PixEdit®

Desktop

PixEdit 8. *Rev 1.3*

Getting Started with PixEdit

About PixEdit

PixEdit is a leading document capture and scanning software for document management systems. The PixEdit functionality is especially well suited for mail scanning environments, electronic archives, document scanning service bureaus and the engineering industry.

Editing documents and drawings is more efficient than creating entirely new ones. Scanned engineering drawings, maps, blueprints are easily modified; forms redesigned and pages joined, split or reordered.

Convert and optimize both paper and born-digital documents to searchable on demand and readable with future generation software file formats. PDF/A is the ISO standard for document archives.

Videos

Many chapters and sections in this user guide contain links to video tutorials. Look for a smaller version of the shown video icon. The videos show you how, in a practical way, can solve daily tasks. If you prefer to watch a complete training course in PixEdit, visit www.pixedit.com.

System Requirements

PixEdit works very well on ordinary computers designed for office use. You don't need special cards or extra memory in the computer for efficient document processing.

Operating system For best performance, we recommend you use a newer operating system such as Windows® 7, Windows®8 or later. You will not obtain the best performance with PixEdit if you are running an older operating system such as Windows® XP.

Screen For maximum comfort you need to make sure the screen is set up so that you can see your documents at the highest possible level of quality. Screen resolution of minimum 1600 x 1024 pixels for regular office use and of 1980 x 1024 pixels (minimum) for advanced use. You can check or change your screen resolution by right-clicking with your mouse on the desktop. Choose Properties, then Options. Set the resolution to the recommended values. It is fine if the resolution is higher than the recommended values.

Mouse A mouse with a mouse wheel is optimal. This is, of course, not absolutely necessary, but is strongly recommended. Most features in the program are designed with good ergonomics in mind in order to avoid repetitive stress injuries. A mouse wheel will also enable you to work more quickly with other programs. You can use the mouse wheel in combination with the Ctrl and Shift keys on the keyboard in most windows in the program. For scaling, panning, etc., the mouse wheel in PixEdit can be used in the same way as in standard Windows programs.

Toolbar Overview

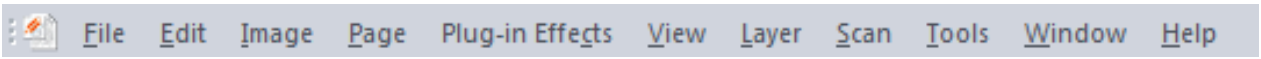
The Toolbar contains a collection of the most common tools or icons used during a view or edit session.

When no document is active, most of the toolbar icons are gray. These icons are not available because there is no document present. When a document is opened, most of the icons become activated. Available icons are colored.

To activate a function, place the cursor on top of the icon and click the mouse button once. If you attempt to use a gray icon and a beep is heard, this indicates the function selected is not available.

Each activated tool displays its own Tool Style Bar. The Tool Style Bar allows you to type in coordinates, lengths, scale factors and other numeric information and to combine these with your digitized values.

Main Menu



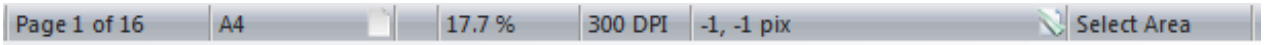
The Main menu displays the menu headings. Some of these will only be visible when a document is open in the workspace. The most frequently used tools found in the Main menu are also available as icons on the toolbar.

Hotkeys

Ctrl + C PixEdit provides hotkey capabilities. Hotkeys are available for panning, zooming, and turning on or off the overview window, blowup window, and other useful functions.

Some users prefer to use hotkeys instead of the toolbar icons. The hotkeys are selected with care to reduce the need of memorizing complicated sequences. The hotkeys for each item is listed on the right in each menu.

Status Bar



A status bar is visible in the lower part of both the main window and the blowup window. The status bar displays information about the current page number, page size, the zoom factor, cursor position in pixels, mm or inches (depending on the unit of measurement defined), the active tool and other types of relevant information.

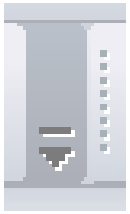
Customize Workspace

Basic or advanced use? The user interface in PixEdit can be adapted for all types of tasks related to document processing. For example, it may be wise to configure PixEdit for office use if you only use scanning, quality improvement and OCR. If you are going to use PixEdit at a document scanning agency or work with large-format documents, it's best to configure the program to show all tools on the toolbars in order to have fast access to advanced features. Go to Tools, Options, Default workspace layout and choose Standard, Office or Max space, depending on your task. The options Standard or Max space are recommended for large-format documents and technical documentation.

With the new modern interface in PixEdit the user can customize all windows positions and sizes and even create toolbars with selected edit functions.

From the Tools menu select Options and go to the workspace tab. You can select from two workspace modes, Classic or Docked. The classic mode, with floating windows, is similar to the older versions of the program. Classic gives the user more document viewing area and is recommended for small screens. In docked mode, windows are

attached to the frame border. Docked requires more window space and is recommended for large screens.



Customizing Toolbars and Menus All toolbars and menus can be customized in PixEdit. Using the shown tool you can add and remove buttons. To add or remove buttons first select the toolbar that you would like to edit, then check or uncheck buttons. Dragging the toolbar to another location in the header is an option. You may also create your own toolbars by selecting the Customize menu. The customize dialog allows you to add or remove menu items, create keyboard shortcuts, associate double clicks to commands and much more.

Open, View and Print Functions

Opening a document or an Image File

To open an image file for viewing or editing, use one of the following procedures:

•FILE, OPEN. Any readable document file may be opened using this command. The file extensions are listed in the OPEN box. You may also combine several files into one large multi-page document before viewing. Check the "Combine files into a multi-page file" option after selecting the files to be opened.

• The eight most recently used files are listed at the end of the FILE menu. To access a recently opened file, simply click the file in the list.

•Double click any thumbnail image to open the file for viewing or editing. You may also click and drag files into the main window.

•Drag any image file from Windows Explorer directly into PixEdit.

General about PixJet file import

The standard PixEdit is capable of reading almost any desired image file format. However, native files from, for example, CAD systems cannot be read directly. To import these, as well as other file types into your document, PixEdit may use the optional PixJet Virtual Printer and instruct the associated application to "print" the file directly into PixEdit. Since the associated application is responsible for rendering the requested file you are always guaranteed perfect results.

Opening and importing native file formats Once PixJet has been installed; you can compose your documents with PixEdit and work with almost any file type, just like you do when you are composing documents from ordinary scanned pages. For example, you can drag a file directly into the Document Composition window in PixEdit or use File, Open, insert a CAD file as a figure into an existing page and so on. The only requirement is that you have the native application installed on your computer.

Since the native application believes it is printing to an ordinary printer, it may ask you questions regarding the "printing" process. Most applications however do the

virtual printing without prompting or dialog boxes, making it suitable for mass conversion with the Batch Wizard.

Page properties When PixEdit imports an unknown file format it will, as default, use 300 DPI. However, some applications may override the default settings for the PixJet virtual printing. In that case you may want to adjust the default values in the associated application.

To adjust the default resolution, page size, color mode and other properties of pages to be imported use the following procedure:

Click Windows Start button, Control panel, Printers and faxes. Right click the PixJet Printer icon, select Printing preferences and click Advanced.

You may also change the page properties after they have been imported into PixEdit. You may, for example, choose to halftone a page range; convert it to black and white and so on. You may also change the resolution in PixEdit, but increasing the resolution in PixEdit will not increase the quality. If you require a higher resolution you should configure this in PixJet as described above to obtain maximum quality.

File Associations

The most common file formats will normally be associated with PixEdit. If you double-click an associated file from the Windows Explorer, PixEdit starts and the file will be loaded. Files that are supported and associated to PixEdit will have the programs document icon attached to it.

If a file won't open from the Windows Explorer and you know for sure that the format is supported, you can try to re-register the format. Select 'Options' from the 'Tools' menu and click the 'File Associations' tab. A list with all available file formats will show and you can click the check box for the ones you would like to associate (register) with PixEdit. This is the correct way to register/unregister file formats with PixEdit.

Viewing

Browsing pages

The easiest way to browse pages is to use Composition View. Just click the page you would like to show in the main window.

As an alternative you can use the browse buttons, VIEW, PAGE or PgUp or PgDn on the keyboard.

If you first click Composition View, you can also use the arrow keys on your keyboard for page browsing.

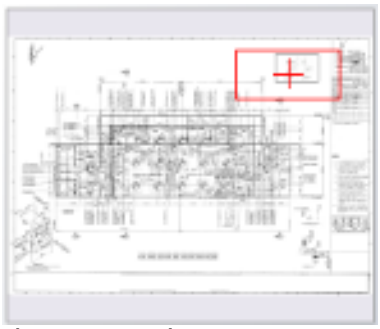
Zooming in the Main Window

For smaller page sizes such as A4 you will seldom need to change the scale factor for the screen. In contrast, for larger technical documents or maps you will often need to zoom in on details. In retrieving a document PixEdit will adapt the scale factor so that you see the whole document, the whole width, or use a given scale factor. You can choose which of these methods PixEdit should use in View, Options, Zoom and Pan. By far the fastest zoom method is to hold down the Ctrl key while rolling the mouse wheel. This method works in both the Page layout window and the main window. You can also use the + and – keys on the numerical section of the keyboard or the Zoom tool on the toolbar. If you think the zoom increments are too large or too small, you can change this in View, Options, Zoom and Pan.

Panning Around the Document

To see different areas of the document in the main window, use one of the following procedures:

Composition window When moving the cursor over this window the shape of the cursor changes to a small pointing hand. If you click the mouse button, the red frame follows the pointing hand to the new position and updates the contents in the main window. The red frame can also be dragged around by holding down the left mouse button while it is moved. You may also drag out a rectangle to indicate the resulting area shown in the Main Window.



Overview Window

If you only work with large single page documents, you may consider using the Overview window instead of the Page Composition window for zoom and pan operations. Press F8 to turn on this window.

The overview window defaults to the upper right corner of the screen. It contains a complete overview of the active document. The main purpose of this window is to display the entire document in as much detail as possible, even at high zoom factors.

You will notice a small red frame in the overview window when viewing a document. This frame corresponds to the area visible in the main window. When panning around the document, the square moves correspondingly. When the zoom factor in the main window is changed, the size changes, enclosing the new area selected for viewing.

When moving the cursor over this window the shape of the cursor changes to a small pointing hand. If you click the mouse button, the red frame follows the pointing hand to the new position and updates the contents in the main window. The red frame can also be dragged around by holding down the left mouse button while it is moved.

You may also drag out a rectangle in the Overview Window to indicate the resulting area shown in the Main Window.

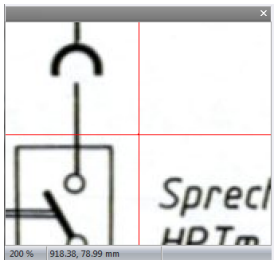
Mouse Wheel Click the mouse wheel and indicate pan direction by moving the mouse. Terminate by clicking the mouse wheel again.

Hotkey (keypad direction/arrow keys) You may pan to the edges by holding down the control key in addition to the keypad keys. Holding down the SHIFT key will pan one screen at the time.

Zoom & Pan Tool Click and drag to a new document position. If you keep the Ctrl key pressed while selecting a rectangle with this tool, the program will zoom in on the selected area. Keeping the Alt key pressed while clicking zooms out. You may also double click any position to center this position in the main window.

When you reach a document edge, no further panning in that direction is permitted.

Blowup Window



The Blowup window displays a small part of the pixel configuration around the cursor in the main window. The content of the Blowup window changes as the cursor is moved around the document. The size of each pixel in the window is enlarged to ease the operation of fine tuning the cursor to a specific point. The main purpose of this window is to allow accurate digitizing in the main window at high zoom factors. To zoom in the Blowup window, use one of the following procedures:

Blowup Window Click inside the Blowup Window to bring up the Blowup Zoom slider

Pull-down menu VIEW, ZOOM, BLOW UP or BLOW DOWN

Hot key ALT + or ALT -. Use the numeric keypad keys

The Blowup window can be turned on or off with F7.

Auto Grayscales

The quality of a monochrome zoomed image can be improved by using the Auto Grayscales option. Click on the Auto Grayscale icon or use VIEW, AUTO GRAYSCALES.

View Options

To configure View Options, click VIEW, OPTIONS. The General View options are related to cursor appearance, backgrounds and colors. The AccuPix option controls the method and sensitivity of the built-in pixel reduction gear, while the SmoothPan option controls the smoothness of animated panning.

General View Options

Select between Extended, Center Dot or Tool size indicator for the main cursor. The cursor color can be configured to the color of the active raster layer or to a specific color. The crosshair inside the Blowup window, as well as the rectangle color in the Overview window, can be configured in this dialog.

Zoom and Pan Options

From the menu select View, Options and go to the Zoom and Pan tab. You can specify different zoom and blowup factors and even pan to the corners or center. These settings allow the user to control how the document will be displayed after opening. You can also apply these settings every time a new page is loaded.

Setting the zoom and pan options can be very useful if you are investigating particular areas of many documents.

AccuPix Options

▶Traditional technology only provides a pixel-step size equal to the current zoom factor in the main window. PixEdit however, features an automatic step-reduction mechanism for single pixel accuracy even at very high zoom factors in the main window. In manual mode, the SPACE key must be held down when you want pixel accuracy in high zoom factors.

In automatic mode, the cursor is slowed down by the factor used in the Blowup window or by a specified factor when you move the cursor slowly

SmoothPan Options

The SmoothPan feature gives you a more realistic feel when panning around the document.

Printing

Use this icon or FILE, PRINT to print a document. You may scale the printed output to any arbitrary size, fit the document to maximum paper size, or output several pages if a page is larger than the paper size. You can also specify a page range for working with multi-page files. Several other options are also available. To configure your printout, use FILE, PAGE SETUP or the page setup button in the print dialog.

Scaling

True Selecting this option always results in a 1:1 ratio between the original scanned document and the printed copy. If your document does not have the resolution parameter, this option cannot be used.

Fit to page Select this option to scale the copy of your document to fit the printer page size. If the document is larger than the size of the paper, the document is scaled down. If the document is smaller than the paper, the document is scaled up. The aspect ratio, however, is maintained.

Use Printer Resolution This option sends the document without any scaling to the printer. If the document resolution is different from the printer resolution a scaling error will result. For dithered images (emulated gray shades), using this option usually gives the best results.

Specify scale: Select this option to scale the document to a specified scale.

Orientation

You may choose between Portrait, Landscape or Automatic orientation. In Automatic orientation mode, the software will decide if a 90-degree rotation should be performed to best utilize the paper area.

Margins

The printable area of a printer is normally smaller than the size of the scanned area, even when using the same standard document size in both units. Therefore, if you want to print a scanned document or image in true scale, you must be prepared to lose some information on the edges of the printed document. In normal cases this will not be a problem, since the edges of a scanned document are in most cases white anyway.

Specify Margins Manual specification of the non-printable area of the paper. When the 'Fit To Page' option is selected, the software will scale the image to fit inside the printable area without any loss on the edges.

Use Physical Printer margins Same as above, except that the margins are fetched automatically from the printer.

Use Entire Paper In this case, the software will assume that the entire paper area is printable, even if this is not the case. Use this option if you can accept a minor loss along the edges of the scanned document.

Labels

To add a text string to any corner of the printed image, check the 'Print Label' option. Type the text string to be printed in the edit field. If you want the filename and date as label, check the 'Use Filename and Date' option.

Exif information

Check this option to include information from your digital camera on the printout.

Banners

You may insert any readable monochrome file as a banner on the printed page. The banner may, for example, be a large bold text string across the document.

In order to make the banner transparent, you may choose to apply the IMAGE, EFFECTS, BANNERIZE function in PixEdit to the file to be used as banner.

Saving and format conversion

Saving Documents

Although PixEdit can save your documents in many different file formats, the recommended file format to use is **PDF** or **PDF/A**. The reason for this recommendation is that document attributes such as PDF comments and hidden OCR-text can only be saved when you use variants of the PDF file format. If you save or convert your documents to a non-PDF file, the following document features may be lost:

- Encrypted content
- Hidden OCR text
- PDF comments
- PDF bookmarks
- Other PDF-specific attributes

Also, if you save or convert a digitally born PDF document to any image file format such as TIFF or JPEG, text and graphics will be rasterized and therefore have less future value. Rasterized documents also tend to occupy more disk space than their digital born counterpart. When saving digitally born PDF to PDF however, PixEdit will always try to preserve as much digital born content as possible.

To manually save an image file after scanning or editing, use FILE, SAVE or the save icon

The default file format and compression method to be used during saving is configurable in the Saving Rules dialog.

Saving Rules

With saving rules you can control the default file formats and compression types in the "Save As" and "Save and Separate" dialogs. By specifying the defaults, you may save some time whenever you want to save documents one way or the other. From the Tools menu select Options and go to the Saving Rules tab. The saving rules have three default modes:

- Use the original file format of the opened file, or default if new/scanned file.
- Use the last file format from the save dialog.
- Use the appropriate default format.

In the "default file formats" section select the file formats and compression types you want. You will also have to specify a multi-page format with two compression types, color and mono.

File format Conversion, Page and Figure Extraction

PixEdit is capable of converting between many different file formats, and can successfully be used as a file format converter by using the FILE SAVEAS command. PixEdit reads more than 80 file formats, and allows you to convert between any read and write compression method supported. For a fast and efficient method of converting many files without user interaction, use the ▶Batch Wizard or ▶DocServer window for file format conversion.

To manually convert a document to another file format, use the shown icon or FILE, SAVE AS.

If your document contains more than one page, you may select the page option in the dialogue box to export and save a range of pages.

Another useful function in the SAVE AS dialogue box is the ▶*Selection* option. If an area is selected prior to SAVE AS option, you may choose to extract the selected area from your file and save it in any file format supported. The resulting file is cropped to the size of the selected area without affecting the size of the currently loaded document.

The resulting cropped file can be inserted as a figure into any other document by using the Figure button in the OPEN dialogue box, or can be treated as an ordinary document.

Encryption and PDF security

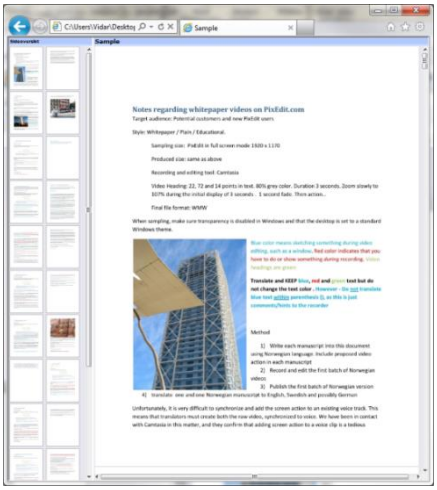
PixEdit can secure PDF documents so unauthorized individuals can't read, change or print them out without a password. You can secure a document so it can be read on screen but not printed out, or be protected so that the documents can only be printed out with reduced quality. Or you can protect the documents so that they can never be changed. The privileges of a user of a document will depend on how you configure the options in FILE, SECURITY.

It is also possible to encrypt documents automatically during scanning. Click the configure button in ScanBar, make sure PDF is selected in the save tab and then go to the security tab to configure the encryption options.

PixEdit can create a random password if you would like it to. If you use this function, you should be aware that it will not be possible to alter the rights to the document again, since the password will be permanently lost as a result of the strong 128 bit encryption in the program.

It is better to let your system administrator or archivist make the decision about the necessary encryption of your scanned documents.

Export to WEB



View scanned documents in any web browser Using FILE, EXPORT TO WEB in PixEdit, you can convert and publish any supported document type to a web server. Both single page and multi-page documents may be exported. The result is searchable and viewable in all types of web browsers without any need for plug-ins or view software. Since PixEdit is exporting your documents using plain HTML code, no special action is required by the reader to view the exported documents.

For easy navigation in multi-page documents, a frame with clickable page thumbnails is displayed, as well as an optional search field. The picture shows how an exported scanned file looks in Internet Explorer.

To browse to a page, click on any of the page thumbnails. Most browsers support additional methods for page browsing, such as the mouse wheel, PgUp and PgDn keys. Most internet browsers also support page zooming with Ctrl + mouse wheel.

With a high resolution screen, several pages may be shown simultaneously. Since PixEdit exports the documents using frames, a user may rearrange the space used for page thumbnails and main document.

General information about Export to WEB PixEdit supports publishing using either FTP or direct access to any folder on your web server. If you want to export and publish just a few documents you can do this using File, Export to WEB. However, if you need to publish hundreds or even millions of documents it is better to automate the process using the Batch Wizard.

As an alternative, your document management system may automatically instruct PixEdit (using a programmed interface) to export a requested document by a web visitor and then later delete the generated document in order to save space on the web server. *Note: this requires programming by qualified personnel.*

Regardless of input formats such as TIFF, PDF, HPGL and so on, PixEdit will, during export, generate easy-to-read pages in JPG, GIF or PNG format with configurable resolution and quality. For best possible flexibility, PixEdit offers configuration of page resolution, page thumbnail size, placements and more. If you change the default values in this dialog, it is a good idea to preview the results of your changes before exporting many documents. Exported documents will, most likely, require more storage space than the original scanned document as web browsers cannot read files compressed with commonly used compression methods such as CCITT Gr. 4 or JBIG2. Documents scanned in pure black/white mode are therefore converted to a file format readable by the browser. During this process the resolution is reduced without significant reduction of readable quality. For pages scanned in greyscale or color, required storage space is usually less than the original scanned document.

Exported documents should not be regarded as backup copies of your original scanned documents.

Configuring Export to WEB

Style This setting defines the general look of your exported documents. You can choose between Standard, Art deco, Seaside and other styles.

Text search Check this option to add a search field on each exported page. Some document types may already be searchable, but if the original document does not contain searchable text, PixEdit will perform OCR. The searchable text itself will not be visible; instead it will be hidden behind the original scanned graphics. This ensures the original document is still exactly as scanned, even if the OCR process makes mistakes.

Page range The default page range to be exported is all pages, but you may also export any page range selected in the Composition Window. You may also specify the page range manually by typing, for example, 5-10 in the page range field.

Save image as (preferred image type) PixEdit will by default use JPG as default image type, but other image types readable by Internet browsers are available. You can choose between JPG, GIF or PNG. JPG will usually generate the smallest files, especially if you choose a low JPG quality such as 30 or 40. Making very small files may seriously affect readability. Default JPG quality is 50. For almost lossless quality, choose a higher value. By definition, GIF and PNG are lossless formats.

Thumbnail page When exporting multi-page documents, it is good practice to always use this option. The exported web page will contain an easy to use page navigation window as defined in setting Frame/table Layout. Default position for page thumbnails is on the left side of the main window.

Image and page thumbnail sizes You can define your own sizes in pixels, but we recommend checking the option "Suggest image and thumb sizes", as this ensures correct image horizontal / vertical aspect ratio as well as a 10:1 ratio between page thumbnails and main image.

Where to save image files You can choose between different predefined structures for storing the images in your exported web. You can use a flat structure, storing the images in the same folder as the main file, in a standard 'images' sub folder, in a sub folder named after the main file or in a specified, user defined sub folder.

Auto cleanup When re-publishing your documents with a different structure or a different number of pages, for example, choose this option to automatically delete unnecessary files.

View report and verify in browser This option lets you view technical details about your exported document such as size and the number of pages, as well as the exported result in your default Internet browser.

Publish to web If your PixEdit has direct access to the target folder on your web server you don't need to check this option to publish your files. To publish your

exported documents using FTP, check this option. Type the FTP server name, username and password. If you are not familiar with FTP publishing, ask your system administrator for details.

Save and Separate

Save and Separate splits multi-page documents into separate files. This function offers automatic file name incrementation in both the main and extension part of the filename. Save and Separate is also capable of splitting multi-page files into smaller multi-page files by the use of barcodes. To split a multi-page file into separate files, click FILE, SAVE and SEPARATE.

Save and Separate only offers basic document separation and that a more powerful, flexible and automatic method can be found in the separation tab of your scanning profile.

Save in selects where to save the separated files.

File name shows the name of the first separated file name. If you are using the barcode option, the barcode itself will be a part of the file name.

Save as type selects the file format

Compression type selects the compression type for the currently selected file format

Separation method Choose between saving each page as a separate file or saving as multi-page documents separated by barcodes.

If the barcode pages contain more than one barcode, the barcodes will be combined before saving.

Incrementation

Filename:	Increments the Filename
Extension:	Increments the extension
Prefix text:	First text in filename
Start number:	First number to use
Suffix text:	Last text in filename
Digits:	Number of digits to use

Overwrite existing files silently. Check this option for silent overwriting of existing files.

Using and configuring OCR

▶PixEdit's OCR function translates scanned documents into readable and searchable PDF files. You can perform OCR manually on an already scanned

document or by using the batch wizard to process thousands or even millions of documents without user interaction. OCR can also be done automatically after scanning. You can select an area with the Selection tool, right click and choose Copy As Text to recognize and copy an area of text to Windows Clipboard. The text may be pasted into any application.

In order to ensure maximum OCR quality, scanned documents should in general have good readability. Recommended resolution is 300 DPI. Make sure that the scanned documents are not very dark or very bright.

If you save your documents in PDF format, recognized text will be stored in *addition* to the scanned content in an invisible layer, ensuring full search ability without affecting the original content. The resulting searchable text is stored in an invisible layer in the saved PDF file according to the PDF/A standard. PixEdit will not replace any graphics or change the appearance of the scanned document.

Using OCR manually First select the page or page range to be processed and then click the OCR icon to recognize text. If you only need to extract a part of a page as text, use the select area tool and then right click and choose "OCR and copy as text". You can also use the search icon and type the text you are looking for. If the document is not already recognized, PixEdit will execute OCR before the results are displayed.

Monitoring OCR folders in DocServer To monitor one or more folders for incoming files and process them with OCR, your best choice is to use the DocServer window with a suitable processing profile. A typical application for this arrangement is to process scanned files arriving from a fleet of multifunctional devices. While the DocServer window processes files, you can continue to work as usual in PixEdit as the job is done in the background.

Using OCR in Batch mode If you need to execute OCR on many documents stored in a folder structure, use the Batch Wizard. Remember to specify PDF or PDF/A as storage format.

Using OCR automatically after scanning Make sure that you have checked Enable After Scan Processing on the General tab in SCAN, AFTER SCANNING, and then check Recognize text using OCR.

Configuring the OCR module To configure the OCR module, use TOOLS, OPTIONS and select the OCR tab.

Language Accuracy will be improved if PixEdit knows the language of the scanned text. PixEdit defaults to the configured language in Windows, but you may override this by checking a specific language in the list of supported languages.

Acro – Automatic Color and Resolution Optimization

The ACRO functionality in PixEdit evaluates scanned color pages and decides if the page should be stored in color, grayscale or black/ white mode in the same multi-page document. In addition, you can configure individual

resolution parameters for detected page types. Acro is available as a manual function (in menu IMAGE, ACRO with page range capability), in a recorded macro or automatically after scanning.

Note: You should avoid using ACRO on documents you plan to save as PDF/A Compact files. The reason is that PDF/A Compact has a built-in, more advanced form of Acro-like functionality.

Using ACRO, you don't need to worry about configuring your scanner between Color, Grayscale or Black/White mode between batches or pages. In order to use ACRO, you must first configure your scanner to always deliver color pages. Beware that some scanners are somewhat slower when scanning in color mode.

A page stored in color mode may have far lower resolution compared to a black and white page and still have the same or even better readability. Color pages are using more storage space than black and white pages, but you can greatly decrease the file size if you configure ACRO to reduce the resolution automatically when a color page has been detected. The same goes for grayscale pages. Just remember that your scanner should always deliver at least the same resolution as you configure for final black and white pages.

Resolution Typically, for an ordinary office or post scanning station, you would want to store black and white pages in perhaps 300 DPI, gray pages in 200 DPI and color pages in 150 DPI to maintain good readability and minimize file size. ACRO takes care of this task for you by offering configurable resolution depending on detected page type.

Color depth ACRO can also reduce the number of colors (or gray shades) to a specific number when such a page is detected. For example, it is seldom necessary to store ordinary post in full 24 bit color mode. Storing a color page in 256 colors is often fully acceptable, greatly reducing file size. In some cases you may even want ACRO to generate color or gray shade to only 16 colors or 16 gray shades.

If you decide to use very few colors or gray shades because you want to save storage capacity, you should configure PixEdit to use a compression format that offers better compression for such pages. A good choice for 16 or 256 colors or shades of grey is PDF or TIFF with "Deflate" compression. If you decide to store color pages in full 24 bit quality, PDF or TIFF with JPG compression is suitable.

ACRO Sensitivity ACRO is using advanced technology to decide if a page should be stored in color, gray shade or black and white mode. In some cases however you may need to adjust the sensitivity to adapt to a scanner delivering stronger or weaker colors compared to the original pages.

To produce less color pages and more gray shade pages, drag the slider away from the color icon, towards the gray shade icon. If you don't want to produce gray shade pages at all, uncheck Detect Gray Pages.

To produce more black and white pages, drag the corresponding slider towards the black and white icon.

Ignoring color cast A document page with an even background color like the example below will be stored as a color page. If you have checked the Ignore Color Cast Option however, the background color will be removed and the page will be stored in black and white format.

Vectorizing

To process a scanned document in your CAD system, the raster document must be converted to geometric descriptions in a format readable by the CAD program. This process is called vectorizing. Due to limitations in today's vectorizing algorithms and machine resources, the output quality can be expected to be lower than the original scanned image. Because of this, the quality of the original scanned image has to be high in order to obtain acceptable vector quality. To start the vectorizing process, use the following procedure:

Pull-down menu Click on the TOOLS command and select the VECTORIZE option.

Toolbar Click on the Vectorize button.

The Vectorize tool will be disabled if you have opened color images. To vectorize a color image you must first use IMAGE, COLOR, and REDUCE TO MONOCHROME.

Output format Choose between DXF and HPGL.

Vectorizing accuracy A high value results in more accurate geometric descriptions and larger vector files. A low value generates longer vectors and reduces the size of the output file.

Contour This option generates vectors on the base of the raster outline. It is useful when processing logos and bold graphics.

Skeleton This option generates vectors on the base of the raster skeleton. In order to extract the skeleton a thinning iteration parameter must be given. Iteration removes a contour shell and the number of iterations defaults to 3.

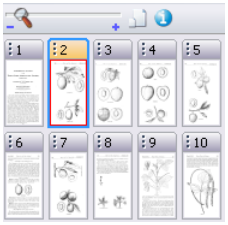
Vector co-ordinates relative to selected area If you have marked an area before vectorizing and selected this option, the generated vectors are positioned at the same coordinates in your CAD drawing as in the original document. If not used, the vectorized area is placed relative to the CAD program's coordinate origin.

Horizontal coding In some cases horizontal coding is desired, instead of the line following method used by PixEdit vectorizer. Horizontal coded DXF files tend to be large, but are useful for loading in a scanned image into AutoCAD without distortion of the data. Use the FILE SAVEAS menu and select the Horizontal DXF format, if this type of coding is required by your application.

Vector display options You may temporarily hide the generated vectors by clicking on the Eye icon in the layer control bar. The color of the vectors may be changed by clicking the color icon. The vector layer cannot be activated for editing.

Page Manipulation

The Composition Window



The Composition Window is a central tool for page navigation and page manipulation. To view a different page, simply click the desired page. To view the previous or next page, use the up/down arrow keys on the numeric part of your keyboard.

Moving pages to a different place in the document or to other documents is easy with drag & drop techniques. To change the displayed page size, use the zoom slider or roll the mouse wheel mouse wheel while holding down the Ctrl-key.

A document may have different page sizes. To show their approximate relative size, activate the shown icon.

To display additional information on top of each page such as resolution and size, click the Information icon.

Selecting page ranges for processing

Selected page ranges in the Composition Window are automatically transferred as default values to functions that can operate on page ranges. For example, if you select two different page ranges in the Composition Window and activate the deskew function from the menu, these two page ranges will be deskewed when you click the OK button. To select more than one page for page processing, use standard Windows methods. To select a sequence of pages, click on the first page, hold down the SHIFT key and click the last page in the sequence. Non-sequential pages can be selected by holding down the CTRL key while selecting.

The selected page ranges will be memorized so that you may apply several page processing functions to the same range without having to re-select the pages.

In addition to selecting a page range in the Composition Window, you may also specify a page range manually in many dialog boxes. Using manual page ranges may sometimes be more efficient – for example, if you need to process every second page between page 12 and 40, you simply write 12-40:2. You may also specify several ranges separated by comma, e.g. 30-40, 50-60.

Moving, copying and deleting a page range

▶ To move a page range to another position within the document, select the pages to be moved and use a standard Drag Drop procedure. When dragging a page or a page range, you must click the *header part* of a selected page before you drag it.

You may also use Cut, Copy and Paste procedures to re-arrange pages. Cut, Copy and Paste can be accessed from the Edit menu, by right clicking the mouse or by the use of Ctrl-X, Ctrl-C and Ctrl-V.

▶ To delete a page range, use the Del key, the Delete command in the pop-up menu or the Edit menu.

Composition Window popup menu

▶ The popup menu contains frequently used commands that can be applied to page ranges, as well as access to functions for corrections, filters, printing and other often-used commands.

To activate the popup menu, click the right mouse button in the Composition Window.

Page Numbering

To activate the page-numbering dialog, use PAGE, NUMBERING. PixEdit provides these options for inserting and customizing page numbers:

Remove page numbering By checking this option you may remove the numerals from the entire document or a specified range.

Font and size Choose between any installed fonts installed on your system.

Prefix and suffix text PixEdit provides customable text to be added before and after the inserted page number. For example, the text "Page" may be added in front of each page number.

Number format Choose between Arabic numbers (1, 2, 3) and Roman numerals (I, II, III).

Page numbering starts at Defines the page on which numbering shall start

Position Choose between Top or Bottom of the page.

Alignment Choose left or right side of the page.

Margins These specify the distance from the top, bottom, left or right side to the numerals. Depending on the current unit of measurement, the distances are specified in pixels, mm, inches or points.

Page Range Choose between current page, all pages or a specified page range. If you have previously selected a page range in the Composition Window, this field defaults to the Composition Window values.

Headers and Footers

To activate the Header/Footer dialog, use PAGE, HEADER AND FOOTER. PixEdit provides several options for inserting and customizing headers and footers.

Headers

To start inserting, modifying or removing headers, click the Header radio button.

Font Click Select to choose between any installed fonts installed on your system. A sample font window is provided.

Remove header When checking this option you may remove the headers from the entire document, the current page or from a specified page range.

From top edge Fill in this field to specify the distance from the top edge of the page to the header section. Depending on the current unit of measurement, the distance is specified in pixels, mm, inches or points.

Alignment Choose between Right or Left

Alignment margin Defines the distance from the Left or Right edge to the header. Depending on the current unit of measurement, the distance is specified in pixels, mm, inches or points.

Header text The header text is itself, e.g. "This is my header". You may also include chapter names as part of the text by clicking the chapter icon above the text line.

Page Range Choose between current page, all pages or specified page range(s). If you have previously selected a page range in the Composition Window, this field defaults to the Composition Window values.

Footers

To start inserting, modifying or removing footers, click the Footer radio button.

Font Click Select to choose between any installed fonts installed on your system. A sample font window is provided.

Remove footer By checking this option you may remove footers from the entire document, the current page or from a specified page range.

From bottom edge Fill in this field to specify the distance from the bottom edge of the page to the footer section. Depending on the current unit of measurement, the distance is specified in pixels, mm, inches or points.

Alignment Choose between Right or Left

Alignment margin Defines the distance from the Left or Right edge to the footer. Depending on the current unit of measurement, the distance is specified in pixels, mm, inches or points.

Footer text The footer text is itself, e.g. "This is my footer". You may also include chapter names as part of the text by clicking the chapter icon above the text line.

Page Range Choose between current page, all pages or specified page range(s). If you have previously selected a page range in the Composition Window, this field defaults to the Composition Window values.

Page Orientation and Turning

Landscape and Portrait Switching between landscape and portrait mode can be done by clicking on any of the turn icons found on the toolbar. To turn a page range instead of a single page, select the desired page range in the Composition Window before using this function.

Since the turn functions are much faster than using the arbitrary Stretch & Rotate option in PixEdit, the turn icons should always be used when you only need to rotate the document in steps of 90 degrees.

Turning only Portrait or Landscape pages If your document contains a mixture of landscape and portrait pages, you may want to consider using the PAGE, ORIENTATION function. With this tool you may, for example, turn portrait pages only.

Automatic Page Orientation PixEdit can automatically correct each page in scanned documents having a mixture of orientations. Use PAGE, ORIENTATION and select Automatic Orientation. This function depends on the presence of recognizable text on each page to work properly.

More Page Functions

New Page

To insert a new blank page into the existing document, use PAGE, NEW. The size of your new page defaults to the size of the current page, but can be modified to any standard or customized document size by using the dialogue box displayed.

Choose between inserting the page before or after the current page, or select the *replace current page* option.

Page Insert

The easiest way to insert pages from one document into another is to use the Composition Window. Having the destination document open, open the document(s) you would like to pick pages from and simple drag any page or page range from the

source documents into the Composition Window belonging to the destination document.

▶ You may as an alternative Click PAGE, INSERT. Choose between inserting the new pages before or after current page, or select the *replace current page* option. You will, however, find that using the Composition Window is more efficient.

You may select more than one document for insertion at the time by keeping the mouse button down and dragging it over the pages to be opened. This is useful when converting many single page documents to multi-page documents.

▶ To combine several documents directly to a new document, select two or more files in the open dialog and check "Combine to multi page document".

Page Extract

▶ To save a page or a page range as a new file or document, first select the pages in Composition view and then use FILE, SAVE AS or the shown icon. Check the Page Range option in the dialog and then click OK. As an alternative, use PAGE, EXTRACT.

Page Delete

▶ To delete a page or a page range, first select the page range to be deleted in Composition View and then hit the Del key on your keyboard. As an alternative, use PAGE, DELETE.

Remove blank pages

▶ This function automatically removes blank pages from your multi-page document. To remove blank pages, use the shown icon or PAGE, REMOVE BLANK

In some cases, blank pages may contain a small amount of graphics because of dark scanner settings or spots on the original document. You may therefore want to adjust the default 0.06% value of acceptable noise level to a higher value.

Some blank pages may also contain some extra graphics on the edges. PixEdit may therefore be configured ignore a specified area along the edges before analyzing.

Like most page related functions, you may also use a page range indicated in the Composition Window or type the range specification in the Page Range field.

You may also remove blank pages automatically after scanning by choosing this option in a processing profile.

Punch Hole Removal

To remove unsightly punch holes from scanned documents, click the shown icon or use IMAGE, REMOVE PUNCH HOLES. If you frequently scan documents with punch holes, we recommend you enable punch hole removal in your processing profile.

Deskew

▶ Scanned images are often slightly skewed. The most common method of correcting this problem is to check the deskew option under the general tab in SCAN, AFTER SCANNING so that skewed pages are fixed directly during scanning. However, you can also correct skewed documents manually in PixEdit.

Automatic Deskew
Use the shown icon to deskew a selected page range automatically. PixEdit looks for text lines, graphics or edges that are supposed to be straight and then corrects the problem.

Manual Deskew
If PixEdit for some reason is not able to detect the skew angle, you may using the manual deskew tool to indicate the skew of any line that should be aligned horizontally or vertically. PixEdit will perform the deskew operation as soon as you have indicated the skew by two mouse clicks in the main window. Manual deskew can only be done one page at the time.

Remove Black Borders / Auto Size

▶ Some scanners include a black border around each scanned page. PixEdit can use this information to automatically crop the page to the original paper size, making it possible to scan different pages sizes in one batch. This function also includes an automatic deskew process.

You can also configure PixEdit to simply remove the black border without cropping. Both of these two options can be executed automatically after scanning.

Page Joining

▶ You can combine two and two, or any other number of pages into one single page. The number of pages in the document will be reduced according to how many pages you are joining. The page range to be joined can be selected in the Composition Window or specified manually in the dialog box. Use the shown icon or PAGE, JOIN to join a page range.

You can join pages horizontally, vertically or from a booklet sequence. Check *Join in reversed order* for left/right page swap.

Page Splitting

▶ Use the shown icon or PAGE, SPLIT to split any selected page range. Scanned booklets can easily be divided into separate pages in PixEdit. You can let PixEdit analyze the pages and suggest the positions to be used, or you can insert a guideline to indicate the desired position. To insert guidelines first make sure you have turned on the Ruler (F5), then double click the ruler to insert guide lines.

Page Rearranging

PixEdit can rearrange the page order, either manually by using the Composition Window, or according to standard rules as shown. Choose between page *reversal*, *collate* or *normal*. The Collate option will arrange front and back pages to a booklet sequence, while Normal will convert a scanned booklet to an ordinary page sequence. Make sure you have used the page splitter before using this option.

You will find this dialog in PAGE, SEQUENCE or by right clicking the Composition Window.

Stack Image

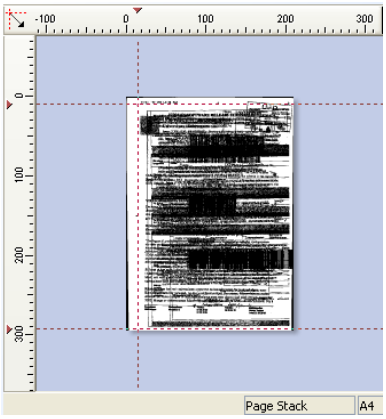
A very fast way of inspecting all pages (or a page range) for correct margin adjustment is to use the Stack Image. Consider the following example: All odd-pages in a 700 page scanned document needs to be inspected for a correctly adjusted margin.

Simply click the Stack Image icon and specify page range 1:700:2. Any page with bad margin is easily spotted. Now, while still having the Stack Image available, simply click on graphics that belongs to the page in question. PixEdit will automatically go to this page so that you can correct the problem with a suitable tool.

As with most page functions in PixEdit, you can select the pages (or page ranges) to be shown stacked.

Guide Lines

You can insert guide lines to indicate future margins, to delete spine noise between double pages and much more. To insert, remove or change the guide lines, use VIEW, GUIDELINE and choose desired function. You may also insert guide lines by double clicking the ruler. If the ruler is not visible, turn it on by F5.



Right clicking a guide line is an alternative method for guide line configuration. This menu offers options like Snap to Guidelines, useful for lining up pages, selected areas or graphics primitives. Recto/Verso mode and other options are also available. The picture shows three guide lines on a stack image.

Crop

The Crop function is used to cut away edges in documents. Use the shown icon or IMAGE, CROP to crop a selected page or a page range. You can crop to standard sizes or to user defined areas defined by the selection tool.

If you choose to crop to a standard format such as A size, you can drag this area to desired position in the crop dialog before you click OK.

You can also crop according to inserted guide lines. To insert guide lines, double click the ruler (F5). If you only want to crop away extra white borders, select automatic mode in the crop dialog. PixEdit will then suggest a set of coordinates surrounding all graphics in the document. Automatic cropping is only suitable for pages with clean white edges.

Image Positioning

▶ This function allows you to adjust the image position and margins on one or more pages according to selected pages in the Composition Window or manually specified page ranges. You will find this function in the IMAGE, IMAGE POSITION menu.

Depending on the Unit setting, the units used will be pixels, millimeters or inches.

Delete Margins To remove punch holes or noise outside a specified margin, check the "Delete margins" option and specify the size of the margin to be deleted.

Horizontal image position Check this option if you would like to adjust the horizontal position of the page content. You can choose between a specified horizontal position measured from the left edge to the first encountered graphics, or let PixEdit center the graphics automatically. If you use this option, you may also add a horizontal offset in addition to the automatically detected center position.

Vertical image position Check this option if you want to adjust the vertical position of the page content. You can choose between a specified vertical positions measured from the top edge to the first encountered graphics, or let PixEdit center the graphics automatically. If you use this option, you may also add a vertical offset in addition to the automatically detected center position.

Page range By default, the page range will be taken from the selected pages in the Composition Window, but as with all other multipage functions, you may also specify the page range manually according to the standard PixEdit syntax.

Redaction and Markups

Redaction

▶You can use PixEdit and PixView to redact or censor sensitive information in a document by "blacking out" selected words or sentences. PixEdit and PixView offer a safe way to do this, even on documents that contains hidden OCR text. Your sensitive information is not hidden, it is permanently removed and replaced with a black rectangular redaction. It will not be possible to retrieve the redacted text after saving a redacted document.

When saving your redacted document, markups, metadata, tool-tips, hidden links to web pages and e-mail addresses will be removed. If you want to keep this information in redacted documents, uncheck this option in the PDF-import tab using Tools, Options.

Some documents may contain a substantial amount of hidden information not visible to ordinary users. However, such hidden information may be revealed using advanced software tools. During saving, PixView and PixEdit therefore removes all hidden information in redacted documents. This deep cleaning process is not configurable and cannot be disabled.

Basic redaction Activate the redaction tool and select the area you want to redact. The selected area will be blacked out.

Large redaction jobs If your document contains a lot of information to be redacted, you may find it useful to combine the redaction tool and the text search window to automatically find redaction candidates. You can also mark sensitive information and later convert these markings to redactions with a single mouse click. On larger redaction jobs, make sure you have both the tool style window (F10) and the text search window (Ctrl-f) visible.

Marking text for later redaction Use this tool to mark redaction candidates. You can then, for example, save your document so that colleagues can evaluate or convert your marked sensitive information to redactions. By default the redaction markups have red color. To change color or other properties, activate the markup by clicking once, then right click and select Properties. To resize, activate the markup and drag the corners.

Converting marked text to redactions Use this button to convert all marked redaction candidates to redactions. To convert a single candidate to redaction, double click the candidate or use the right click menu.



During redaction or while marking redaction candidates, the text search field will automatically be updated so you can search for additional candidates for redaction. Instead of manually selecting the text to be redacted, you may type a word or text in the search field and click the search button  to display a list of candidates to be redacted. By default, all listed candidates will be selected and marked for redaction when you click the "Mark selected text for redaction" button shown to the left.

Note When redacting documents, PixEdit will sometimes use OCR-technology to search for candidates to be redacted. The automatic search function may not always find all candidates. It is therefore good practice to always manually check if all candidates have been found.


Changing selection mode If the document you are redacting contains searchable text, you can use this button to change between double clicking and indicating rectangular areas when you redact or mark for redaction. This button is greyed out when working on documents without searchable text.

PDF Markups

▶There is a significant difference between comment tools and content editing tools. While editing tools are used to make permanent changes to a document, commenting or markup tools are mostly used for adding comments or to propose changes to be made in a document.

To see an organized list of all comments and markups in the document, click the "Comments" tab in composition view.

Dynamic comments and markups are only preserved when you save your document to a PDF file. If you save your document in a file format such as TIFF, you will be warned comments and markups will be lost. You should, therefore, always save documents with comments and markups to PDF.


Note To add a note on a document page, activate the Note tool and then click to indicate the position of the note. The note, which is marked with your login name, is ready to be filled with text. You can hide the note by clicking the X in the upper right corner. To re-open the note, double click the note. Delete a note by clicking it and then press the delete key on your keyboard.

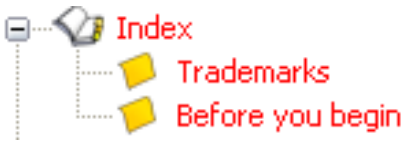

Highlight, underline and cross out These three tools all work the same way. Activate by clicking the icon, then click and hold down the mouse button while you indicate the text. You can also add a note to the indicated text by double clicking it.


Oval, rectangle and lines You can add markups in the form of ovals, rectangles and double click them to add textboxes

with additional information. When you right click you can configure transparency, color, line thickness and other properties.

In contradiction to content editing tools that makes permanent changes to your document, PDF markup operations cannot be recorded in macros.

PDF Bookmarks



Bookmarks simplify navigation in PDF documents, and acts as an advanced table of content so that users easily can browse large documents. Bookmarks are shown on the left hand side of the main window in PixEdit. A single click on a bookmark will immediately take you to that page, as well as the position on that page where the bookmark is pointing. Remember bookmarks can only be saved in the PDF document format. If you, for example, are adding bookmarks to a TIFF document you *must* to save the file in PDF format in order to keep the bookmarks.

In order to show or edit bookmarks you must first have the Page Composition window visible. By default this window is visible, but if you no longer have this window switched on use View, Document Composition to make this window visible. The Document composition window has three tabs, Comments, Bookmarks and Composition. Click Bookmarks in order to work with Bookmarks.

You can add, remove, move or edit bookmark properties. When you insert a new bookmark you can type in the name of the bookmark manually, or let PixEdit use its optional OCR snap-in module to automatically select a name for your new bookmark. Your bookmark can have various properties such as color and text font. A bookmark can cover the entire page or a small section of a page. You can also configure a bookmark so the page is displayed at a given zoom factor when a user clicks the bookmark.

Go to a bookmark Make sure the Document Composition window is visible and you have clicked the Bookmark tab. Simply click the bookmark just like you do when you are browsing the Internet. PixEdit will immediately display the page and bookmark.

Creating bookmarks If your only task is to create a bookmark that points to the current visible page and shows the entire page when a user later on click the bookmark, simply click the Insert Bookmark tool, then type the name of your new bookmark.

You may also specify an exact area on a page and add this area as a bookmark. Activate the Bookmark tool and indicate the area on the page using the rectangle and your mouse. You can change the default bookmark name "Untitled" by clicking the name and then typing in the new bookmark name. In many cases you would probably like to let PixEdit use OCR to automatically choose the bookmark name. Before indicating the bookmark area, activate the OCR button to the right of the Bookmark tool and PixEdit will use the text in the bookmark

area as bookmark name. Note that the first time you create a bookmark using OCR you may experience a slight delay before the bookmark name has been recognized.

Bookmark properties To change the properties of a bookmark such as color, font etc, select a bookmark then click the Bookmark Properties tool. You may also change properties of a bookmark by right clicking the bookmark and selecting Bookmark Properties.

Deleting bookmarks To delete a bookmark first select the bookmark to be deleted and click the Delete Bookmark tool. You may also use the Delete key on your keyboard or right clicking the bookmark and then select Delete. To delete more than one bookmark, use the Shift and Ctrl keys in combination with selecting the bookmarks.

Splitting Composition View If you frequently work with bookmarks you will find it handy to split Composition View so that you can see both bookmarks and Composition view at the same time. Use the shown icon to split Composition view.

Moving bookmarks Click the bookmark to be moved, hold down the mouse button and drag the bookmark to its new position. To move more than one bookmark simultaneously, use the Shift and Ctrl keys in combination with selecting the bookmarks.

You can organize bookmarks in a tree structure. To create a bookmark chapter, select one or more bookmarks and drop them onto the bookmark to be converted to a bookmark chapter.

Measuring area and length

You can use the measure tool to measure areas, lengths and angles in a scanned document. You can choose between units of measuremets such as millimeters, meters, inches and others, and you can use both paper and real world values. A list of measured areas can, together with user defined comments and text, be copied to Windows clipboard and pasted into other applications.

Area calculator The measure tool features an easy to use calculator so that you can add and subtract measured areas. Measured areas are placed in a list with the calculated result at the bottom. You can, for example, measure the sum of two areas minus a third area by using the + and – buttons in the measure tool window. As you continue to measure areas, the list in the measure tool Window is expanded. Use the C button to delete the entire list, or the CE button to delete a selected value.

Before you begin When using paper coordinates, all you have to do is choose units of measurements from the drop down list on the tool bar. When using paper coordinates, you can choose between millimeters, centimenters, inches and other small units of measurement.

Paper coordinates only allows small units of measument.

Real world coordinates allows larger units of measuement.

When measuring world coordinates you must first define the relationship between your scanned document and the real world. When using real world coordinates, the drop down list will show larger units of measurments, such as metres, kilometer, miles and so on. When you activate real world coordinates, a dialog box will be displayed offering you to define document scale. If you know the document scale, e.g 1:100, type in this value. Some documents may have different scale in horizontal and vertical directions and in that case you must specify two different values. If the document scale is not printed on the document, you may optionally click two coordinates indicating a known distance. PixEdit will automatically calculate the document scale. You will also find additional methods to define document scale in the automatically displayed dialog box.

When you activate the measure tool, a window with all measured areas will display on the left hand side of your screen. The magnifying window will be switched on and displayed directly below the measure tool window. When you move the mouse very slowly to fine tune your mouse click position, you will notice that the cursor on your screen may slow to an halt, but the cursor will continue to move in the magnifying window even if it stops in the main window due to slow mouse movement. It is a good idea to do the last fine tuning of your cursor positions while looking at the content of the magnify window. The magnification factor can be adjusted by clicking in the magnifying window.

Lengths Click, move, and click again to measure a length. Keeping the left mouse button down while moving the mouse allows you "draw" wavy and irregular sections in your document. Current and total measured length is displayed in the upper part of the toolstyle window, together with infomation about angles, horizontal and vertical delta values and so on. Last digitized length can be cancelled by hitting the backspace key on your keyboard.

To stop measuring, click the right mouse button.

Area Digitize each corner of the area of interest. To measure difficult and irregular shapes of an area, click and hold down the left mouse button while moving the mouse. To close the area, double click the left mouse button. The area is displayed in the list in the measure window. To cancel, click the right mouse button.

An example of three measured areas and the resulting area list. The lot (blue) was first measured, the "-" button was clicked and then house and carport was measured. Subtracted areas are always shown with red numbers and red graphics in the main window. In this example, the result shows the remaining free area of the land lot.

Last digitized section of an area can be cancelled by hitting backspace on your keyboard. To cancel the last measured area, right click the main window or select the area in the list and click the CE button in the area calculator. Click C to cancel all measured areas.

Exporting measured areas to other applications The entire list, or sections of the list, can be selected and copied to clipboard. The area list may be pasted into Microsoft Excel or a database application.

Adding comments to the area list You can insert comments to each measured area in the list by placing your cursor in the comment field. Text added to the comment fields may be exported together with the measured areas as described above.

Edit Functions

Undo

The undo feature allows a command to be reversed and thus return the document to its former state. Click on the Undo icon, which has a left pointing arrow, to undo the last command performed. The Undo function is also available in the EDIT menu.

Undo can only be used when modifying the current document. Mistakes made in previously edited documents cannot be undone. This is indicated each time you load a document by the gray arrow icons.

Note that many functions can span page ranges. You may choose to undo changes made to one single page or the entire changed page range.

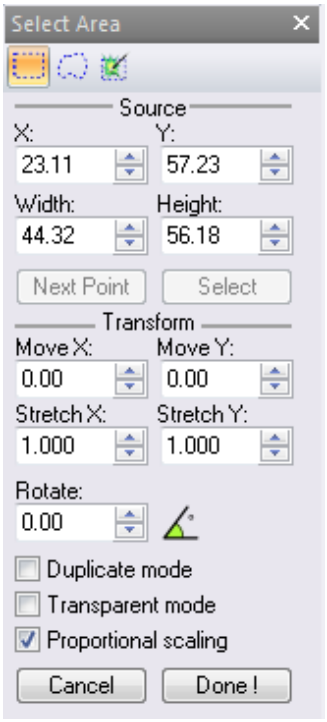
Redo

To cancel an UNDO operation, a REDO command is available. To redo a command canceled with the undo option, use the Redo icon. The Redo function is also available in the EDIT menu. At least one UNDO must be performed before REDO is available.

Undo Current Page

If you have processed a page range, you may undo changes on the current page without affecting other processed pages. This function is available only if you have processed a page range. Undo Current Page is also available in the EDIT menu.

Toolstyle bar (F10)



When you work with editing the content of a page, you will find it useful to have the Toolstyle bar visible so that you can configure your selected tool. The content in the Toolstyle bar changes, depending on activated tool. If you, for example, activate the text tool, font types are displayed. If you activate the poly line tool, alternative line styles and line endings such as rounded or arrow heads are offered.

You can turn the Toolstyle bar on or off with F10 on your keyboard.

In most cases it is sufficient to digitize your changes directly on the document page using the mouse. If you, however, wish to use exact coordinates and values, click the corresponding field in the tool style bar and type in your values. To terminate, click the "Done" button.

If you frequently work with content editing you may want to use PixEdit in standard mode instead of office mode. To change mode, use TOOLS, OPTIONS.

The picture shows the toolstyle bar when the select area tool has been activated.

Text

Use this icon to insert permanent text on a page. When you activate the text tool, the Toolstyle bar (F10) offers configuration of font, text size, angle and other properties. During insertion, a blue rectangle surrounds the text. Drag this rectangle to change the position of the entire text block. To terminate, click on the outside of the rectangle. To abort text insertion, right click outside the rectangle.

You can paste text from Windows clipboard using EDIT, PASTE or CTRL-C. In most cases you can also drag in a marked text block from other programs directly onto your document page.

Default text color is black. To configure text color, use the color selector (F4) or the color picker to clone an existing color on the document page.

Select Area

Functions such as Rotate, Scale, Copy, Filter and many others, can all operate on selected areas. Before these functions can be used, an area must be defined; otherwise, the whole page is processed.

Toolstyle options

Areas are selected with the Magic Wand, the Rectangular or Polygonal selection tool or the ▶ Automatic Multiple Objects picker.

Selecting rectangular areas Activate the Rectangular Selection tool and indicate the rectangular area by clicking and dragging the mouse until you are satisfied with the size of the area. Cancel by clicking the right mouse button.

Selecting polygonal areas Activate the Polygonal Selection tool and freehand draw the polygonal area by clicking and holding down the mouse button while drawing. To save time on longer lines, release the mouse button and move the cursor to the end of the line. Continue by clicking and holding down the mouse button continue freehand drawing of the area. Close the area by double clicking. Cancel by clicking the right mouse button.

Magic Wand (single object picker) To select connected symbols, activate the Magic Wand and click on any part of the object. Cancel by clicking the right mouse button. This function is available for black / white images only

To select multiple objects inside a connected border without selecting the border itself, activate the Magic Wand and indicate a rectangle surrounding the objects of interest and release the mouse button. Graphics inside the selected rectangle, which are connected to graphics outside of the area, will not be selected.

Move selected areas to another position

Make sure the Duplicate option is unchecked. Select the information to be moved by using any of the "Select area" tools and move the cursor inside that area.

Hold down the left mouse button and drag the selected area to the new location. PixEdit will automatically pan if needed. When you are satisfied with the new position, release the mouse button and click outside the selected area.

To move information from one layer to the other, turn on the layer control bar. Be sure that the current active layer button corresponds to the information you want to move from. Select an area, and click on the new active layer button you want to move the information to. Move or hold the position, depending on the desired effect, then click outside the selected area.

Duplicate selected areas to another position

Check the Duplicate option. Select the information to be copied by using any of the "Select area" tools and move the cursor inside that area.

Move the cursor inside the area, press and hold the mouse button and drag the area to a new location. When you are satisfied with the new position, release and click outside the marked area.

To duplicate information from one layer to the other, activate the layer control bar, (if it's not already on). Choose the area, and click on the new active layer button you want to copy to. Move or hold the position, depending on the desired effect. When satisfied with the position, click outside the selected area.

Instead of checking the Duplicate option on the toolstyle bar, you may hold down the Ctrl key during the operation.

Freehand scale

PixEdit is able to perform exact scaling and rotation by entering values in the Toolstyle Bar for selected areas, but you may, in some cases, find it more convenient to perform freehand scaling.

To scale objects, first select an area. The selected area has solid marks at each corner and sides. By pointing the cursor at one of the marks and holding down the mouse button, the area can be sized in both x and y directions simultaneously by dragging the mouse. If the cursor is placed over one of the side markers, the area can only be sized in vertical or horizontal direction, depending on which marker is chosen.

The selected area is always active until another area is selected or cleared by a single click the right mouse button in the main window.

When releasing the mouse button and clicking outside the area, PixEdit makes the change permanent. If you want to move or copy the information to be scaled, use the *Copy* or *Move* procedures.

Freehand mirror

By exaggeration freehand scale, the content of the selected area will be mirrored and scaled at the same time. Click once outside the selected area to fix the result, or right click to cancel.

To mirror a selected area without scaling, use the horizontal or vertical mirror icon. If you have not selected an area before using these icons, the entire page will be mirrored. To mirror several pages, select a page range in composition view before using a mirror icon.

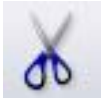
Freehand Rotate

After having marked the information to be rotated by using any selection tool, click inside the marked area. Notice that the markers around the box change to the rotate icons. By pointing the cursor at one of the corner marks and holding down the mouse button, the area can be rotated in either direction by moving the cursor.

Click outside the selected area to fix the rotation. If you want to move or copy the information to be rotated, use the *Copy* or *Move* procedure.

Cut, Copy and Paste

These commands are used for moving content between PixEdit and other applications via Windows Clipboard. Content from a selected area can be copied or cut and then be pasted in as figures, as new documents or pages in PixEdit or other applications. You will find these commands in the EDIT menu.



Cut Select an area using the selection tool and then use the shown icon, EDIT, CUT or Ctrl-X to move the image content of the selected area to Windows Clipboard. The area will be emptied and filled with current

configured background color selected in the Color Selector (F4). Default background color is white. You can also select a page range in Composition View and cut pages to clipboard.

Copy Use the icon, EDIT, COPY or Ctrl-C to move a copy of the selected area to clipboard. Contrary to cut, the content of a selected area is not affected when you use copy. You can also copy a selected page range in Composition View to clipboard.

Copy merged On pages with more than one image layer use EDIT, COPY MERGED to merge all layers as a full color image to clipboard.

Copy scaled The standard copy command is fetching image data directly from the document at full resolution. In some cases, large copied areas may therefore exceed clipboard capacity or other software's paste limits. Copying the image content of a selected area using the screen's current zoom factor may solve this problem. The pasted result will have the same quality and readability as displayed in PixEdit during copying. Use EDIT, COPY SCALED to copy image data from your screen to clipboard.

Copy as text Use EDIT, COPY AS TEXT to copy digitally born or OCR text to clipboard.

OCR and copy as text To copy text from an unprocessed scanned page, use EDIT, OCR AND COPY AS TEXT. PixEdit will first execute OCR on the selected area and then put the recognized text on the clipboard.

Paste Use this icon, the EDIT menu or Ctrl-V to paste content from the clipboard. When you paste onto an existing document page, the area can be moved, scaled, flipped and rotated. Click outside the area to fix the pasted area, or right click to abort.

The EDIT menu also offers to insert clipboard content as a new page or even as a complete new document.

As an alternative to using the EDIT menu for page pasting, you can instead click Composition View to activate this window, and then hit Ctrl-V on your keyboard.

Figure Insert

▶ To insert a document, or a previously extracted figure, into the current document, click EDIT, FIGURE, INSERT. Select the file you want to insert as a figure and click OK.

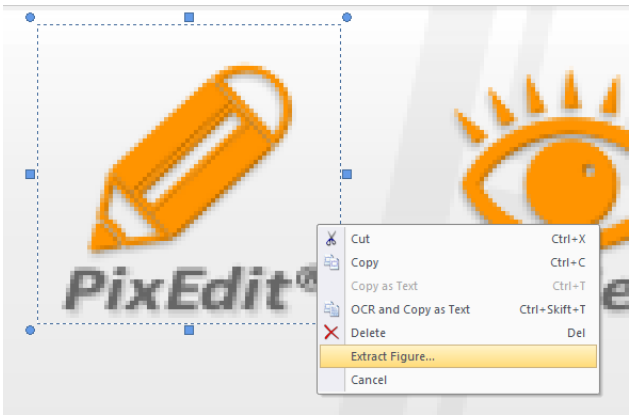
As an alternative, use FILE OPEN, select the document to insert, and then click *on Insert As Figure* option.

Hint: You may also drag a thumbnail from PixEdit's File Explorer (F3) window or any other open folder in Windows directly into the document as a figure.

The selected figure is superimposed on the existing document and can be moved, resized or rotated to any location. The procedures to perform these operations are the same as those for moving, sizing or rotating selected areas as described in *Select Area*. The destination raster layer is the current active layer. If you need to insert the

figure onto a different layer, turn on the layer control bar and activate required layer before completing the procedure by clicking on the outside of the figure.

Figure Extract



To extract information to create a figure, select the figure area with the Select Area tool. To complete the extraction, right click the selected area and choose Extract Figure or click EDIT, FIGURE, EXTRACT. Select the file name and file format by using the dialogue box, then click on the OK button. You can save the figure in any file format supported for saving files.

As an alternative method, use FILE SAVEAS, select a file name and file format by using the dialogue box. The option *Extract selected area* must be checked. Complete the operation by clicking the OK button.

Erasing

PixEdit offers many different ways of erasing parts of the loaded image. You may select an area by using any of the available selection tools, and then use EDIT, DELETE INSIDE or OUTSIDE commands. However, the most convenient way of erasing parts of the image is to use the eraser tool.

Erase options Freehand, rectangular and polygonal erasures are available in the Toolstyle Window. The rectangular and polygonal eraser tool can also be used to delete the content outside the defined area by checking the "Delete Outside" option. The pen thickness and pen shape of the freehand eraser tool may also be configured.

Freehand Eraser To erase freehand in the active layer, click on the Freehand Eraser tool on the Toolstyle bar and start digitizing. Both shape and size of the tool can be configured.

Rectangular Eraser Select the Rectangular Eraser icon on the Toolstyle bar and move the cursor to a location for anchoring the area to be erased. Click the mouse button and move the mouse. A rubber band box stretches from an anchor point to the mouse position, expanding and contracting as the mouse is moved. When the desired location and size are reached, release the mouse button again to execute the erasure.

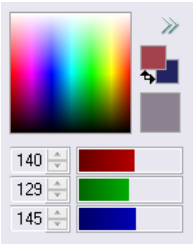
Polygonal Eraser The Polygonal Eraser tool lets you erase parts of your drawing that may be difficult to reach with Freehand Eraser or the Rectangular Eraser. Select the Polygonal Eraser icon and move the cursor to a location for anchoring the area to be erased. Continue to digitize, enclosing the area to be erased. To close the area and execute the erasure, double click the mouse button.

During digitizing, you may choose between defining the area to be erased by digitizing only each vertex of the polygon, or by using the freehand-draw technique of holding down the left mouse button and moving the cursor. Close the activated area by double clicking.

Multi-page Eraser The EDIT, MULTIPAGE ERASE function is useful for cleaning up margins on several pages. Insert guidelines by double clicking the Ruler (F5) and specify if the deletion should be inside or outside the rulers.

Before using this function you may want turn on the stacker image to view the desired page range as transparencies.

Color Selector



With the color selector you can select a foreground and a background color by clicking in the color space. The colors you select are used for pen and fill colors when drawing

You can fine adjust your colors by clicking in one of the rectangles indicating the fore/background color. The edit controls will be enabled and you can type in the values or drag the RGB bars. You can swap foreground and background colors by clicking on the two arrows.

The color selector will switch to mono, gray or color mode, according to the current active document's color format.

Color Picker

With the color picker tool you can pick colors from the active document by clicking the left or right mouse button. When the color picker tool is selected the color bar will show the current color when the cursor is moving in the document.

How to pick the most common color In some cases you will find it useful to pick the most common color within an area. If you want to remove the background color on a page, use the color picker to drag out an area that contains more background colors than other colors. The color picker will then find and store the most frequently used background color. You can then use IMAGE, COLOR, DROP COLOR with a tolerance between 8 and 10% to remove the background color on the entire page or within an area selected with the area selection tool.

Standard replacement color is white. To define a different replacement color, click the right mouse button in the color selector. You may also use the right mouse button when using the color picker to define replacement colors.

 If the current image is true color you can switch to custom color palette in the color selector. This allows you to pick up to 64 different custom colors with the color picker tool.

Rectangles

 Select the Rectangle icon and move the cursor to a location for anchoring the box. Click the mouse button and move the mouse. The rectangle stretches from an anchor point to the mouse position, expanding and contracting as the mouse is moved. When the location and size is reached, release the mouse button. The current fill color is used for filling.

To select different Rectangle options, use the Toolstyle bar. If you have already started to digitize, press the Esc key to access the various options. To keep the aspect ratio, hold down the CTRL key on the keyboard, then move the mouse. A rubber band rectangular box stretches from the anchor point to the mouse position, expanding and contracting as the mouse is moved. When the desired rectangle is achieved, click the mouse button again. The current line thickness and style are used.

Freehand Draw

 To freehand draw, click on the shown icon and start digitizing. Notice the cursor changes to a spot indicating the size of the pen you have chosen. To configure pen size and shape, use the Toolstyle bar (F10). Pen color can be configured with the Color Selector (F4) or the color picker.

Circles / Ellipses

 To insert circles, activate the circle icon and keep the Ctrl-key down while digitizing. To insert ellipses, release the Ctrl key. To configure pen thickness, filling, insertion method and other options use the Toolstyle Window (F10). To select color, use the Color Selector (F4) or the Color Picker.

Instead of digitizing, you can type in exact values in inches, millimeters and other units of measurement in the Toolstyle Window. To switch from manual digitizing to typed exact values, press the Esc key. A red frame surrounding the Toolstyle Bar then indicates that PixEdit expects you to type values or change various options.

Arcs

 Activate the Arc Icon and digitize the start point, a point at the arc and the end point. To configure pen thickness, filling, arrow endings and other options

use the Tool Style Window (F10). To select color, use the Color Selector (F4) or the Color Picker.

To cancel the insertion of an arc after starting, click once on the right mouse button.

Instead of digitizing, you can type in exact values in inches, millimeters and other units of measurement in the Toolstyle Window. To switch from manual digitizing to typed exact values, press the Esc key. A red frame surrounding the Toolstyle Bar then indicates that PixEdit expects you to type values or change various options.

Polylines

Click on the Polyline icon and move the cursor where you want to start the line and click the mouse button. Move the cursor to the next point and click, repeat for each line segment. Terminate the final line segment by double clicking the mouse button.

To configure pen thickness, filling, arrow endings, line style and other options use the Tool Style Window (F10). To select color, use the Color Selector (F4) or the Color Picker. To cancel the insertion after starting, click the right mouse button.

To close an area of digitized lines, press and hold down the Ctrl key when double clicking the mouse button, as if you wanted to end the sequence.

Instead of digitizing, you can type in exact values in inches, millimeters and other units of measurement in the Tool Style Window. To switch from manual digitizing to typed exact values, press the Esc key. A red frame surrounding the Toolstyle Bar then indicates that PixEdit expects you to type values or change various options.

Dimension Line

Occasionally, a precise drawing, plotted to size, is not sufficient to convey the desired information. In this case, dimension annotations must be added to show the real world distance or object size.

PixEdit provides basic linear dimensioning, with automatic conversion from the document to real world values. Graphical properties such as line thickness, size of arrows, text style etc., may be customized to fit the already existing style of your drawing. Dimension lines may be locked into horizontal or vertical directions, or be inserted at any angle.

Move the cursor to the starting point of the dimension line, and click the left mouse button. Stretch the line to the end point, and click the left mouse button again. As the line stretches out, text values are constantly updated. When you are satisfied with the digitized position of the line, click the left mouse button. Before finishing, you may move the dimension line to a new position. Notice the thin extension lines

stretch out from the digitized position towards the dimension line as the line slides back and forth.

Drawings are often drawn to scale, and unless your drawing is scaled 1:1, you will need to define or measure the existing scale. PixEdit can then calculate the correct values to be inserted.

How to define document scale Enter the scale definition dialogue box by clicking this icon. You may choose between defining the real world length of a known digitized distance, and directly specifying the document scale (e.g. 1:50). You may also specify the coordinate system origin by defining the left and top edge offsets of the document.

Dimension Line options You may specify the font type, size and text location, line thickness, arrow size, snapping, etc., as needed.

These options can be configured before the insertion starts, or can be accessed during the operation by pressing the ESC key on your keyboard. In the latter case, the operation is suspended while you insert explicit values, configure the pen style or perform other operations. When you have completed fine-tuning the function, click the DONE button on the Toolstyle bar.

Layer Control Bar

Note: If you add raster layers to your document you will have to save your documents in the TDF file format to preserve the layered graphics. If you intend to simply add PDF comments, you should consider using the PDF commenting tools in PixEdit instead of the layer control bar.

A document may consist of several layers. Think of the layers as a stack of transparent sheets, each containing an image. However, the fixed background sheet in the stack is solid white, and consequently is not transparent.

When looking at the stack from the top, you see the content of each sheet (layer) superimposed on the bottom sheet. This stack of layers corresponds to your document. You may change the stacking order of your layers or the color of each layer. This makes it easy to distinguish between each layer in the stack.

You may temporary hide the information on one or more layers. Only one layer can be activated for editing at the time. You may move or copy data between layers or export/import information.

Layer name Any name can be set to improve the readability of the document.

Layer Color Select one of the 16 predefined colors for the layer color. The layer name changes to that color to indicate the color selected in both monochrome and color mode. To activate the layer *color* display, right click any layer and select Color. If a layer contains a color image, the layer color cannot be changed.

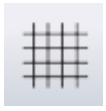
 **Layer Priority** To control the position of each layer within the stack, use Layer Up, Layer Down, Layer to Top or Layer to Bottom icons.

 **Visible Layer** This option makes the layer visible (if it is not already visible). This option stays activated until it is selected again. Data in a visible layer is not always visible; it depends on the layer's priority. If it is put on top of the stack, everything in that layer is visible. However, it might hide information in underlying layers which are visible at the same time.

 **Activate Layer** This option enables or disables editing of the layer. It remains active until it is selected again or another layer is chosen as the active layer. Only one layer can be active at a time. To move or copy an area, select the area and then activate the layer to which you want it moved or copied.

Multipage overlay layers Multipage layers span a page range, and can be edited at any page where that layer is visible. To create a multipage layer, right click the layer control bar and select this option. As with all multipage functions, you can select the pages range from the Composition Window before creating a multipage layer.

Using the Grid

 The grid is a pixel or line pattern displayed together with the document. The grid is not printed or stored permanently in the document file. The distance between each grid point and offset from the upper left corner are easily changed to suite your needs.

 When the grid snap is turned on and the snap function is enabled, each digitized point snaps to the nearest grid coordinate.

Show Grid Use the grid icons or VIEW, GRID to turn grid ON or OFF.

Grid Options The grid type and spacing can be configured with VIEW, DEFINE GRID. The default is a dot grid with snapping disabled.

The grid-offset position can be defined in the Offset section in the dialog box.

At high zoom factors, the distance between each grid point decreases in the main window. When the distance between each point on the screen is less than 3 pixels, the grid is temporary disabled.

Additionally, when the grid is turned on and main window zoom factor is larger than 200%, each pixel is highlighted by a grid pattern showing each individual image pixel. This special grid pattern is not in any way connected to the parameter settings in VIEW, DEFINE GRID dialogue box, but is meant to be of help when you are working with very accurate pixel manipulations.

Effects and filters

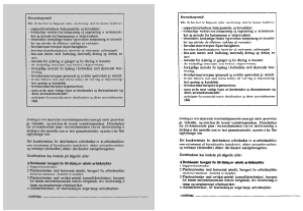
In an ordinary office scanning environment you will normally not need to use PixEdits graphical effects or filters. However, if you work with preparing scanned documents or images for further technical processing or with image analyzes, you will find a several useful tools for this in PixEdit. However, not all available functions are documented in this user guide. Therefore, if you need a special tool that you can't find documented in the user guide, it is a good idea to look though the menus directly in PixEdit.


Most functions in PixEdit can be executed on areas selected with the selection tool. If you don't select an area before executing a function, the entire page will be processed.

Also, most functions can be recorded in macros and replayed on page ranges, on entire file structures or automatically during scanning.

Enhance contrast

Faded document pages scanned in color or greyscale mode may sometimes result in low contrast. You can automatically maximize contrast by using IMAGE, COLORS, ENHANCE CONTRAST. The figure here shows a document page before and after using Enhance contrast. As with most functions in PixEdit, the enhance contrast function can be applied on selected areas, on page ranges or be recorded and replayed on many documents by using the Batch Wizard.



Pages with high contrast will not be affected. Some low contrast pages may contain a few perfectly white or black sections at the same time as the page gives you a faded impression. In such cases you may want to specify a somewhat higher tolerance value than the default 1%.

Brightness and Contrast

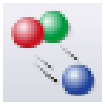
Brightness and Contrast is a very powerful image enhancement tool. It works on selected areas and the whole document. Adjusting a positive brightness will make the image brighter and negative value will make it darker. Adjusting contrast will increase or decrease the distance between light and dark areas locally.

Click on the brightness and contrast icon to start the digitizing. Before you start to adjust brightness or contrast you can make a selection or you can adjust the whole image. As you start to move the brightness/contrast sliders the change is done immediately to the area or document, this is meant as a real preview of your adjustments. You have to press apply or click left mouse button in the document to make the change.

Sharpening

This is probably the most commonly used tool for enhancing blurry images. It is a good idea to use a low zoom factor when sharpening images, preferably zoom 100% in order to see the changes clearly. If you think the default sharpening effect is too strong, you may want to click the Select Filter icon and choose the Subtle Sharpening instead.

Drop out color



▶This function is useful for removing color background on document pages. You can, for example, easily turn a yellow background into pure white. This function is also useful for removing graphics with a specific color.

Before you drop out a color from your document, first activate the Color Picker. Drag out an area on the page containing a majority of the color you would like to remove. It does not matter if the area also contains some text or graphics, as long as most of the indicated area is covered with the color you would like to drop out. Then use IMAGE, COLORS, DROP OUT COLOR or the corresponding icon on the toolbar. In the displayed dialog you may want to adjust the tolerance for the indicated color. In the example below, 10 % is used. The reason for using a relative high tolerance in this example is that the yellow background is varying a lot in intensity. As with most functions in PixEdit, the Drop out color function can be applied on selected areas, on page ranges or be recorded and replayed on many documents by using the Batch Wizard.

Blurring

▶This tool may be used for removing very sharp edges or for adding artistic effects to an image. It may also be used for hiding the identity of a license plate or person.

Emboss

▶The Emboss function is mostly used for artistic purposes. Emboss creates a 3D effect using shadows.

Median Filter

▶Median filtering is useful for removing noise and rasters from a scanned printed poster or photograph. Use this filter with care, as some images may appear unsharp after processing.

More filters (advanced)

▶This dialog contains a selection of various filters commonly used for artistic purposes. The dialog provides you with a preview of each filter in the list.

Clicking the Add button in the Select Filter function provides another dialog where you can design you own filter.

With the custom filter in PixEdit you can create many different filters for image enhancements or effects. A custom image filter is simply an array of coefficients called a filter matrix. The filter matrix changes the pixel's colors one by one using the coefficients in the filter matrix and the colors from the neighbor pixels. A filter matrix is usually 3x3, 5x5 or 7x7 and the coefficients can only be integer values (decimal values are truncated). If an image filter has decimal coefficients you can multiply them with the necessary factor of 10's and specify a divisor. The filter's bias is an offset value for all the pixel colors. By specifying a positive bias the filtered image will be brighter and a negative value will make the image darker. If a custom image filter can be reduced to a 3x3 filter matrix instead of 7x7 or 5x5, it would drastically improve speed when applying the filter to an image.

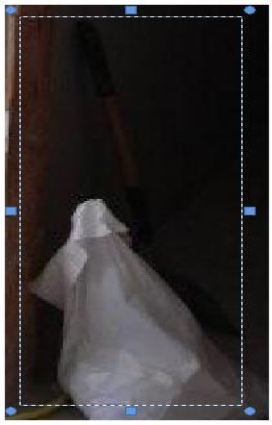
When you are satisfied with the result of the custom image filter, supply a name for the filter and click ok. The image filter dialog will automatically select your new filter from the list and you may now apply it to the image.

Color Balance

▶With the color balance tool you can add/remove red green and blue colors in an image. The tool works on selected areas and the entire document. With this tool you can add more blue color to a sky or remove red color from a person’s eyes caused by a camera flash. The color balance tool can only add or remove color from a pixel if the color already exists. If a pixels color is red = 255, green = 255 and blue = 0 (yellow). Blue color increase or decrease will have no effect on this pixel.

Equalize histogram

▶Use Image, COLORS, EQUALIZE HISTOGRAM to enhance small details in dark sections of your document. In general, pages with normal quality should not be processed with this function, as their quality will be lower after processing. You should only apply histogram equalization if you are familiar with image processing.



To make very subtle details visible as shown in the picture, select an area around the area of interest with the selection tool before using histogram normalization.

Reduce Colors

From the IMAGE menu select COLOR, REDUCE COLORS. You can reduce a true color image to 16 or 256 colors using Windows standard palette or an optimized palette. If there is no need for standard Windows colors you should use the optimized palette for better result.

This function is mostly used to create artistic effects. Note that some compression types may increase the number of used colors. To preserve the exact number of colors you should use the Deflate compression type.

Convert to 24 bit (Merge Layers)

Some functions in PixEdit can only operate on color pages. For example, you cannot insert colored graphics on a pure black and white page. When you open a page scanned in black and white, menu and icons for colored graphics will be grey. To work with color functions on such a page, use IMAGE, COLOR, CONVERT TO 24 BIT.

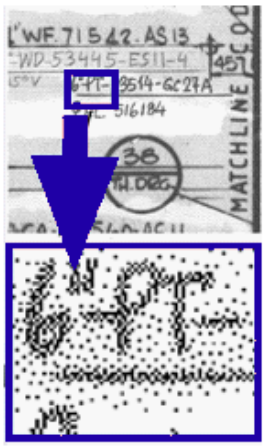
This function also merges any extra existing raster layers into the default, main layer.

Color to Monochrome Conversion

▶You can convert a color page to black and white by using IMAGE, COLORS, CONVERT TO MONOCHROME. The following options are available:

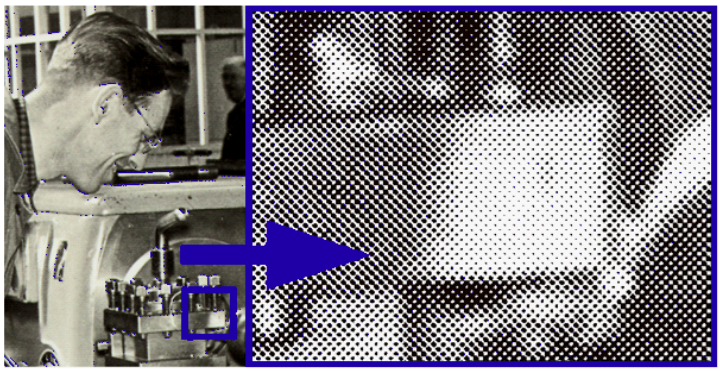
Simple conversion by thresholding Thresholding is the simplest way of converting a color page to black and white. This method is mostly suitable for pages that were accidentally scanned in color or greyscale mode. Choose between Lineart and

Threshold. The Lineart option uses a fixed threshold, while the Threshold option offers adjustment similar to brightness adjustment on a standard office copier. Simple conversion by Thresholding is not suitable for conversion of scanned photographs.



Error diffusion Error diffusion is suitable for scanned photographs and documents where keeping as much information as possible is important. If you use simple thresholding on such documents, some important information may be lost. The error diffusion method will produce larger files than the simple threshold method, but the documents will be much more readable. Laser printers in general are not suitable for printing error diffused images due to the very fine pixel patterns generated by this method. You may want to consider half toning for printing on laser printers.

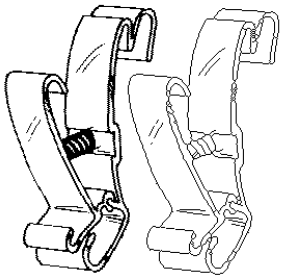
PixEdit offers three different error diffusion methods: "Floyd Steinberg", "Jarvis, Judice and Ninke" and "Stucki.". These methods give slightly different results; you may want to experiment in order to find the most suitable method for your application.



Half toning Half toning is suitable for converting images before printing on laser printers. Before using half toning, first select the final resolution according to the printer resolution in your system. Next, decide how many grey levels you want to simulate. Notice that LPI (Lines per inch) will change depending on how many grey levels you choose.

Thin

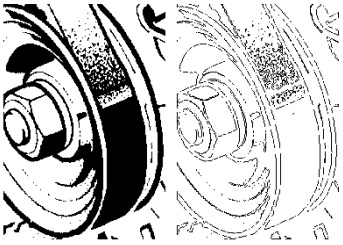
Thinning or automatic removal of contour pixels in any graphics in the document may be useful for preparing a document for vectorizing by an external vectorizing process. Select the area with any of the selection tools and click the Thin icon or use IMAGE, EFFECTS, THIN. This function is available for black / white images only.



To thin the whole image, follow the previous procedure without selecting an area.

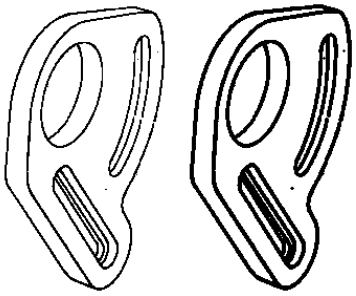
The Erode option removes contour pixels without checking if they belong to the skeleton of the object.

Contourize



Contouring, or outlining, extracts black information from thick areas, leaving just the contour or borderline of the selected objects. To contour an area, use the following procedure:
Select the area with any of the selection tools and click the Contourize icon or use IMAGE, EFFECTS, CONTOURIZE. This function is available for black / white images only

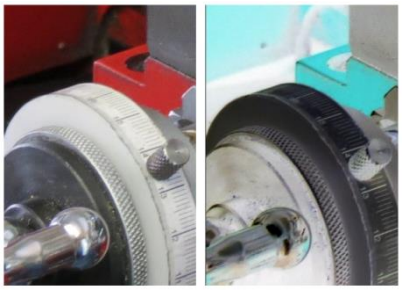
Bold



Bolding or automatically adding contour pixels to any graphics in the document is useful for adding contrast to information in a document. To bold an area, use the following procedure:
Select the area with any of the selection tools and click the Bold icon or use IMAGE, EFFECTS, BOLD. This function is available for black / white images only.

To bold the whole image, follow the previous procedure without selecting an area.

Invert



The invert option turns black information to white and vice versa in monochrome images. In color images, all pixel values are inverted by replacing intensity 255 with 1, 254 with 2, and so on.

An area or the whole document can be inverted. To invert areas, first select an area with any of the area selection tools, and then use IMAGE, EFFECTS, INVERT.

Bannerize

The bannerize command applies an adjustable white dither pattern to the selected area. Bannerizing is useful for making semi-transparent graphics to be printed together with a document. For more details about banners, please refer to the Print command.

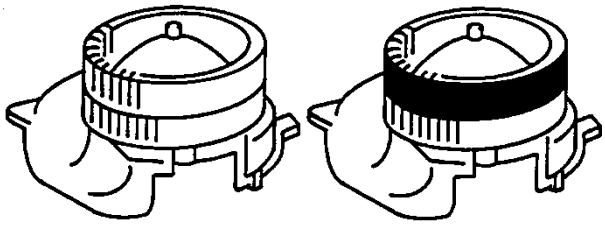
An area or the whole document can be bannerized. To bannerize areas, first select an area with any of the area selection tools, then use IMAGE, EFFECTS, BANNERIZE.

The saturation factor defines how intense the banner will appear. A low factor makes the graphics barely visible, while a high factor inserts just a few white pixels, making the graphics clearly visible.

This function is available for black / white images only.

Flood Fill

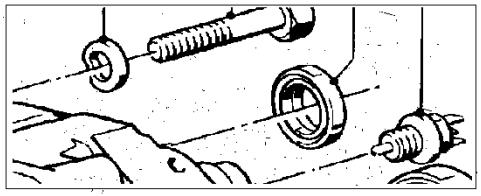
The Flood Fill option fills any enclosed area with either black or white. After selecting the Paint Roller icon, place the cursor inside the area to fill, and click any mouse button to fill with white or black. If you click a black area, PixEdit will fill with white and vice versa. This function is available for black / white images only

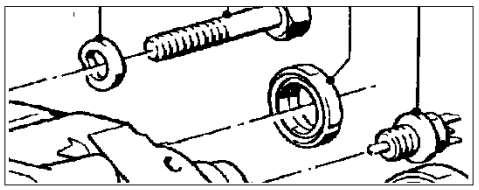


If the shape being filled has any gaps in its border, the filling pattern leaks through and fills the entire drawing area. When the program has finished filling, the accidentally filled part can be removed by using the undo icon. The picture shows an enclosed area before and after filling.

Cleanup

Filter functions are used for removing unwanted noise, lines or speckle with a defined size. This function is available for black / white images only.





All filters can be performed either on the whole image or on selected areas. To start a filter on a selected area, the following procedures:
Select an area with any of the selection tools and click the FILTER tool or use IMAGE, CLEANUP

For filtering the whole image, follow the previous procedure without selecting an area.

Filters should be used with care, since they can remove information of real value. This happens to any pixel configuration which matches the properties of the chosen filter. The pixel configuration looks like noise to the program, but instead is real information. Use the Undo command if you suspect this has happened after filtering.

Filter types

The following filters may be configured to *remove* the graphics matching the filter specification:

Single Pixels Removes single pixels only, or single pixels attached to lines.

Lines Removes lines whose thickness lies between two thickness values. This is useful for layer separation of contour lines in scanned maps.

Objects Removes objects within two specified numbers of pixel values.

Object extent Removes objects with an extent between two specified pixel values.

Holes containing between Fills white holes in graphics within two specified numbers of pixel values.

Hole extents between Fills white holes in graphics within two specified extents.

Despeckle

Some scanned black and white documents may contain undesired graphics like extra dots or speckle. This type of extra graphics reduces the readability of a document. Speckles also increases the file size and download times, causing the viewing software to take longer to display such documents.

Use IMAGE, DESPECKLE to remove unwanted graphics, or click the icon for Despeckling.

All types of automatic cleanup may, by mistake, remove graphics that you want to keep, such as punctuation marks, commas or parts of halftone images. PixEdit is especially designed to avoid removal of such important graphics. You should however, use the despeckle filter with caution, and always check the result of your despeckling. If you are unfamiliar with processing scanned documents, use the Simple option in the Despeckle dialog. As an extra safety you may want to check the Preview option. Using Preview will quickly indicate which type of despeckle filter that is best suited for your type of documents.

Simple despeckle Use this option for careful filtering. PixEdit will apply a simple image despeckle to each page and perform safe speckle removal.

Thorough despeckle Useful for medium to difficult documents. PixEdit will apply advanced image analysis, combined with a user specified density specification and comprehensively remove graphics interpreted as speckle. Speckle with a lower density than specified will be removed, except when found inside enclosed frames and halftone images. Don’t use a higher value than 2-3 percent unless your document is very dirty. Thorough despeckle is somewhat slower than a simple despeckle.

Specific despeckle (Advanced) Use this option for difficult and very dirty documents. In addition to the density parameter described above, you can also specify how close the despeckle filter shall operate to real graphics like text. The distance parameter can be adjusted between two quite small values, and is therefore specified in pixels so that you can easily remember these values for different types

of documents. For example, if you are using a distance value of 8, PixEdit will not remove speckle closer than 8 pixels to real graphics like text.

Since the distance parameter is specified in pixels, the real distance in your document will vary depending on document resolution. A value of 8 pixels, for example, is equal to 1 millimetre or 0.04 inches in a document having 200 DPI resolution. If the document resolution is 600 DPI, 8 pixels will be 0.33 millimetres or 0.013 inches.

When using Specific despeckle, always check the Preview so that you can easily see the effect of your adjustments.

Warping

PixEdit supplies a correction function that compensates for many of the typical errors introduced in the scanning process. Most of these distortions are not critical for engineering applications, but such errors may be unacceptable for most mapping applications.

Roller scanners and scanners with multiple cameras are in general not suitable for mapping applications without post corrections of the data. Flatbed scanners are much more accurate, but even these types of scanners are likely to introduce minor distortion. Even if the scanner is nearly perfect, the map media itself may change its size and shape depending on media type, temperature, humidity and storage method.

The following text is not meant to be a complete description of scanner-introduced distortions, but it covers the most basic problems found in roller-based scanners. The most common distortions are:

Variable Stretch and compression in a vertical direction A constant stretch or compression error is most likely present. In addition, due to the fact that the map has a certain weight, the map is fed in slower in the beginning of the scanning process, and faster at the end, (if the map has to be lifted by the scanner). It is therefore recommended to let the map rest horizontally both on its way into and out of the scanner, but the mechanical construction of the scanner does not always permit this. The results of this error are stretching in the first part of the map, and compression in the lower part of the map.

Variable Stretch and compression in a horizontal direction Since camera optics are not a 100% linear; the image is stretched at the edge of the visible field of each camera. For scanners with a single fixed sensor instead of cameras, horizontal distortion is a minor problem.

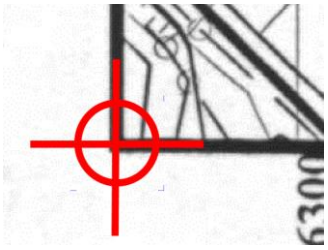
Ordinary skew It is difficult to perfectly adjust a document in-line with the strip of sensors in most scanners. An ordinary skew is most likely to be present in the map after scanning.

Un-parallel sides Due to the above-mentioned problems, each side of the map will not be 100% parallel to each other. Instead, the scanned result resembles a four-sided polygon on a microscopic scale.

There are also other sources of inaccuracies in scanners, but the common distortions mentioned above need correcting in mapping applications.

The basic Warp function accepts four accurately digitized corners of the area to be corrected. It then trans**forms** this area into a perfect rectangle with a specified size. This type of transformation is typically called a *four-point* correction.

Warp and Correction Marks



Before executing the Warp (previously known as the map correction function in early versions of PixEdit), each of the four corners of the scanned map (or document) must be defined. Inserting correction marks does this. To insert correction marks, use the following procedure: Click on the Warp tool and insert correction marks in each of the four corners of your document border. For best results, always select a zoom factor of at least 1:1 or use the blowup window with AccuPix turned on, so your correction marks can be inserted exactly in the center of each corner as indicated in the figure.

If you need to edit the position of an inserted correction mark, click the mark once more to delete it. Then insert a new one by following the above-described procedure. After careful and accurate digitizing of each of the four corners, drag out an area to indicate the size and position of the corrected map.

Notice that your digitized coordinates are written into the four leftmost fields of the dialogue box. The size of the destination rectangle will be defined in the selected units. As an option, you may choose to resize the document to match the size of your destination rectangle.

Important To remove an overlapping central section between to roughly joined maps and join the two sections seamlessly, simply click Done in the Toolstyle window without digitizing a destination rectangle.

The figure shows four correction marks, indicating a typical overlapping area before tightening.

Hint: Combining corrected maps

In some cases, you may find it useful to combine several maps together, forming one large, seamless map. After having corrected, for example, nine maps by the Warp function create a new blank sheet using the FILE NEW command. Set the size of the new document large enough to contain all of the nine maps that have been corrected. Insert the upper left map into the blank document by using the FIGURE INSERT function in the EDIT menu. Click outside the blue frame to permanently insert the first map. Then follow the same procedure, selecting a new map to be inserted to the right of the previous map, and position it to the correct position. Zoom up to 100% and then turn on the Grid and the Grid Snap function with a grid size equal to the pixel size of your maps. Continue to move the map so it fits together with the previous

map. Since the correction function splits the surrounding frame of each map to half the thickness, the maps should fit perfectly together. Click outside the blue lines of the selected area to join the two maps permanently together. Continue to join the rest of the maps in a similar way.

Map Grid removal

PixEdit provides an automatic function for removal of the grid patterns in corrected maps. The function repairs the gaps of intersecting graphics after grid removal. In some cases, intersecting graphics are not repaired by PixEdit. If the angular difference between the removed grid line and intersecting lines to be repaired is very small, reconstruction may fail. It is therefore recommended to inspect the result after processing. In normal cases however, automatic grid removal saves a lot of manual work if the grid pattern in a map must be removed. To remove the grid pattern in a corrected map, use IMAGE, DETECT AND REMOVE GRID.

Comparing Files

To compare two raster files, use FILE, COMPARE. The result is placed in a separate raster layer. This function is available for black / white images only. The following compare functions are available:

Common graphics Common black information in the two source files is merged into the destination layer

Merge graphics All black information in the two source files is merged into the destination layer

Difference between layers The difference between the two files is merged into the destination layer.

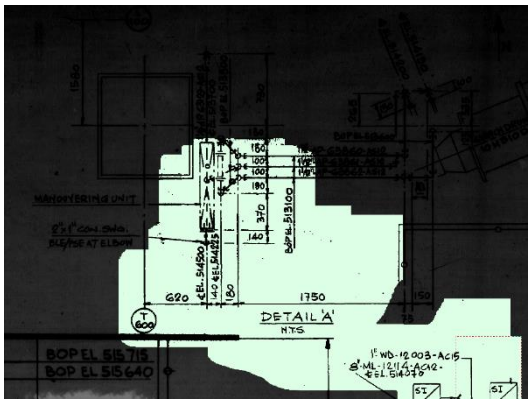
Unique graphics in first layer Graphics present in the first, but not in the second file are merged into the destination layer.

Unique graphics in second layer Graphics present in the second, but not in the first file are merged into the destination layer.

Fine tune position before compare Use this option to fine-tune the position before you start the compare process. Move a file by holding down the mouse button while dragging. When you are pleased with the position, click on the outside of the area.

Layer compare If you already have inserted the information to be compared into PixEdit's layer structure, you can use the TOOLS menu to perform a direct comparison.

Docwash



Some documents may prove impossible to scan with acceptable quality. The DocWash function is a tool for manual thresholding for very dirty or difficult documents. Modern scanners from Vidar, Xerox, Contex, OCE and others have built-in automatic thresholding logic, resulting in high quality monochrome scans. However, very old or faded documents may still be difficult to scan. For such difficult documents, using the DocWash tool may be the only solution to this problem. Use the following procedure for manual thresholding:

1) Scan your document in gray shade or color mode with any supported scanner, or load a previously scanned document.

2) Activate the DocWash function by pressing the DocWash icon

3) Using the mouse and mouse wheel, 'Wash' the document and click Done.

The washing process is performed by first selecting the size of the rectangular washing tool by digitizing a rectangle. Move the rectangular wash area by clicking inside the rectangle and holding the mouse button down while moving the rectangle. If the image inside the area is too dark or too light, adjust the threshold with the mouse wheel. A new rectangle with another size can be selected.

PixEdit will perform auto panning when you reach any edge of the main window.

Scanning

Introduction

PixEdit can be configured to scan your documents suiting you and your document management system the best way. You can use a locally connected document scanner (often called Twain scanner), manual network scanner or completely automated network scanners.

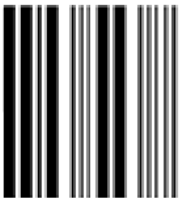



Regardless of your local scanner type, size, capacity and brand, the user interface in PixEdit looks the same. This means that you don't have to learn new things when you switch between scanners.

At the very same time as you scan and work with documents locally, PixEdit can monitor, fetch, process and save documents arriving in folders that are being filled from a fleet of network connected multifunctional devices.

To save time, we recommend setting up PixEdit to perform automatic document separation, quality improvement functions such as deskew and contrast enhancement, OCR, paper size detection and other functions available in the after scan configuration. PixEdit does this in the background while you continue to scan your next batch as the previous batch is processed. When configuring after scan processing, it's a good idea to save your configuration in a profiles so that you can quickly switch configuration later from the profile drop down list in ScanBar.

When PixEdit monitors network folders being filled from multi-functional devices, each folder can be processed by different profiles.

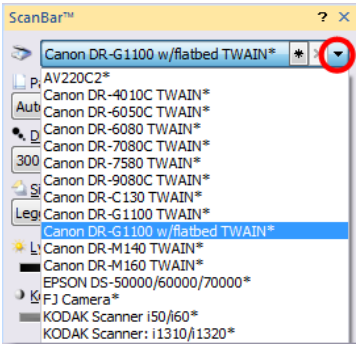
It's usually more efficient to scan entire batches instead of individual documents, as most scanners take some time to start and stop their sheet feeders. To separate documents in a batch you can use barcode or QR stickers, dedicated separator sheets, white sheets or configurable interval separation. Each document's file name is normally fetched from combined barcode content, but you can also use standard separator sheets provided by your document management system.

An alternative separation method is to manually highlight text with (for example) a Yellow Marker. When highlighted text with configured color is detected, PixEdit will separate out a new document until the next detected highlight. The file name is taken from the highlighted text.

Installing Twain drivers

In order to use the ScanBar™ window with the green scanning button, you must have a TWAIN driver installed on your computer. All modern document scanners are delivered with a Twain driver on a CD.

Follow the vendor's instructions for installing the TWAIN driver if it is not already installed. As a general rule, always install the Twain driver **before** connecting your scanner using the provided USB cable. Installation problems are usually solved by unplugging the scanner, removing the Twain driver using Windows Control Panel, rebooting the PC and then reinstalling the driver.



You can install and connect as many local scanners as you like, and quickly choose between installed scanners using the scanner drop down list as shown.

ScanBar

▶ The easiest way of scanning multi-page documents is to use the ScanBar. If the ScanBar is not already visible, press Shift-F10 or click the ScanBar Icon on your toolbar.

The ScanBar is located on the right hand side of the PixEdit® main window unless you moved it. Click the big green button to start scanning with current ScanBar settings. Clicking the orange button will display the scanner's vendor specific dialog box.

ScanBar offers adjustment of the most frequently used settings available in the scanner such as page size, resolution, color or black/white scanning, brightness, contrast, et cetera. ScanBar may also configure which tasks shall automatically execute immediately after scanning such as quality enhancements, document separation, saving, OCR, macro execution, and others of your choosing.

How to select scanner Clicking on the profile name on the top of ScanBar allows you to select between different Twain scanners and scanner profiles. By default, you may choose between installed scanners, but you may also create your own

customized profiles even if you have only one single scanner. This makes it easier to scan different types of material that requires different default scanner settings.

In addition to installed and custom defined Twain scanners, you may find that the drop-down list includes selections for file and network scanning due to compatibility considerations. For new file and network scanning installations it's recommended to use DocServer in PixEdit.

Paper size This option allows you to select between standard sheets sizes supported by the scanner. The content of this list will vary, depending upon your scanner capabilities. If your scanner is able to deliver black borders around scanned sheets, you may want to let the software automatically select page size, allowing you to put a mixture of different page sizes into the document feeder. To take advantage of this option, remember to enable this option in the After Scanning dialog and set the scanner to maximum paper size.

DPI and color mode If you have configured PixEdit to save your documents in PDF/A Compact, it's best to select 300 DPI resolution and full color scanning. PDF/A Compact files are using very efficient compression methods and occupy little disk space on your computer.

If you prefer to use ordinary PDF/A, TIFF or other file formats not supporting adaptive compression, you must choose these settings manually according to the quality of your documents. As an alternative, you can enable the ACRO option in your processing profile and let PixEdit choose optimum DPI and resolution for each page. ACRO should be disabled in the processing profile if you save in PDF/A Compact.

Page mode This option chooses between append, overwrite, insert before or after current page.

Brightness and Contrast Use these settings to compensate for very dark or very light documents. In such cases, you will find that acceptable quality can only be obtained by scanning in greyscales or color mode.

Automatic processing, document separation and saving You can configure PixEdit to execute almost any operation sequence automatically after you have scanned a batch of documents. If you are using DocServer in PixEdit, the processing profile will be executed while you are scanning the next batch of documents.

You don't have to wait until the processing profile has been executed before scanning the next batch. You can leave the processing to DocServer by checking the "Processed scanned document with DocServer" option. DocServer will then process your batch in background while you continue to scan the next batch.
To specify the operations to be executed after having scanned a batch, click the configuration button.

Independent of scanner type and brand, PixEdit offers automatic document separation using barcodes, quality enhancements, page size detection, automatic orientation, automatic deskew, blank page removal, automatic color and resolution optimization (ACRO), OCR using the OCR snap-in module so your saved PDF's becomes searchable, automatic saving to any supported file format using barcodes,

incrementing file names or time/date, execution of custom made macros and much more.

Although you will find a lot of useful functions for after-scan processing, your business may have very special requirements that do not exist in the After Scanning dialog. As an example, let's say you want to always join three and three pages automatically after scanning (this is a quite uncommon occurrence, so this serves as a good example in this case). You can do this with the help of a macro. Simply open a document, click the macro record button and join three and three pages and specify "All pages" in the join dialog. Stop recording and give your newly recorded macro a name, for example, "My special joining". Now click the Configure button in the After Scanning section of ScanBar, and under the General tab, select your recorded macro from the drop-down list. Three and three pages will now always be joined after completed scanning. Remember to check the Enable option in ScanBar to enable after-scan processing.

You may create many different after-scan profiles, and then load them depending on your various scanning tasks during a production day. Select the profile to be used in the drop-down list in ScanBar. You can create and manage profiles in the Profile tab in the After Scanning dialog.

DocServer

Introduction

▶The DocServer window processes documents at the same time as you are scanning or working manually with documents, and is a fully integrated part of PixEdit. DocServer can serve and process an unlimited number of folders that are continuously filled with documents from network scanners and/or multi-functional devices. The most common use of DocServer however, is to process the last scanned batch from the current Twain scanner while you are scanning the next one. DocServer does this automatically in the background and your scanner is therefore always ready to scan a new batch.

After Scan processing without locking up your computer You may be familiar with the "After Scanning" concept in PixEdit, where PixEdit, after the scanning process has completed, does deskew, OCR, document separation based on barcodes and so on. The scanning process does not need to be a physical scanning process, the After Scanning process may also fetch documents from a network folder updated by a network scanner or a multi-function machine.

The traditional "After Scanning" process will typically take some time, depending on the complexity of the after scanning profile. While PixEdit executes your traditional profile, your PC is locked up so that you cannot scan the next batch. DocServer solves this problem in an elegant way. You can let DocServer take care of executing your Twain "After Scanning" profile and free PixEdit and the scanner so that you can scan the next batch while the previous one is processed by the Twain "After Scan" profile in background.

Modern hardware required DocServer takes advantage of the multi-processor or multi core capabilities in modern PCs. In order to get the most out of DocServer, you will need a PC with these capabilities. If your PC does not have multiple processors or cores, some tooltips will contain a warning message and DocServer will still work, but with greatly reduced performance. If you experience reduced DocServer performance, ask your IT department to check if your PC is equipped with the necessary hardware.

Multiple document sources folders In addition, to executing the current After Scanning profile in the background, DocServer can also monitor an unlimited number of folders and process incoming documents with different After Scanning profiles for each folder. DocServer is a separate window in PixEdit, and provides process status such as processed, remaining and error counters. While DocServer processes documents, you can add new folders, create new profiles as well as handle possible production errors. As documents flow through DocServer, they are shown as small

thumbnails in DocServer. DocServer fully supports drag and drop technology to move documents between folders and profiles, but more about this later.

Typical basic use of DocServer

You have an expensive document scanner and you would like to use its full potential without having to wait for the After Scanning process to complete. In other words, you want to keep the scanner busy by continuously feeding it new batches of documents and execute the After Scanning profile in background. Simply check "Process scanned document with DocServer" in ScanBar, and the DocServer window will open. Click the Start button in DocServer, and as soon as you have scanned a document or batch of documents using ScanBar, the selected After Scanning profile in ScanBar will be executed by DocServer.

Serving multiple scanners in DocServer

DocServer can serve multiple network scanners at the same time as serving the current selected Twain scanner. To let DocServer serve another Twain scanner, simply select a different Twain scanner (if connected to your PC) in ScanBar. If you would like to serve additional network folders or network scanners, click the Add button and specify the folder to be watched by DocServer. If you would like DocServer to use the current default After Scanning profile, all you have to do is to check the "Scan" checkbox. If you want to create new, or use an existing profile, click the After Scanning Profile button belonging to the new watched folder. To add more watched folders, click the Add button again.

Most network scanners or multi functional devices support sending files to different folders from the same machine, depending on how the network scanner is configured. You can, of course, let DocServer watch several folders even if the folders are filled by the same network scanner. Using this method, you can choose "profile" on the network scanner user panel, and then the After Scanning profile in DocServer. Obviously, even if DocServer is serving different folders with different After Scanning Profiles, the profiles may still save the finished documents to the same folder using for example, different prefixes or file formats.

Drag and Drop documents to DocServer

Even if DocServer normally watches folders being filled by network scanners, you can equally, as well, fill those folders yourself using for example Windows Explorer. You may choose between dropping files directly onto any folder specification in DocServer, or drop your files into ordinary folders. This method is also essential when it comes to handle processing errors in DocServer.

For example, you have batches of files that need different types of processing; some files need to be processed with OCR, others need to be converted to TIFF, some to CALS and so on. Create different folders on your desktop, and give them names indicating the type of process that you would like to use such as "OCR", "Convert to TIFF" and other meaningful names. Now configure DocServer to watch the folders you just created, and apply a suitable After Scanning Profile for each folder. To process files, simply drop your files into the different folders, either directly into the folders themselves, or into DocServer. PixEdit will immediately begin processing your files in the background.

The DocServer Window

DocServer supports drag and drop. The upper part of the DocServer window contains start and stop buttons, as well as buttons for adding or removing watch folders. The DocServer window runs in a separate computer thread. If your computer contains multiple processors or cores, DocServer will run without any noticeable performance reduction of PixEdit.

Starting and stopping DocServer

Click the Start/Stop button in DocServer to do this. If you quit PixEdit while DocServer is running, DocServer will start automatically the next time PixEdit is started. If PixEdit and DocServer is running unattended, and you would like the operation to resume after a power failure, make sure you put PixEdit in the startup group in Windows.

Adding or removing monitored folders

Use these buttons to add or remove watch folders where documents, or batches of documents, are showing up for processing. In addition to folders, DocServer can also have a separate entry for the current Twain scanner with its corresponding After Scanning Profile. The current Twain scanner cannot be removed. If you want to temporarily exclude a specific folder from processing, uncheck the "Scan" checkbox instead of removing the folder specification with the Remove button.

Specifying profiles

When you add a new watch folder, you will need to specify what DocServer shall do with the incoming documents in this folder. If you already made a profile containing these operations, just select this profile from the profile list In DocServer. You can also create or edit an existing profile by clicking the "Edit profile" entry in the profile list.

Priority

This option will ensure that DocServer will continue to process the corresponding folder until the folder is empty before continuing to the next watch folder in DocServer. If unchecked, DocServer will process one single batch or document, and then continue to the next watch folder. If you uncheck this option for all folders, DocServer will serve every folder on a regular basis. Perhaps you would like to have

DocServer prioritize your current Twain scanner, and only serve watch folders when DocServer have capacity to do so. Uncheck this option for all folders, except "Current twain scanner"

Delete source files

As DocServer processes a watched folder, each processed document will always be deleted after processing. However, a copy of the original, unprocessed document will be stored in a folder under the original folder called "Processed". If you have checked "Delete source files", DocServer will not keep a copy of the original document. If you choose not to delete source files, your hard disk sooner or later will be filled up with copies of the original documents. The finished processed documents will be stored in a folder according to the used profile.

Document counters

DocServer will continuously update several counters so that you can keep track of the production process. There are counters for the number processed, remaining and failed documents for each watched folder.

Error handling

This is an important part of DocServer. Typical errors that may happen are corrupt documents, documents with missing barcodes processed with a profile that expects barcode document separators and so on.

When DocServer, for some reason, fails to process a document, the corresponding red "Failed" counter will be incremented. DocServer will continue with other tasks in the meantime, but sooner or later you will need to correct the situation. To investigate the problem, click the red "Failed" counter to open the folder where the error occurred.

The procedure for error correction varies, depending on the type of error and if the error occurred in a watched folder or in the entry for current Twain scanner. Documents that fail in the profile for current twain scanning will be opened directly in PixEdit when you click the red "Failed" counter, and must be saved manually after you have corrected the problem.

If an error occurs in a watched folder, the failing documents will be stored in a folder called "Not Processed" under the watched folder. To view the content of this folder, click the red "Failed" counter. Maybe you just would like to see the error happen again – click on the red "Failed" counter and simply drag the document back to the watched folder specification in DocServer. As an alternative you can open the failed document in PixEdit, correct the problem and save it back to the original watched folder. You can of course do this while DocServer continues its processing.

Alarms in DocServer

Sometimes you may see a DocServer entry displayed with a red highlight color. This indicates that DocServer is temporary or permanently inhibited from processing any documents in the specified watch folder. A red entry line can also indicate that the watch folder is no longer available. DocServer will continue to work with other folders in the meantime, but it is good practice to remove deleted folders from DocServer.

Macros

Recording and playing macros

▶ To create a macro click the record button, execute any edit or page function in PixEdit, stop recording and give your new macro a suitable name.

You can then replay your macro on a current page, on selected page ranges, in processing profiles executed automatically after scanning, in DocServer processing documents arriving in folders being filled by MFP devices or in Batch Wizard for processing entire folder structures. Let's take a look at the various buttons in the macro tool box:

Press this button to record a macro. Execute the functions in PixEdit you would like your macro to contain such as page manipulations, edit functions, figure insertions and so on and press the stop button to complete the recording.

When you stop a macro recording you will be asked to give your recorded macro a name. It is good practice to use a name describing what the macro does so that you can easily find it later in the macro drop down list, in processing profiles or in Batch Wizard.

Use this button to play selected macro on current page.

To play a macro on a page range, first select the pages to be processed in composition view and then press the multi-page play button. If your macro has been *recorded* over multiple pages, the recorded page range will be temporary overridden by your new page range specification.

Press this button to delete current macro. You cannot undo macro deletions.

To execute a macro on several files or folder structures, click the Batch Wizard button and select the macro to be executed in step 3 of the batch Wizard. Batch Wizard is suitable for one-time jobs. For continuous macro execution on documents arriving in folders, it is better to use a processing profile in DocServer.

Advanced: Click this button to view or edit a recorded macro. Syntax and parameters in a macro is roughly the same as used in PixEdit's COM and DDE interface.

Batch Wizard

The Batch Wizard in PixEdit is designed for image processing and/or file format conversion of multiple files, folders and folder structures. Batch Wizard consists of several steps, and guides you though the process of setting up a job.

You can use Batch Wizard for everything from basic file format conversion, to OCR processing, macro execution, image processing, data extraction from scanned forms and more. Batch Wizard, in addition to processing folder structures, for historical reasons, also is capable of monitoring folders for incoming files to be processed. If you need to monitor folders it's recommended that you use a processing profile in DocServer so you can continue to work as usual during folder monitoring and processing. A second advantage over Batch Wizard is that DocServer can monitor many folders at the same time.

Batch Wizard may, in some cases, produce image like PDF/A files from Office documents if you include image processing functions in the batch job. Image like documents require more storage place than digitally born documents.

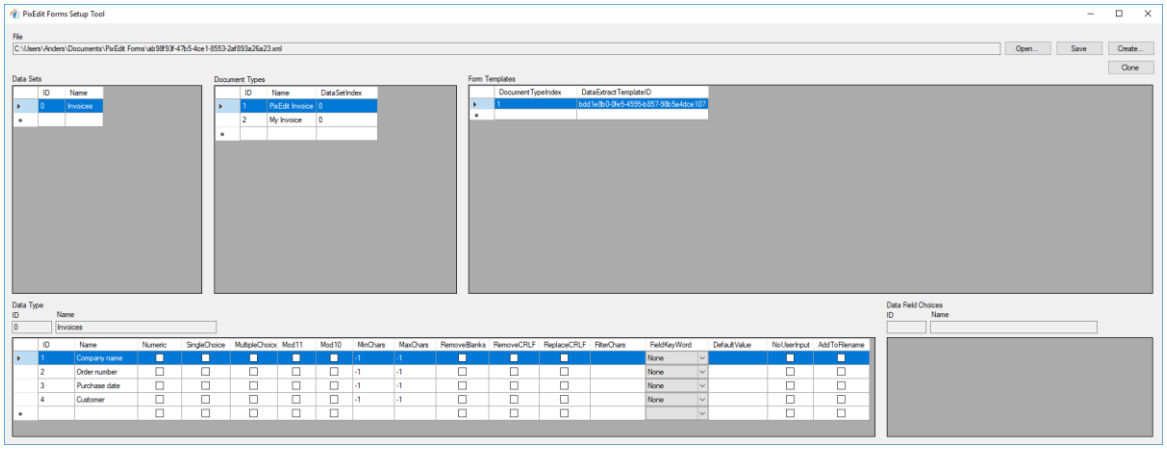
Batch Wizard and DocServer can in many cases be used to solve the same task. Batch Wizard is more suitable for one-time jobs such as conversion of documents in a large folder structure, while DocServer is your best choice for continuous processing of arriving documents in different folders.

Data extraction and forms processing

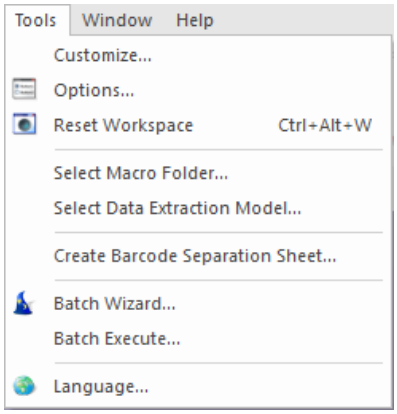
Data extraction and forms processing in PixEdit makes it easy to capture information from paper-based documents with identical layout. It is also possible to streamline extraction of data from unstructured documents.
The data from the extraction is exported to a standard exchange format that can be used by other systems or imported into Microsoft Excel. PixEdit retrieves information from existing files or in connection with document scanning. You can process both single-sided and multi-page documents, with or without color. You must have the PixEdit Desktop Extended software to perform data extraction.
Before starting data extraction from documents, you need to define a data model. The data model contains the type of information you want to extract from the documents and in what order. The data model used to extract data from both structured forms and unstructured documents. This data model is defined in a separate, included program called 'PixEdit Forms Setup Tool'. Once defined, the data model is connected to PixEdit Desktop and you are ready to perform data extraction.
When working with structured forms, you can define areas in your template which you know to be common on each scanned sheet. PixEdit will adjust each sheet so this information overlaps before information is extracted. The graphics in these areas do not have to be designed with form alignment in mind; you can use any graphics such as text, logos and so on as long as you know, for sure, the graphics are present in the same spot on each page.
For additional security, you can define properties on the different types of data in the model, so that the PixEdit will give warnings if, for example, too many or too few digits are detected in a given field during the form processing.

Defining the data model

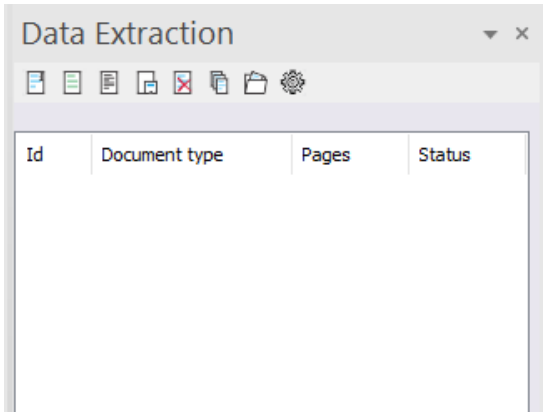
 To define a data model, start the application 'PixEdit Forms Setup Tool'. With this application you define the types of documents and forms to be processed with PixEdit.



In the example above, we have defined a dataset to process invoices. This dataset contains a set of 4 fields. In addition, we have defined two types of documents that use this data set.
We can now start PixEdit Desktop and select the data model stored in an .xml file. This is done from the Tools menu in PixEdit, as shown here:



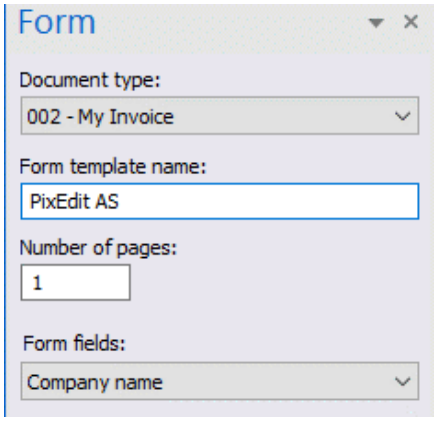
PixEdit will read the data model and make available the document types and definitions set up in the PixEdit Forms Setup Tool. You can make changes to the data model at any time and PixEdit will read the changes automatically. Automatic loading of the data model will be performed when there are no opened documents in PixEdit.
Another essential tool for processing forms is the Data Extraction window. This window is turned on from View | menu Control windows | Data extraction. With the tools available in this window, you can identify forms then extract and export the data.



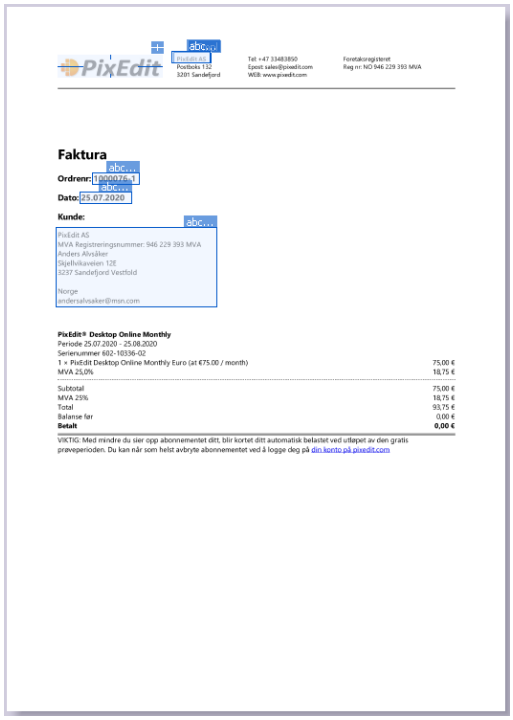
Defining a form template

In order to achieve an efficient workflow for extracting data from structured forms, one should define form templates. By defining templates, PixEdit can capture the information automatically and save you a lot of time. It is not necessary to define form templates if only processing unstructured documents.

 To define a form template, start by scanning or opening a representative filled-in form. The form to be used as the original should be of good quality and scanned in 300 DPI resolution. You must also make sure the tool window is visible. Use F10 to make the tool window visible if it is not already displayed.
Then press the new form template button and select the type of documents. You will have the opportunity to select from the defined document types that are in the data model.
The tool window now contains what you need to define where the data fields are positioned on the document page.



As seen here, the name of the document type is displayed, and the form fields are available from a drop-down menu.
The first thing to do is to enter a name for this form. By doing this and additionally inserting a field for form detection, PixEdit Desktop will be able to identify different types of forms automatically.
Then select a Field Type from the drop-down list and drag a rectangle in the main window where this data is located. Repeat this until all fields are defined.



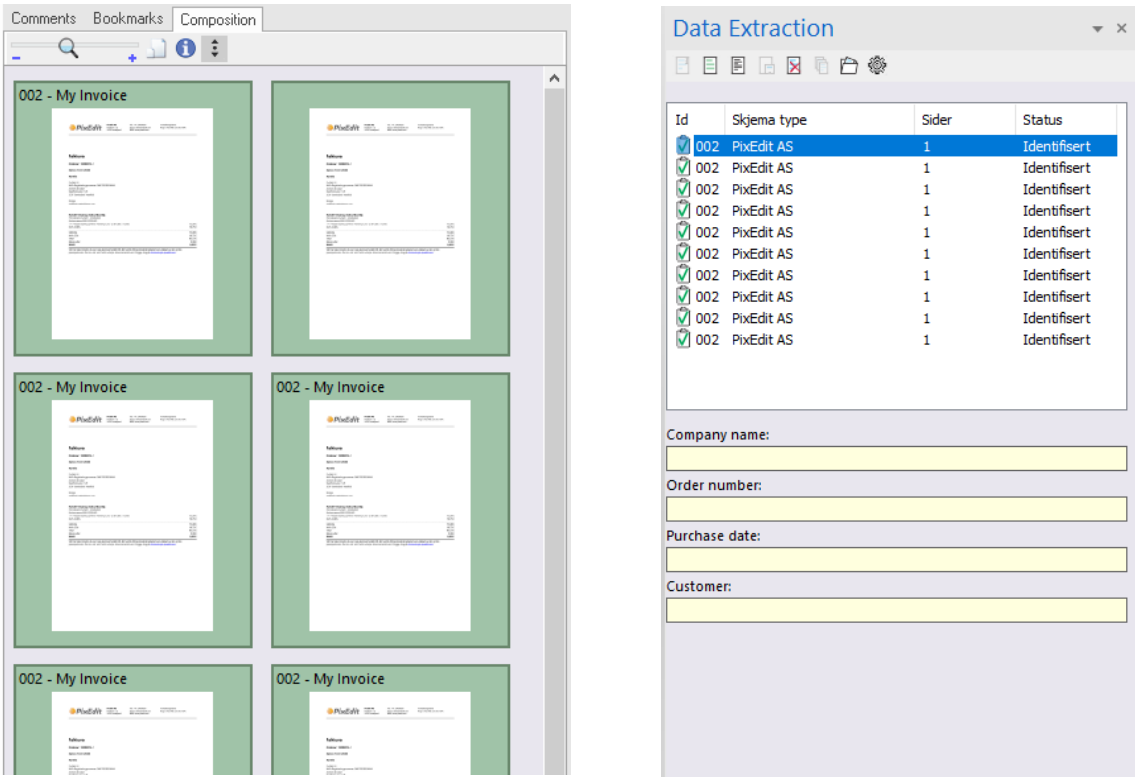
Press the save button. The form template is now saved with a unique name and linked to the selected document type in the data model.

Processing structured documents

With a scanned batch of forms, use the tools in the Data Extraction window to capture data from many forms. This is a semi-automatic process where the user has a controlling function.

 Start by pressing the button to identify forms. PixEdit will search through all the pages in the document and link the correct form to document pages.

 If a form is not correctly identified, you use the page view window to select the corresponding pages and then press the button to select the correct form template. You also may use drag-and-drop operations in the page view window if needed.



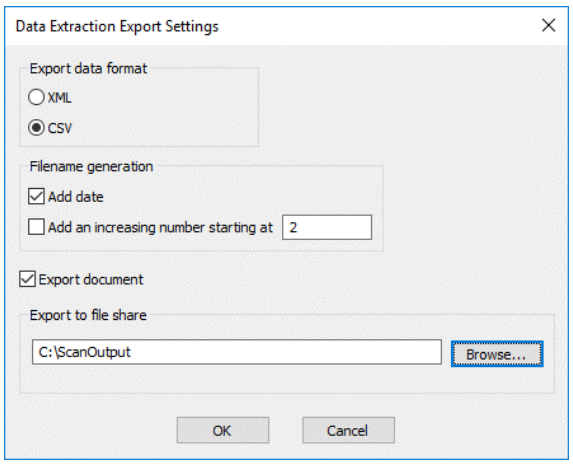
Screenshot shows all identified forms in the page view window and in the Data Extract window.

When all forms in the batch are correctly identified, you start the automatic data extraction by pressing the button. PixEdit will work through all forms and retrieve data for each field.
When the data capture is complete, click on the forms in the list to verify that the data is correct. If something is misinterpreted, revise it by entering the correct information in the text boxes for each field.
Some fields can be set up with different types of control mechanisms such as minimum number of characters or, for example, modulus 11 control. If the information in the field is not valid, the field will be displayed in red, and a user must visually check and correct this. It is not possible to export data as if the data extract contains errors.

The figure shows data capture where all fields are ok.

 Before exporting the data, you can view them for additional visual control. Press the button to do this.

 To be able to export data, you must first configure some export settings. Press the button to display data extraction settings.



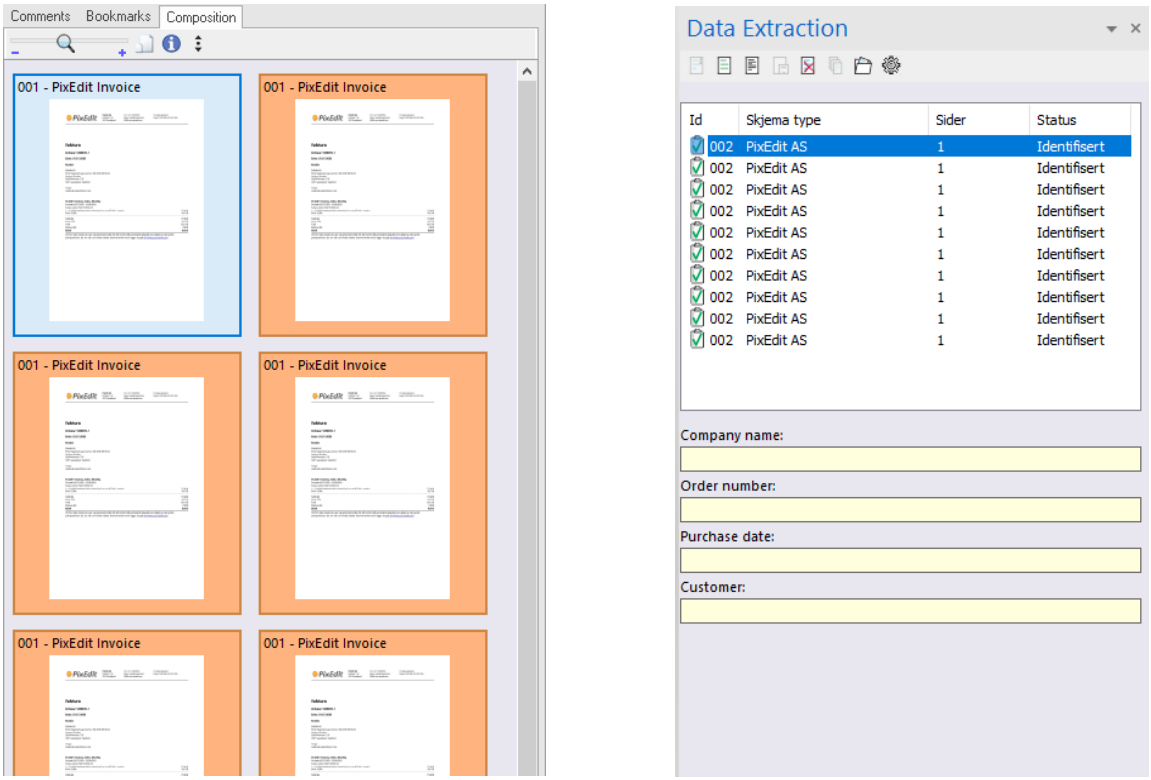
Export format Select between XML and CSV. For XML export, all field names and data values will be written to the output file. For CSV export, only the data values will be written to the output file.
File name generation Choose to add a date and an incrementing counter to the file name.
Export document By enabling this option, each individual form in the job will be saved to a PDF.
Export file path A valid file path must be set in order to export extracted data.

 By clicking Export data, all forms in the batch will be saved as separate PDF documents with associated data files (XML or CSV).
There are several options in the data model for adding field information to the file name. It is also possible to add a file reference in, for example, the CVS file that refers to the associated PDF. Some systems may require this key information to be able to make use of the extracted data.

Processing of unstructured documents

PixEdit also simplifies extraction of information from unstructured documents. When processing unstructured information, the user must select the type of document to be processed. This is done by selecting the corresponding pages in the composition window and then selecting the document type from the list of defined types. To simplify this process and, at the same time, be able to scan several documents at once, you need to insert a barcode separator sheet between each document and use a batch split function for separating the batch into individual documents. A standard PixEdit separation sheet can be created from the Tools menu in PixEdit.


Press the button for separating the batch into individual documents.



Screenshot shows identified forms in the Composition view and the Data extraction window.

When documents are selected manually as required when working with unstructured information, the thumbnails in the page composition are colored orange.
Now start entering information in the various fields belonging to each individual document / form. If there is searchable text on the document page, you should copy / paste it into each field. This makes data registration much easier.
When the data is completely registered and filled in correctly, an export can be made in the same way as with the structured forms.