



Release Notes

3-Heights™ PDF Tools

Version 1.60

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Table of Contents

1 Overview	3
2 Technical Support	3
3 How to Download	3
4 System Requirements	3
5 New Products	4
5.1 3-Heights™ PDF to PDF/A Converter	4
5.2 3-Heights™ Java Document Viewer (pre-release)	4
5.3 3-Heights™ Document Converter Service (pre-release)	4
6 New Features to all Products	5
6.1 Enhancements to all 3-Heights™ Products	5
6.2 Enhancements to 3-Heights™ PDF Rendering Engine.....	6
7 New Features to Specific Products	7
7.1 3-Heights™ Image to PDF Converter.....	7
7.2 3-Heights™ PDF Extract Tool	7
7.3 3-Heights™ PDF Optimization Tool	8
7.4 3-Heights™ PDF Printer, Printer Pro and Printer Service.....	8
7.5 3-Heights™ PDF and TIFF Producers	9
7.6 3-Heights™ PDF Security Tool.....	9
7.7 3-Heights™ PDF to Image Converter.....	10
7.8 3-Heights™ PDF Validator	10
8 About PDF Tools AG	10

November 30, 2007

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, exporting information, conversion, validation, repair, 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 limit).

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

4 System Requirements

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

- Windows Vista
- Windows XP
- Windows 2003
- Windows 2000

Some of the tools are also available for:

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

Please refer to the individual product pages to obtain information on supported operating system platforms.

November 30, 2007

5 New Products

5.1 *3-Heights™ PDF to PDF/A Converter*

The 3-Heights™ PDF to PDF/A Converter API converts PDF documents into PDF/A conformant files according to the international standard ISO 19005-1. PDF/A conformant digital signatures can be added to the output documents in the same process.

The tool first analyzes the input PDF documents according to the requested conformance level (A or B). Afterwards, the files are converted to the highest possible conformance level, based on the result of the analysis. The output files can then be re-analyzed on request.

The conversion process embeds missing fonts and optimizes them through sub-setting. Device dependent color spaces are replaced by ICC color profiles. An output intent will be generated if necessary. Prohibited and redundant content (JavaScript, alternate images, etc.) are removed, and required content is added. The file is reformatted during the conversion process and all repairs are carried out where success can be guaranteed.

A PDF/A conformant digital signature can be added to the output PDF/A document, giving a guarantee that the archived file has not been manipulated or compromised.

5.2 *3-Heights™ Java Document Viewer (pre-release)*

The 3-Heights™ Java Document Viewer is a powerful and flexible component that enables applications, such as DMS or ECM systems, to view, print and rasterize various document formats such as PDF, TIFF, JPEG, BMP, JB2, JP2, JPX, PNG, GIF, and ASCII text (Additional formats, such as XPS, will be added in a later version).

Multi-page TIFF and many PDF features as described in the new ISO 32000 draft standard (PDF 1.7) including Chinese, Japanese, Korean (CJK) fonts, patterns, shading, and transparency are supported.

The new viewer renders a page of a document into a Graphics2D object, giving the application programmer the utmost flexibility in designing the user interface. An extensive GUI implementation for the Java Swing framework comes with the component in source code.

Accelerator libraries (DLLs, shared objects) for various platforms such as Windows, Linux, Sun Solaris, AIX, HP-UX, etc. provide a viewing performance normally associated only with native implementations.

5.3 *3-Heights™ Document Converter Service (pre-release)*

The 3-Heights™ Document Converter Service facilitates the automated conversion of various office document formats to PDF and PDF/A. The Converter Service has an automated core that controls Microsoft Office applications like Word, PowerPoint, Outlook, or Visio to convert any supported document format to PDF. The converter

November 30, 2007

service also handles all image document types supported by the 3-Heights product family, i.e. JPEG, TIFF, GIF, PNG, BMP, and JBIG2.

The converter service can also extract documents from ZIP files or E-Mail attachments and assemble them into single PDF documents that are ready to be archived. The service can be accessed in various ways, including from the command line, by scripting, with hot folders, or through application program interfaces for COM, C/C++ and Microsoft.NET.

Future versions of the converter service will have built-in support for additional document formats and will be extensible to support virtually any format via a plug-in interface.

6 New Features to all Products

6.1 Enhancements to all 3-Heights™ Products

- New switch `-wd` to specify the drop location of a watched folder service: For all Windows Service products, the watched folder layout can be modified by specifying the location of the input folder (drop folder).
- The Windows Services provide enhanced processing of files by dividing each processing thread into a dispatcher and a worker thread. The dispatcher thread picks up the files from the drop folder and serializes them into the job queue. The worker thread does the actual processing such as conversion, printing, etc.
- The new Windows Service configuration option 'AutoDeleteAll' allows for cleaning up all output files in the failed as well as the succeeded folders.
- The PDF Kernel now supports the creation of digital document signatures (used in the PDF Security tool and the PDF to PDF/A Converter). This feature is currently available on Windows platforms; the implementation for UNIX platforms is planned for the next release.
- The extraction of text has been improved to produce legible results for a wider range of fonts with corrupt or missing Unicode information.
- The image reader (used in the Image to PDF Converter, Viewer and Printer) can now correctly import JPEG streams in cases where the color transform information is incorrect or missing.
- The image import function (used in the Image to PDF Converter) now produces smaller JPEG image data streams.
- The image import function (used in the Image to PDF Converter) now accepts a wider range of TIFF formats from legacy creators. In particular, the support for TIFF files with embedded JPEG compressed image data has been further improved.
- The image export function (used in the PDF to Image Converter and Extract tool, etc.) has been optimized to produce smaller bi-tonal TIFF files.

November 30, 2007

- The JPX decode filter now supports image data with a number of bits per component other than 8.
- The accuracy of the image color conversion functions (e.g. ColorToGray) has been improved.
- The font reader can now correctly interpret TrueType fonts in cases where the font table information is incorrect.
- The embedding of CFF fonts has been optimized to produce smaller font file streams.
- The font import function (used in the Font to PDF Converter, Viewer and Printer tool) has been enhanced to support TrueType font collections.
- The 'Neugebauer' transform within the color management system (CMS) can now be loaded with parameters from a text file.
- The color management system (CMS) now supports a wide range of embedded ICC profiles.
- The PDF Kernel now supports Type 0 function objects with 32 bit sample data.
- The amount of required dynamic memory consumed by the PDF Kernel's functions has been further reduced by reusing pre-allocated objects and moving the allocation of large variables from the stack to the heap space.
- The performance of the PDF Kernel has been further enhanced by introducing powerful new algorithms to manage hash tables and dynamic arrays.
- The stability of the PDF Kernel has been further improved by increasing the number of function parameter checks.
- The PDF Kernel now normalizes all rectangle parameters from a PDF document to a top-left representation in order to simplify processing.

6.2 Enhancements to the 3-Heights™ PDF Rendering Engine

Products such as the PDF Viewer, the PDF Printer and the PDF to Image Converter are based on the PDF Rendering Engine. The following improvements are common to these products:

- The anti-aliasing for text and path objects and filtering of image objects can now be turned off and on with the new rendering option 'eOptionHighQuality'.
- The engine now supports transparency functions such as a number of blend modes as well as isolated and non-isolated transparency groups.
- The logic to match non-embedded fonts with the nearest pre-installed fonts has been further improved.
- The accuracy of coordinate transform calculations when using image filters has been further improved.
- The accuracy of clip rectangles has been improved.

November 30, 2007

- The rendering of patterns has been improved.
- The inet.dll plug-in, which is used whenever a PDF document is opened via an internet link, has been changed to reload the document each time a URL is requested. This is different to the former behavior which was to cache the document on a disk file.

7 New Features to Specific Products

7.1 3-Heights™ Image to PDF Converter

- Support for conformance level PDF/A-1a: With the command line tool and the service, the `-cl` switch now accepts the value `pdfa-1a` in order to produce PDF/A-1a conformant files. In addition, the switches `-aa` and `-al` have been introduced to allow for specifying a descriptive text for the imported image. The API provides the corresponding new properties 'Alt' and 'Lang'.
- New property 'SetOrientation': By means of this property the orientation of the imported image on the page can be set.
- New switch `-fr` and new property 'Recompress': In rare cases where JPEG streams (e.g. with multiple scans) cannot be read by some viewer applications, the decompression and re-compression of the streams helps to work around the problem.
- Output files can now be produced according to the new draft PDF/A-2 conformance level B standard draft by using `'pdfa-2b'` as a value for the `'-cl'` switch. This allows for compressing images using the JPEG2000 algorithm which is prohibited by the PDF/A-1 standard.
- New switch `-d` and new property 'DPI': The image to image conversion now allows for up-sampling images by specifying a resolution (dots per inch) for the output image.

7.2 3-Heights™ PDF Extract Tool

- Signatures and their properties can be listed with the new `'-ls'` switch.
- The listing of fonts with the `'-lf'` switch has been enhanced.
- The new properties 'Creator' and 'Producer' that extract additional document information have been introduced.
- Separated pages can now be identified by means of a new property 'DeviceColorant'.
- A property 'TextMatrix' has been added to the text interface.
- The properties 'IsBitonal', 'IsColor' and 'IsMonochrome' have been added to the image interface.
- The properties 'ColorantName', 'IsColor', and 'IsMonochrome' have been added to the color space interface.

November 30, 2007

- The properties 'AlphasShape', 'BlendMode', 'FillAlphaConstant', 'StrokeAlphaConstant', 'OverprintFlag', 'FlatnessTolerance', 'OverprintMode', 'RenderingIntent', 'SmoothnessTolerance', 'StrokeAdjustment', and 'StrokeOverprintFlag' have been added to the graphics state interface.
- The property 'Vertices' has been added to the annotation interface.

7.3 3-Heights™ PDF Optimization Tool

- A new switch '-fv' has been added to specify the version of the output document.
- A new switch '-fn' has been added to specify file names as a switch instead of a parameter.
- A new switch '-rs' and property 'RemoveStandardFonts' have been added to remove embedded standard fonts such as 'Helvetica' etc.
- A new switch '-sf' has been added to strip and flatten form field annotations.
- The new strip options 'eStripPieceInfo' and 'eStripFormsAnnots' have been added.
- A new property 'PageCount' has been added to the document interface.
- The property 'ErrorCode' has been added to the C and Java interface.
- The compression value 'eComprUnknown' can now be used to indicate that the existing compression must not be changed by the optimizer.
- The subsetting and merging of font subsets has been improved.
- The appearance streams of annotations are now optimized similar to the content streams of pages and external objects.
- The functions 'add or replace font', 'rename non-embedded font', and 'remove embedded font' are deprecated now.

7.4 3-Heights™ PDF Printer, Printer Pro and Printer Service

- The switch '-oo' has been added to convert embedded fonts to outlines.
- The switch '-ofp' has been added to use pre-installed fonts instead of embedded ones.
- The switch '-tt' has been added to specify the TrueType font handling (print bitmap, download soft font, use device font, etc.).
- The new switch '-load' allows for pre-loading a printer driver DLL in order to speed up processing in cases where the DLL is loaded and unloaded by the printer driver for each printed page.
- In the verbose mode (switch '-v') the elapsed time is now being displayed.

November 30, 2007

- With the new switches '-lw' and '-lf' the line width of stroked path objects can be controlled by setting a minimum width and a multiplication factor (professional version only).
- The new switch '-n' allows to set the print job's name (pro version only).
- The method 'GetErrorText' returns a textual explanation of a given error code.
- The new properties 'DC' and 'HANDLE' provide access to the printer's device context and device handle.
- The switch '-rl' and property 'ReportingLevel' have been added to set the reporting level (error, warning, informative).

7.5 3-Heights™ PDF and TIFF Producers

- The port monitor now allows for specifying an executable command which is launched after the file has been produced. The name of the produced file is passed as a parameter to the command.
- Fonts for which the pre-installed styles 'Bold' and 'Italic' don't exist are simulated based on the 'Regular' style.
- The TIFF Producer now supports the 'PackBits' compression method.
- The device settings have been extended by the options 'UseBackBuffer', 'JPEGQuality', and 'RasterizePage'.
- The 'WinAnsi' encoding has been implemented.
- All bitmap raster operations are now supported by means of a page cache.
- The device mode and page size handling have been improved to be compatible with a wider range of printing applications.
- The port monitor can now be pre-configured via the installer interface.
- The product has been extended by a branding and licensing mechanism for OEM customers.
- The programs to install the PDF and the TIFF producer have been merged into a single executable.
- Log files are now stored in the directory denoted by the environment variable 'TEMP' instead of the root directory of the 'C:' drive.

7.6 3-Heights™ PDF Security Tool

- Digital document signatures are now supported by means of the new properties 'SignaturePageNo', 'SignatureFillColor', 'SignatureStrokeColor', 'SignatureRectangle', 'CertificateName', 'SignatureReason'.

November 30, 2007

7.7 3-Heights™ PDF to Image Converter

- New property 'CMS Engine': with this property the color management system engine can be set. Implemented values are 'msicm' (the default on Windows platforms), 'lcms', 'neugebauer', 'none', and the name of a file with a set of 'neugebauer' parameters.
- With the new switches '-lw' and '-lf' the line width of stroked path objects can be controlled by setting a minimum width and a multiplication factor.
- The anti-aliased rendering of text and path objects can be turned off using the '-oq' switch.

7.8 3-Heights™ PDF Validator

- With the new switches '-rd' and '-rs', the conformance violations report can be printed either in detail or as a summary. The new default is only a return code and no report at all.
- The return code '4' indicates that the document doesn't conform to the requested standard.
- The new property 'Categories' returns a set of bits indicating the conformance violation in various categories.
- The number of conformance validation checks has been increased.

8 About PDF Tools AG

PDF Tools AG (www.pdf-tools.com) is the world leader in PDF (Portable Document Format) programming technology, 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.