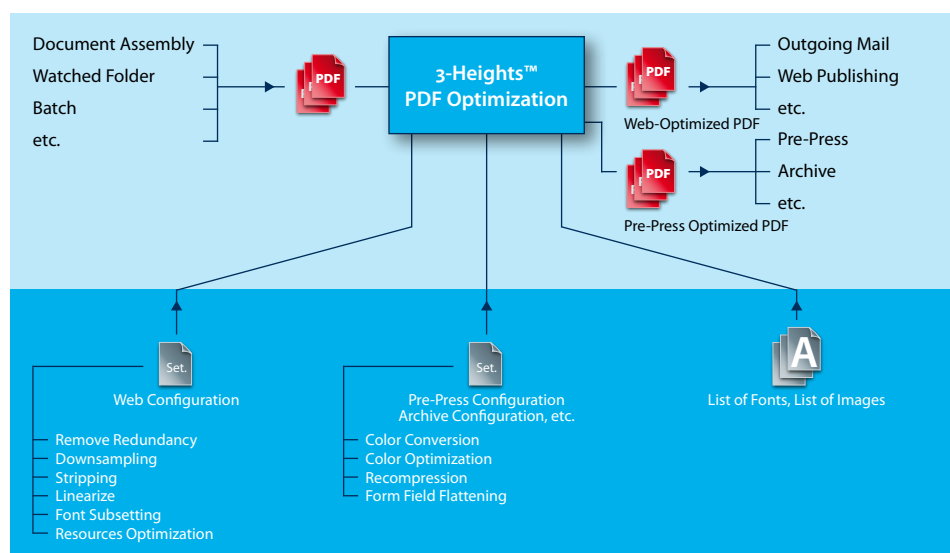


## 3-Heights™ PDF Optimization

The 3-Heights™ PDF Optimization component serves the purpose of optimizing PDF documents specifically in preparation for certain applications such as web-based publication, data exchange or printing. Web-based publication calls for lean files optimized for screen display, whose first page is displayed even before the complete file has been downloaded. The priorities in the pre-press stage focus on sufficient resolution of images and color quantity optimization.



### Properties and Benefits

The 3-Heights™ PDF Optimization component is designed to handle large quantities of documents. It is simple to integrate and customize. The tool enables the efficient production of PDF documents for specific purposes.

### Einsatzgebiete

#### Web

Web-based applications demand short response times. Potential customers soon lose interest when online publications and documents are slow to load. Small and linearized PDF documents reduce response times significantly.




#### Outgoing Mail

Poorly compressed PDF documents make emails unnecessarily large and can slow down communications or prevent the exchange of documents by email altogether. Appropriate optimization in outgoing mail processes can improve communication significantly.

#### Pre-Press Stage

The priorities in the pre-press stage focus on correct reproduction and color quantity reduction during printing. Hence, all colors can be converted to CMYK or grayscale, for instance.

### Product Variants

API	Shell	Service
		

### Customer Opinion

With PDF Tools AG we gained a reliable partner with high quality products. They delivered professional and efficient customizing of the product according to our needs. In addition we profited from reasonable prices and sane licensing terms.

Stephen Sykes,  
 Technical Director,  
 Inbro Ltd.

## Archive

Archiving requirements can vary; for instance, alternative images may be required in one case but not in another. Redundant or unnecessary data should not be archived in either scenario. The 3-Heights™ PDF Optimization component offers selective optimization options to enable precisely these kinds of configuration variations.

# Technical Details

## Formats

### Input Formats

- PDF

### Output Formats

- PDF

### Compliance

- Standards: ISO 32000 (PDF 1.7)

## Platforms

### Operating Systems

- Windows 2000, XP, Vista, 7
- Windows Server 2003, 2008, 2008 R2 – 32 and 64 Bit
- HP-UX – 32 Bit and Itanium
- IBM AIX – 32 and 64 Bit
- Linux (SuSE and Red Hat on Intel)
- Mac OS X
- Sun Solaris

## Other Areas of Use

- Web publishing platform
- As an optimization step after assembling documents from a heterogeneous source
- Conversion of colors to standardize corporate color space standards

## Interfaces and Languages

### Interfaces

- API: C, Java, .NET, COM

### Programming Languages

All program libraries are written in efficient and thread-safe C++. API offers a selection of the following connections to programming languages:

- C#, VB .NET, J# via .NET
- Java via JNI
- MS Visual Basic, Borland Delphi, MS Office products such as Access and C++ via COM
- C and C++ via native C

### Product Variants

- Shell tools (command line)
- API (programming interface)
- Windows service (system service)

## Performance Characteristics

- File size reduction
- Broad range of optimization functions in one component
- Needs minimal memory to handle complex optimization very efficiently thanks to two-phase processing
- Can also process very large files (> 2 GB)
- Platform independent

## Functions

Each function can be selected and configured individually. For instance, you can specify that all bi-tonal images with a resolution of 300 dpi or more should be reduced to 200 dpi and compressed using JBIG2.

- Resolution reduction (down-sampling) for color and grayscale images, bi-tonal images and indexed images
- Specification of a threshold where down-sampling starts
- Color conversion
  - To RGB, CMYK, grayscale
- Recompression
  - JPEG, JPEG2000, JBIG2, CCITT G3, G3-2D, G4, Flate, LZW
- Subsetting of fonts
- Removal of embedded font programs from standard fonts (un-embedding)
- Optimization of resources
- Removal of redundant objects
- Removal of undesired information such as
  - Article threads
  - Alternative images
  - Metadata
  - Page piece information
  - Document structure tree
  - Thumbnails
  - Spider information
- Remove or flatten form fields and annotations
- Read and write encrypted documents
- Linearize documents for fast web view
- List image attributes used
  - Page number, Size, Resolution, Color space, Compression type, Compression ratio, Space requirements in the PDF document
- List used fonts and their attributes

