PDF Viewer..... | 16 |

July 24, 2013

| | | |
|----------|--|-----------|
| 4.30 | 3-Heights™ Text to PDF Converter | 16 |
| 4.31 | 3-Heights™ TIFF Tool Suite..... | 16 |
| 4.32 | 3-Heights™ XMP Generator..... | 16 |
| 4.33 | Classic Command Line Suite | 16 |
| 4.34 | Classic PDF Prep Tool Suite..... | 17 |
| 5 | About PDF Tools AG..... | 17 |

July 24, 2013

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, extracting 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.

1.1 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>

1.2 Technical Support

Please report problems by contacting our support team by mail:

pdfsupport@pdf-tools.com

1.3 System Requirements

All of the tools are available for:

- Windows 2000
- Windows XP
- Windows Vista
- Windows 7
- Windows 8
- Windows Server 2003
- Windows Server 2003 R2
- Windows Server 2008
- Windows Server 2008 R2
- Windows Server 2012

Windows 9.x and NT 4 are no longer supported by this version.

July 24, 2013

Some tools are only available on Windows platforms. These are:

- PDF Producer
- Document Converter
- The components which are based on the rendering engine: PDF Viewer, PDF Printer, PDF to Image Converter, PDF to EMF Converter

Most of the tools, however, are also available for the following platforms, and will run also on newer versions of the same OS family:

- IBM AIX 5.1
- Sun Solaris / SPARC 5.8
- HP-UX 11i incl. IA64
- SunSolaris / Intel 5.10
- Linux 2.4 (RedHat)
- Mac OS X 10.4 x86 / x64
- Linux 2.6 (SuSE)

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

1.4 Compiler Versions

The release kits are generated with the following compiler versions for C/C++:

| Platform | C/C++ |
|-----------------------|--------------|
| Windows | MSVC 8.0 |
| MAC OS/X 10.5 x86 | gcc 4.0.1 |
| SuSE Linux/Intel | gcc 4.1.2 |
| 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 4.6.0 |

For Java, version 1.2 is required as a minimum except for the Java Document Viewer which requires version 1.5.

July 24, 2013

2 New Products

2.1 *Signature Creation and Verification Service*

The *3-Heights™ Signature Creation and Verification Service* provides HTTP protocol based remote access to cryptographic providers such as smartcards, USB tokens, and other cryptographic infrastructure such as HSMs. By means of this service the tokens can be hosted centrally and used by any client computer which has access to the service.

The service is configurable to handle multiple tokens and is secured via credentials. While the service is running on a Windows computer, its clients can access it also from other platforms such as UNIX.

PKCS#11 is a widely used standard for providing extensive support in the area of digital signatures, including cryptographic algorithms and storage for certificates and keys.

The *3-Heights™ Signature Creation and Verification Service* relies on the PKCS#11 infrastructure for creating and verifying digital signatures. It constitutes the preferred infrastructure when dealing with hardware tokens and hardware security modules (HSMs).

2.2 *PDF Viewer as a new .NET WPF Control*

The *3-Heights™ PDF Viewer* component is now available as a new control which can be seamlessly integrated in .NET Windows Presentation Foundation (WPF) applications. The control exposes an API with the following functions:

- Open and close a PDF document
- Get the document's page count
- Set the page rotation
- Set the page fit mode
- Set the page or document (continuous) layout
- Navigate to a destination (page number, x and y coordinate, zoom factor)
- Set properties such as border width, user units, screen resolution, etc.

Customers with a valid PDF Viewer license and maintenance agreement will get access to the .NET WPF Control software kit and can use the control with the same license key as the OCX control.

July 24, 2013

3 New Features to all Products

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

3.1 Enhancements to all 3-Heights™ Products

- All products are now interoperable with Windows 8 and Windows Server 2012 except for the PDF Producer which cannot be used yet in modern Windows 8 apps.
- The types of digital signatures have now been extended by a time stamp signature type. The signature is created with the aid of a trusted time stamp server but without the need for a signer's certificate. This enhancement affects all products which deal with digital signatures such as PDF Security, PDF to PDF/A Converter, and Document Converter.
- Incremental updates now support the cross reference streams.
- The importing of OCR data has significantly been improved. The image and the text appearance based on the skew and rotation property of the recognized image. Furthermore fonts with code pages other than WinAnsi (e.g. CJK fonts) are supported now. Small images, such as slices of larger images, are not anymore processed by the OCR engine to save resources. This enhancement affects all products that deal with OCR data such as Image to PDF Converter, PDF to PDF/A Converter, and Document Converter.
- Text within the appearance streams of digital signatures now supports fonts with code pages other than WinAnsi (e.g. CJK fonts).
- The importing of mixed raster content (MRC) images now support optional content groups to allow for switching the individual image layers on and off. This enhancement affects the JPM to PDF Converter and the TIFF Tool Suite.
- The importing of text now supports variable pitch and CJK fonts.
- The loading of FDF files now supports relative and absolute paths as well as URLs. This enhancement affects all products which can read PDF files.
- The fonts.ini file which is used by some tools is now supported on Unix platforms as well.
- The recovery of damaged files has been improved to handle compressed object streams.
- The re-creation of missing appearance streams in annotations has been improved.

July 24, 2013

- The image import codecs have been improved to remove redundant image masks.
- The CCITTFaxDecode filter has been improved to support the filter parameter DamageRowsBeforeError.
- The color transform of the DCTDecode filter has been improved to better meet the slightly different specifications for PDF files, TIFF and JPEG images.
- The TIFF codec has been enhanced to improve the interoperability with non-standard TIFFs.
- The BMP / DIB codec now supports top-down bitmaps in addition to bottom-up bitmaps.
- The PNG codec now supports RGB palette with transparency.
- Interoperability with non-standard CFF fonts has been improved.
- Interoperability with non-standard Unicode CMAPs has been improved.
- The renderer has been enhanced to support shading types 4 and 5. This enhancement affects the products PDF Viewer, PDF to Image Converter, PDF Printer and PDF Thumbnail Utility.
- The renderer now follows a refined strategy to use the options 'eOptionNoEmbedded' and 'eOptionUseOutlines' in order to get the best compromise between printer driver interoperability and embedded font use.. This enhancement affects the products PDF Viewer, PDF to Image Converter, PDF Printer and PDF Thumbnail Utility.
- The JPEG software library (www.ijg.org) has been upgraded to version 9.
- The Lcms software library (www.littlecms.com) has been upgraded to version 2.4.
- The libpng software library (www.libpng.org) has been upgraded to version 1.6.1.
- The zlib software library (www.zlib.org) has been upgraded to version 1.2.7.
- The libxml2 software library (www.libxml.org) has been upgraded to version 2.9.0.

3.2 Enhancements to all Classic Products

- No significant enhancements

4 New Features to Specific Products

4.1 3-Heights™ AFP to TIFF Conversion Utility

- No functional changes.

4.2 3-Heights™ Document Assembler

- No functional changes

4.3 3-Heights™ Document Converter

- New Office Add-in: The new Office Add-in provides a simple and fast way to use the 3-Heights™ Document Converter directly from Word and Outlook using a toolbar button.
The add-in is designed to be as easy to use as possible. All configurations are made on the server. A single click on the toolbar button starts the conversion and the resulting PDF can then be saved on the hard disk.
The add-in is currently available for Word and Outlook. Other Office applications will follow in the future.
- Improved mail parsing, support for XHTML bodies
- Various improvements related to PDF/A conversion
- Support for non-standard RDP port configuration

4.4 3-Heights™ Font to PDF Utility

- New switch '-lf': List the font families and its indexes in a font collection.
- New switch 'f': Select the font in a font collection by its index.

4.5 3-Heights™ Image Compare Utility

- Improved difference display.

4.6 3-Heights™ Image to PDF Converter

- New error code: Error code 4 indicates an error during OCR processing.
- New property 'Rect' in IPDFOCRText interface: Return the bounding rectangle of the text.
- New property 'BaseLine' in IPDFOCRText interface: Return the coordinate of the text's base line.

July 24, 2013

- Removed property 'XPos' and 'YPos' in the IPDFOcrText interface: These properties have been replaced by the 'Rect' property.

4.7 3-Heights™ Java Document Viewer

- Text search supports to search for patterns containing more than one word.
- The methods of the 'Text' interface have been split up to the 'Text' and the 'TextFragement' interface.
- New method 'length' in the 'TextFragment' interface: Return the length of the text.
- Enhanced method 'getPosition' in the 'TextFragment' interface: Return the position of an individual character in the text string.
- Enhanced method 'getBBBox' in the 'TextFragment' interface: Return the bounding box for a given sub-string in the text.
- New method 'dispose' in the 'TextFragement' interface: Release allocated resources.
- New method 'getBoxes' in the 'Text' interface: Return an array of bounding boxes of all text fragments.
- New method 'setTextExtConfiguration' in the 'Textextractor' interface: Configure the text extraction modes.
- New method 'setColorHighlight' in the 'ViewerPage' interface: Set the color for highlighting of marked text.

4.8 3-Heights™ JPM to PDF Converter

- New switch 'ocg': Create optional content groups.

4.9 3-Heights™ OCR Enterprise Add-on

- pdfocr shell tool:
 1. New error codes: Return 4 for OCR engine error, 5 for OCR parameter error, and 6 for OCR processing error.

4.10 3-Heights™ PDF Analysis & Repair

- No functional changes.

July 24, 2013

4.11 3-Heights™ PDF Annotation API

- No functional changes.

4.12 3-Heights™ PDF Compare Utility

- The comparison of streams has been optimized.

4.13 3-Heights™ PDF Creator Library

- No functional changes.

4.14 3-Heights™ PDF Extract

- New switch 'or' in the pdtxt tool: Output the text as raw hex string in addition to the Unicode string. For fonts with multi-byte encoding the raw string is empty. The switch does not work with the switch 'sl' at the same time.
- New property 'BoundingBox' in interface 'Content': The rectangle must be set before calling ResetContent(). The rectangle has an effect on the coordinate transform when setting the parameter of ResetContent() to true. The default rectangle value is the page's crop box.

4.15 3-Heights™ PDF Merge Split

- New property 'InfoEntry' in 'IInDoc' interface: Get an entry from the document info dictionary.
- New property 'CopyLogicalStructure' in the 'IOOutDoc' interface: Enable / Disable the copying of the document's logical structure.
- New property 'OptimizeResources' in the 'IOOutDoc' interface: Detect and merge redundant objects while copying.
- New property 'RemoveNamedDests' in the 'IOOutDoc' interface: Remove named destinations while copying.
- New method 'AddOutlineItem2' in the 'IOOutDoc' interface: Add an outline item.
- New method 'CopyOutlineItems' in the 'IOOutDoc' interface: Copy some or all outlines to a specific location in the output document's outline hierarchy.
- New property 'CopyAssociatedFiles' in the 'IOOutDoc' interface: Enable / Disable the copying of associated files.
- New method 'CopyEmbeddedFiles' in the 'IOOutDoc' interface: Copy embedded files of the input document's collection.
- New method 'AddEmbeddedFile' in the 'IOOutDoc' interface: Add a new embedded file to the document's collection.

July 24, 2013

- New method 'AddAssociatedFile' in the 'IOOutDoc' interface: Add a new associated file to the document's collection.

4.16 3-Heights™ PDF Optimization

- The resampling algorithm for bitonal images has been improved and achieves a visually better result.
- New switch 'id': Set entries in the document information dictionary, such as the document's author or title.
- New property 'MergeEmbeddedFonts': Enable or disable the merging of the embedded subsets of the same font.
- New method 'SetInfoEntry': Set entries in the document information dictionary.

4.17 3-Heights™ PDF Page Split Tool

- No functional changes.

4.18 3-Heights™ PDF Printer

- New switch 'oj': Disable image filtering.
- New property 'WaitForJobCompletion': If set, the tool waits until the spooler reports that the job has been completed.
- New property 'MediaType': Set and get the DEVMODE's media type.
- New method 'EmptyPage': Add an empty page to the output. If watermarks were set then they are printed.
- New property 'OMR': Set and get an OMR marker string. The string contains a specification of OMR markers which are printed on top of each succeeding page until the marker is changed or deleted.
- Enhanced methods 'OpenPrinter', 'ClosePrinter', 'PrintPage', 'BeginDocument', 'EndDocument': If the printer driver flags an error and returns an error code of ERROR_SUCCESS then the method ignores the error condition and returns true.
- Enhanced method 'BeginDocument': The method can repeatedly be called after it has returned false. This is to recover from communication line failures in network printing environments.
- Enhanced switch 'pjl' and method 'PJJ': The insertion of PJJ commands in the spool output stream has been enhanced to work with the switch 'file' and the

July 24, 2013

method 'Output' at the same time. PjL commands are now inserted after a leading comment section.

- Interoperability with legacy printer drivers has been further improved.

4.19 3-Heights™ PDF Producer

- General enhancements:
 1. The tracing facility which was introduced with version 4.1 has now been implemented in all PDF Producer components such as drivers, port monitors etc. as well.
 2. The PDF Producer is now compatible with Windows 8 operating system (Desktop).
- New driver features:
 1. The interoperability with legacy applications has been improved.
- New and enhanced port monitor features:
 1. mailopen.exe: A new tool has been provided to create a new mail message using the MAPI interface. The new tool is used in the "Save as ..." dialog and can be used on the command line in the port configuration.
 2. shellopen.exe: The existing tool has been enhanced to process command line parameters. It is used in the "Save as ..." dialog and can be used on the command line in the port configuration.
- Installer features:
 1. New command line tool to install and deploy the producer silently.
Features:
 - Install / uninstall PDF and / or TIFF Producer
 - Install cross platform drivers for x86 and x64 architectures
 - Add / delete a printer
 - Add / delete a port
 - Configure a port
 - List all printers

July 24, 2013

2. A new installation API has been created which fully replaces the old one. The main benefits of the new API are:
 - Cross platform driver installation (x64 and x86)
 - More flexibility for OEM installer applications
 - Easy to use programming interface
 - Improved error handling and robustness
 3. The MSI Installer uses the new installation API. The installation of a licensing DLL for OEMs is no longer supported.
- Samples: A new EMF to PDF Converter Tool has been added to the samples collection.

4.20 3-Heights™ PDF Security

- The addition of the first digital signature to a document and the linearization function can now be performed in one single step.
- The stamps can now be added to a PDF page either as part of the page content or as stamp annotations.
- New switch `abg`: Set the signature background image.
- New switch `dts`: Create a time stamp signature instead of a signer's signature. Using this switch requires a trusted time server which must be specified using the `tsu` switch.
- New switch `ow`: Optimize output file for the web (linearization).
- Enhanced switch `vs`: The signature validation report has been improved.
- New method `AddTimeStampSignature`: see switch `dts`.
- New property `Linearize`: see switch `ow`.

4.21 3-Heights™ PDF Studio Utility

- No functional changes.

4.22 3-Heights™ PDF Thumbnail Utility

- No functional changes.

4.23 3-Heights™ PDF to EMF Converter

- No functional changes.

July 24, 2013

4.24 3-Heights™ PDF to Image Converter

- Existing property 'RotateMode' has been added to the Java interface.
- The conversion to bilevel bitmaps has been improved to account for gamma correction (Gamma: 2.0).

4.25 3-Heights™ PDF to Image Converter R2

- No functional changes.

4.26 3-Heights™ PDF to PDF/A Converter

- The conversion of JavaScript and Launch actions has been improved.
- The flattening of signature field appearances has been improved in order to better preserve the z index.
- New switch 'id': Set an entry (key / value) in the document information dictionary.
- New switch 's': Specify an XML-file containing stamp instructions.
- New switch 'fs': Flatten existing digital signatures.
- New switch 'ef': Add an embedded file (PDF/A-2 and PDF/A-3).
- New switch 'af': Add an associated file given the page association, the relationship, the mime-type, and the description (PDF/A-2 and PDF/A-3).
- New switch 'ocx': Export recognized OCR text to file.
- New conversion mask values 'OCR Failed' and 'Font substituted': Adding these values to the mask will cause a conversion error in the respective event.
- New method 'AddEmbeddedFile': Add an embedded file (see switch 'ef').
- New Method 'AddAssociatedFile': Add an associated file (see switch 'af').

4.27 3-Heights™ PDF Uncompress Utility

- Enhanced decompression filters: Content streams of pages and form xobjects are now decompressed to ASCII text.

4.28 3-Heights™ PDF Validator

- Added the possibility to detect and validate a document's claimed compliance.
- Enhanced switch 'cl': The switch now supports the value 'ccl' which reads the compliance level from the document being validated.
- New property 'Compliance': Return the compliance from the document.

July 24, 2013

4.29 3-Heights™ PDF Viewer

- The shell tool now supports most of the rendering and viewing options as a menu and a key combination (accelerator). Options for advanced users have been moved to an advanced menu which is not visible by default and can be made visible using the ctrl-m key combination.
- The command line switches have been extended with a license key switch 'lk', a page switch 'p' and a fit mode switch 'f'.
- The shell tool now stores the window position and the fit mode in the current user's registry.
- The print document dialog has been changed such that all pages are selected by default instead of the current page.
- The editing of annotations is now enabled by default.

4.30 3-Heights™ Text to PDF Converter

- The tool now supports variable pitch and CJK fonts.
- New error code: Return code 4 if the font could not be found.

4.31 3-Heights™ TIFF Tool Suite

- tiff2pdf:
 1. New switch 'ocg': Create optional content groups for MCR documents.
- tiffimp:
 1. Improved interoperability of non-standard JPEG files.
- tiffocr:
 1. The algorithm to create MCR layers has been improved.

4.32 3-Heights™ XMP Generator

- No functional changes.

4.33 Classic Command Line Suite

- pdcat:
 1. improved control file parsing, allowing longer parameter values (URLs)

July 24, 2013

- pdform:
 1. possibility to add a combo field
 2. New switch -lf to obtain additional detail information about fields (export values).
- pdmerge:
 1. New switch 'v': Verbose mode.
- pdstamp:
 1. image placement has been enhanced to allow for right and center alignment

4.34 Classic PDF Prep Tool Suite

- New function PDocInputSetFormDataExW to pass form data as UNICODE string (Windows only).
- Support to add Combo and Checkbox fields.
- Support to fill (plain) text into rich text fields.
- Extended type information is returned for form fields: the basic subtype string is amended with export values (and combo box values). For details, please refer to the new and updated samples.
- Performance improvement for stamping large and complex pages.

5 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.