



DpuScan

Janich & Klass
Computertechnik GmbH



DpuScan 7 Reference Manual

Image Enhancement

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Actuality

It may happen that a more recent version of this manual for DpuScan is available for download from the Internet. Therefore, it is recommended that you should compare the version by means of the date printed on this page with the version on the Internet. You should please use the most up-to-date version of the manual.

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1 Enhanced Modify

The Enhanced Modify functions are intended to improve the picture quality of black and white images. Color or gray images **can not** be edited.

For example:

- image skew corrected
- contaminants removed or
- be reversed text converted.

The post-processing of images by Enhanced Modify is particularly suitable to improve the quality of a subsequent automatic text recognition (OCR).

The settings that relate to the Enhanced Modify can be combined to subprofiles, management and configuration is done via the settings of the base profile, there on the settings for the process.

In addition, an Enhanced Modify process step must be defined in the task. Both definitions are necessary for an Enhanced Modify process is executed.

1.1 Configuration Dialog

The setup dialog may look different: Depending on previously installed older versions of the program, there are two libraries available from Sequoia and Pixtools. Since these libraries work like a machine in the process, they are often referred to as "Engine".

In newer installations, this distinction is not made, then, only the Pixtools engine available. If both engines are available, you can switch in the setup dialog between these modules. Depending on the other settings can be made:

For the Pixtools Engine the setup dialog uses these tabs:

- Define Areas
- Deskew
- Lines Removal
- Noise Removal
- Smotting Characters
- Shading Removal
- Sub Image

For the Sequoia Engine the setup dialog uses these tabs:

- Define Areas
- Inverse Text Correction
- Horizontal/Vertical Lines Removal
- Horizontal/Vertical Register

Noise Removal

Shading Removal

Sub Image

Available actions	Clicking one item in this listbox will change the Tabcontrol on the right side. Click each item to define all possible parameters for the Modify process.
OK	Closes the dialog box and saves all definitions to disk.
Cancel	Closes the dialog box without saving.
Help	Opens a help screen. The help theme depends on the tabcontrol page, which is currently selected.
Test	Tests the current settings with the document displayed in the window.

1.1.1 The Pixtools Engine

For the Pixtools Engine the setup dialog uses these tabs:

Define Areas

Deskew

Lines Removal

Noise Removal

Smotting Characters

Shading Removal

Sub Image

1.1.1.1 Define Areas

Active Areas	Shows the position and size of all defined areas. By clicking one line the appropriate frame will be activated in the window.
Add Area	Creates a new frame. The new frame will be displayed in the window and is blue. You can change size and position of the frame. Press and hold the left mouse button in a frame to move it. Click the frame margin to change the size of the frame.
Delete Area	Deletes the frame, which is marked in the Box Active Areas and the blue frame of the window.
Delete all Areas	Deletes all lines of the box Active Areas and all frames of the window.

See also Sub Image

1.1.1.2 Deskew

This process aligns the image based on printed texts or structures. This is e.g. useful for skewed photocopies. This straightening is often referred to as de-skew or deskew

activate activates this feature

Operation Mode	The images can be rotated at a fixed angle (for example, when a whole batch was printed already skewed) or be automatically rotated based on the structures in the picture (for a better result in the OCR).
Fix Angle	If to rotate with a fixed angle its value can be given here.
Test direction	Here it can be defined to search for horizontal or vertical texts only or for both.
Image Contents	This property specifies whether text -like or picture -like elements to be used to determine the skew of the image content. Use picture , when the images contain large black areas, otherwise text .
Deskew Quality	You can choose between optimizing the quality and the throughput here: For better quality a decreased throughput is achieved and vice versa.
Fill Color	Select here white to get a uniform background for the image. Choose here black, if you want a visual indication that the image was still artificially rotated after scanning.

See also Lines Removal, Noise Removal, Character Smoothing, Shading Removal and PixTools-Engine.

1.1.1.3 Lines Removal

This procedure removes lines from the image. This is e.g. useful when tables with the OCR to be captured.

activate horizontal/vertical lines removal	Enables removing horizontal/vertical lines.
Horz./Vert. Straight Line	Use this mode if the lines on the image are clear not not defected. Don't use this mode if the lines have gaps or are lightly curved.
Min. horz/vert Length	Specifies the minimum length of a line to be deleted. Increase this value if for example the bars of a barcode get lost.
Max horz/vert gap	Determines how long a gap within a line may be.
Horz/Vert Curvature Percent	Specifies how many percent a line may be curved or inclined relative to the horizontal or vertical.

See also Deskew, Noise Removal, Character Smoothing, Shading Removal and PixTools-Engine.

1.1.1.4 Noise Removal

This process removes contaminants on the screen, for example, small dots caused by a high contrast when scanning.

activate	activates this feature
Max. Width / Height	Specifies how many pixels an object must be wide or high, so it is not removed.
Max Percent	Specifies how much of area specified by height/width must be black if the object is removed..

Min. Distanz Specifies how far a stain from other objects must be away to be considered as noise.

See also Deskew, Lines Removal, Character Smoothing, Shading Removal and PixTools-Engine.

1.1.1.5 Smoothing Characters

This process cleans the edges of characters. It removes overstanding bumps and fills pits. Too thin font can be shown thicker, too thick fonts thinner.

activate activates this feature

Smooth Enables the smoothing of the edges, removes overstanding bumps and fills pits.

Erosion Amount Font that appears too thick, is made narrower, the value indicates how often the procedure should be repeated.

Dilation Amount Font that appears too thin, is made richer, the value indicates how often the procedure should be repeated.

See also Deskew, Lines Removal, Noise Removal, Shading Removal and PixTools-Engine.

1.1.1.6 Shading Removal

This procedure removes rasterized or dotted backgrounds as e.g. be used to highlight text fields in forms.

activate activates this feature

See also Deskew, Lines Removal, Noise Removal, Character Smoothing, and PixTools-Engine.

1.1.1.7 Sub Image

Modify can isolate a specified area from an image. This extraction occurs after De-Skew and Register, but prior to any other processing. The sub-image is then processed with all other active Modify features. Modify discards the remainder of the image. This feature is useful for applications that process only part of the document, such as extracting the address block from a check. To assure accuracy and consistent output, always set the De-Skew and Register features ON when Splitting Out a Sub-Image.

To extract a sub image you should define a frame and move it to the appropriate position in the original image. If no frame is defined the whole image is the frame. You can create a white frame around the sub image. The created sub image will be increased by this frame.

enable Checking this checkbox enables the sub image option.

left / top Distance of the left / upper edge of the cut-out from the origin

width / height Defines the width and height of the area to be clipped.

image pad A white border can be added to all four sides of a sub-image. This value specifies the width of that border.

Position	Indicates the point of origin for the calculation of the upper left corner of the cutout. Thus, e.g. an area to be calculated on the bottom right, regardless of the size of the sheet The values will be automatically converted when changing the origin.
Measurement	The units in which the dimensions are to be stated. The values will be automatically converted when changing the units.
Add Area	Creates a new frame. The new frame will be displayed in the window and is blue. You can change size and position of the frame. Press and hold the left mouse button in a frame to move it. Click the frame margin to change the size of the frame.
Delete Area	Deletes the blue frame of the window and the coordinates of the textfields.

See also Overview

1.1.2 The Sequoia Engine

For the Sequoia Engine the setup dialog uses these tabs:

- Define Areas
- Inverse Text Correction
- Horizontal/Vertical Lines Removal
- Horizontal/Vertical Register
- Noise Removal
- Shading Removal
- Sub Image

1.1.2.1 Define Areas

Active Areas	Shows the position and size of all defined areas. By clicking one line the appropriate frame will be activated in the window.
Add Area	Creates a new frame. The new frame will be displayed in the window and is blue. You can change size and position of the frame. Press and hold the left mouse button in a frame to move it. Click the frame margin to change the size of the frame.
Delete Area	Deletes the frame, which is marked in the Box Active Areas and the blue frame of the window.
Delete all Areas	Deletes all lines of the box Active Areas and all frames of the window.

See also Sub Image

1.1.2.2 Deskew Options

Skew refers to how much rotation the text has in relation to a horizontal reference line. An image that is not perfectly square is considered "skewed." Even at 1% or 2% skew, many OCR engines fail to recognize characters. Higher levels of skew can interfere with form identification and anchoring. Modify uses text and horizontal lines to automatically detect and remove skew from an image. Modify can easily handle 10% skew, and up to 20% with a clean image. Modify also has a feature that reduces rotational text distortion in a De-Skewed image.

The process is invaluable for applications that require precise and consistent placement of text, such as Forms Processing and the intelligent OCR of columnar data. De-Skewing an image can also improve the performance of compression algorithms. Skewed TIFF Group 4 files often compress an additional 25% when De-Skewed.

enable	Checking this checkbox enables the deskew option.
minimum length	This parameter sets the shortest line (text or graphics) Modify will use to detect skew. This measurement is in pixels. The recommended default setting for Minimum Detect Length is 300 (1 inch at 300 dpi). This value should be at least 25% larger than maximum acceptable skew. If Modify reports a Failure to Detect Skew, decrease this value and reprocess the image.
maximum acceptable skew	<p>This parameter determines how much skew is acceptable. When Modify encounters an image skewed less than this value, it will omit the De-Skew process. Using a higher value here causes Modify to process images with a lower percentage skew. If you set this to a lower value, Modify is more likely to accept lightly skewed images without de-skewing them.</p> <p>We recommend a default setting of 150 for Maximum Acceptable Skew. This setting corresponds to 0.67% skew which produces good OCR results. The setting is somewhat counter-intuitive. This value represents the number of horizontal pixels in a line before Modify encounters a pixel shifted vertically out of position. Lower numbers indicate greater skew.</p> <p>Modify Hint: A setting of 100 corresponds to 1% skew, while a setting of 200 corresponds to 0.5% skew. Many OCR engines can handle a lightly skewed image, so very high values for maximum acceptable skew may not improve performance.</p>
protect characters	This feature automatically removes rotational distortion from the De-Skewed characters, since De-Skewing an image will often distort text characters. Character Protection provides improved OCR results and a more attractive image, but is considerably slower than De-Skew alone. It is a trade off between speed and OCR accuracy. Since this feature can dramatically increase processing time, we recommend you leave it off unless your OCR error rate is unacceptable.
don't change image size	<p>A deskew process often increases the width of an image. If you want to retain the image size, activate this option.</p> <p>Attention: The image could be cut at the edge. Use this option only, if you are sure, that the resulting image is correct.</p>
add black	An image, increased by a deskew process, is normally filled up by white pixels. This option fills up the image with black pixels.

See also Define Areas, Inverse Text Correction, Horizontal/Vertical Lines Removal, Horizontal/Vertical Register, Noise Removal, Shading Removal, Sub Image and Overview

1.1.2.3 Inverse Text Correction

Inverse Text Correction automatically detects areas of inverse (white-on-black) text and converts it into normal (black-on-white) text. It will handle multiple zones of inverse text on the page and inverse zones of various shapes, such as rectangles, circles, ovals, etc. At present, OCR engines cannot read inverse text. Modify makes it possible.

enable	Checking this checkbox enables the inverse option.
min. height	This parameter sets the (vertical) height, in pixels, of the smallest expected zone of inverse text. The recommended default is 50 pixels (1/6 inch at 300 dpi). Decrease the setting if small inverse bands are being missed, and increase it if Modify treats normal text as inverse.
min. width	This value represents the (horizontal) width, in pixels, of the smallest inverse (black) zone that Modify will search for. The recommended default value is 300 pixels (1 inch at 300 dpi). Decrease this setting if small inverse bands are being missed, and increase it if Modify treats normal text as inverse.
min. black on edges	This field must contain a positive value if the Inverse Text Correction feature is active. If Inverse Text Correction is active, zero is not a valid value for this field. This parameter sets the minimum horizontal length of the shortest run of black pixels along the left or right edge of an inverse zone. The recommended default is 10 pixels. Decrease this value if Modify misses inverse bands, or increase it if Modify treats normal text as inverse text.

See also Define Areas, Deskew Options, Horizontal/Vertical Lines Removal, Horizontal/Vertical Lines Removal, Noise Removal, Shading Removal, Sub Image and Overview

1.1.2.4 Horizontal/Vertical Lines Removal

Modify can automatically detect, report, and remove horizontal lines. Our SuperLine technology is capable of locating even the most degraded line. We introduce this new technology under the Maximum Line Gap parameter.

Removing the lines from an image will often leave gaps in characters which can seriously degrade OCR accuracy. With its advanced Character Reconstruction feature, Modify greatly improves OCR accuracy in difficult documents, such as typed forms and those with underlined words.

Line Removal reduces OCR errors, especially in images where text and lines are placed closely together (in underlined text, for example). It is also very useful for Forms Processing and Document Imaging applications. Line Location Reports are especially useful in Forms Processing for precisely locating image areas. Report accuracy is usually within a few pixels.

You can activate Horizontal Line Management and Vertical Line Management separately with independent parameters. Other than orientation, these features are identical.

enable	Checking this checkbox enables the horizontal/vertical lines removal option.
min. line length	The line removal system can identify and remove very short horizontal lines, such as the one across a large capital T or the vertical segments of a large capital H. This value sets the minimum length of a line (in pixels) to hunt down and eradicate. Be sure to set this value larger than the height and width of your text characters. The recommended default value is 150 pixels (1/2 inch at 300 dpi).

- max. line thickness** Some images may have short graphic lines you that want to remove, and large text characters you want to preserve. Since extremely large text is usually thicker than the lines on forms, you can use this feature to keep Modify from removing very large text in titles. This value sets the maximum thickness of a line for detection. The recommended default is 20 pixels.
- max. line gap** Lines in a scanned document often contain small gaps. With this parameter, you can set the maximum gap (in pixels) that Modify will consider a continuous line. Activating this feature re-attaches broken segments for removal purposes. For poor quality images, such as dot-matrix and microfilmed documents, you may set this value as high as 50. Setting this value higher than 3 invokes our SuperLine technology. The SuperLine technology takes a little longer, but can accurately detect even the most broken up lines. The SuperLine technology may see small print as lines if the Maximum Line Thickness is larger than the height of lower-case print.
- We recommend a recommended default value of 1, which works well for most clean images. With high quality scans, you can set the Maximum Line Gap to 0.
- edge cleaning** When removing a line, Modify automatically removes adjacent noise. This feature is especially useful for removing poor-quality lines. The Edge Cleaning Factor determines how far from a removed line Modify will clean up noise.
- We recommend a recommended default value is 2 pixels, which works well in most cases. Set it to 3 or 4 if line shadows remain; if line removal degrades adjacent text, decrease the value to 0 or 1. The Character Reconstruction feature can often repair text damaged by line removal.
- reconstructed width** Modify will automatically reconstruct intersected characters after performing line removal. This parameter sets the maximum width and height, in pixels, of characters to reconstruct. The recommended default is 20 pixels, which works well in most cases.
- Increase this value if text is not being adequately repaired, and decrease it if you encounter erroneous reconstruction. Text larger than 14 point may require higher settings. Setting this value to 0 disables character reconstruction.
- Modify Hint:
- When you disable Reconstruction, you may want to set your Edge Cleaning Factor lower than 2 if line removal is damaging characters.

See also Define Areas, Deskew Options, Inverse Text Correction, Horizontal/Vertical Register, Noise Removal, Shading Removal, Sub Image and Overview

1.1.2.5 Horizontal/Vertical Register

These settings give you finer control over image Registration.

- enable** Checking this checkbox enables the horizontal register option.
- left/top margin** This parameter determines how many pixels will remain as a left or top margin after processing. Setting this value to 0 places text flush with the left or top edge of the image. A negative value crops the specified number of pixels from the left or top edge of the text.

- find line for register** Find Line For Register is a powerful feature for precise registration on forms, especially on forms with edge noise. Instead of using what it believes to be the edge of the text, Modify will instead position the text in the image based on the position of a vertical line. This line should be significantly larger than any text characters (in particular, those characters to the left of this line).
- Set this parameter to a value larger than the height of characters but less than the length of the line. Modify will examine the image from left to right until it locates a vertical line segment larger than the specified value or until it reaches one quarter the image width. It then shifts the image so that the line is the distance from the left edge of the image as specified by Resultant Left Margin. Setting the value to 0 deactivates this feature.
- central focus** This feature causes Modify to register using only the middle portion of the image border. Central Focus is useful for ignoring edge noise, letterheads and logos.
- add only** This feature causes Modify to expand the current margin (if it is smaller than the specified value) to the size specified in the Resultant Left or Top Margin parameter. With Add Only active, Modify will only add to the margins. Modify will not remove any portion of the image if the current margin is larger than the Resultant Left or Top Margin parameter.
- ignore holes** Activating this feature causes Modify to ignore binder holes and other left-edge noise when analyzing the margin. Leave this feature off unless you have holes or similar noise to avoid. This feature applies only to Horizontal Registration.

See also Define Areas, Deskew Options, Inverse Text Correction, Horizontal/Vertical Lines Removal, Noise Removal, Shading Removal, Sub Image and Overview

1.1.2.6 Noise Removal

The **Noise Removal** features let you remove random flecks of noise from your image. Removing noise can improve the performance of third party OCR engines.

The Smoothing features allow you to adjust blocks of characters (*pixels, actually*). Using these features, you can bring out faint text, de-emphasize bold text, join dot-matrix text into a form that is more readable by an OCR engine, and smooth out the edges of jagged text.

- enable** Checking this checkbox enables the noise removal option.
- horizontal de-speck** Modify examines each horizontal scan line (a single pixel high), and deletes any group of black pixels whose length is less or equal than this value. This parameter sets the maximum horizontal size for De-Speck. Increasing this value will remove larger specks. Setting this value too high can remove segments of small text. To remove large areas of dot shading, use the Dot Shading Removal feature.
- vertical de-speck** This parameter sets a maximum vertical size for De-Speck. Modify examines each vertical scan line (one pixel wide), and deletes all groups of black pixels whose length is less or equal than this value. Increasing this value will remove larger specks. Setting this value too high can remove small vertical sections of characters.
- activate Text protection** To activate character protection, check this checkbox. Activating character protection causes Modify to check the vertical plane to determine if the suspect pixel group is part of a character. Be aware that this is a slower process and requires more memory. For improved performance, we recommend using Isolated De-Speck instead of Horizontal De-Speck with Protection.
- Without Protection active, neither Horizontal nor Vertical De-Speck looks at anything in the opposite plane. As a result, Modify may cut away pieces of letters with thin vertical

or horizontal segments. However, this has the advantage of having very successful and efficient "whisker" (specks touching characters) removal.

isolated de-speck

This feature removes specks that are not touching anything else in the image. Larger values can cause Modify to remove periods and the dots on the letters i and j. Isolated De-Speck is faster than using both Horizontal and Vertical De-Speck.

This is a very powerful feature because it allows you to remove very large specks without harming text. Using this feature, you can even remove unwanted small text.

This feature can produce exceptionally clean results from the poorest images.

Experiment with this parameter to get the best results.

Modify Hint:

Measure your character's thinnest parts to judge how aggressively you can De-Speck. If characters tend to be thicker in one plane (such as this letter O, which is thicker in the Horizontal plane), then set a higher value in that plane

Note that setting just the Horizontal parameter to 1 is equivalent to removing all 1 pixel wide specks, as well as all image elements which are only 1 pixel wide (if character protection is not on). Setting the Vertical parameter removes all elements 1 pixel high. For small specks, use Horizontal De-Speck only; it is faster.

sand and fill

This feature smoothes out the edges of characters, improving the image's appearance and reducing its compressed image file size. It fills small pits in the edges of a character and removes small bumps on the edges.

This parameter sets the limit of "sand and fill" smoothing: increase the value to repair larger pits and bumps. The larger the type size, the larger this parameter can be.

Settings between 1 and 5 work well, although you may try higher settings if needed.

grow

This feature looks at every black pixel in the original image, and adds additional pixels around it. A Growth value of 2 causes a single black pixel to become a 3 by 3 square of black pixels (adding 2 pixels, one on each side, to each direction: horizontal, vertical, and along both diagonals). This has the effect of making single pixels "grow" into small dots, and expands the borders of text characters.

Grow is very useful for making a font bolder. By growing small groups of pixels, this feature can actually "connect the dots" of dot matrix print. However, too high a value can fill in the open spaces of an 'a' or 'e' character. Lower this value if your characters start touching one another.

erode

This feature looks at groups of black pixels and removes the outer edges. This effectively makes a speck or text character "shrink" by the selected value. Setting Erosion to 2 will erode a 3 by 3 block of pixels to a single central pixel, or make a 2 by 2 block of black pixels disappear entirely.

Erosion has the effect of "peeling" off the outer layer of the character and is useful for "thinning" bold characters. Decrease this value if your characters are breaking up, or use Custom Grow and Erode. When used after Grow, it is possible to repair broken characters (provided the distance across the missing area is smaller than the distance to neighboring characters). Negative values are not allowed with this feature.

See also Define Areas, Deskew Options, Inverse Text Correction, Horizontal/Vertical Lines Removal, Horizontal/Vertical Register, Shading Removal, Sub Image and Overview

1.1.2.7 Shading Removal

Black and white images use dithering, often called dot shading, to simulate shades of gray. This feature removes areas of dot shading from an image, including actual black-on-white shading. Modify allows OCR reading of dot shaded text by automatically detecting zones of shading, determining the size of individual dots, and then removing them. The Dot Shading Removal feature handles a wide range of dot sizes.

Another benefit of removing dot shading is that it can improve the compression of an image file, since the compression algorithm no longer has to store as much data. Additional compression of 50% or more is possible.

- enable** Checking this checkbox enables the shading removal option.
- min. height** This parameter sets the height of the smallest dot-shaded area that Modify will process. The recommended default value is 50 pixels (1/6 inch at 300 dpi). You can decrease this value in order to detect shorter dot shaded zones, or increase it to reduce false detects or if all dot shaded areas are taller than the recommended default size.
- min. width** This parameter sets the width of the smallest shaded zone Modify will process. The recommended default value is 100 pixels (1/3 inch at 300 dpi). You can decrease this value in order to detect thinner dot shaded zones. Increase this value in order to reduce false detects or when all the shaded areas are wide. Note that the recommended default 'smallest dot shaded zone' measures 1/6 inch high by 1/3 inch wide at 300 dpi, and works well for most images. You can always adjust these parameters to your specific image.
- horizontal adjust** This parameter modifies the horizontal component of the dot shading removal feature. Set to 1 if some wide dots remain; this causes the dot removal feature to remove dots 1 pixel wider than the size specified in Maximum Dot Size. Set to 2 to remove dots which are 2 pixels wider. Set to -1 or -2 if text is being degraded (leaving horizontal white streaks). This will decrease the width of the dots being sought by 1 or 2 pixels, and will also spare small text. The recommended default of 0 works best in most cases.
- vertical adjust** This parameter modifies the vertical component of the dot shading removal feature. Set to 1 if some tall dots survive the Dot-Shading Removal process; this causes the dot removal feature to remove dots 1 pixel taller than the size specified in Maximum Dot Size. Set to -1 or -2 if text is being degraded (leaving vertical white streaks). The recommended default of 0 works best in most cases.
- max. dot size** This parameter determines the maximum size of individual dots that make up the dot shading. Modify removes dots up to, and including, this size. The recommended default value is 5 pixels.
- protect** Character protection can protect characters from cuts in the horizontal and vertical planes. This feature is more effective on horizontal and vertical segments of characters than it is on their diagonal segments. This feature may also preserve dots that touch letters.

See also Define Areas, Deskew Options, Inverse Text Correction, Horizontal/Vertical Lines Removal, Horizontal/Vertical Register, Noise Removal, Sub Image and Overview

1.1.2.8 Sub Image

Modify can isolate a specified area from an image. This extraction occurs after De-Skew and Register, but prior to any other processing. The sub-image is then processed with all other active Modify features. Modify discards the remainder of the image. This feature is useful for applications that process only part of the document, such as extracting the address block from a check. To assure accuracy and consistent output, always set the De-Skew and Register features ON when Splitting Out a Sub-Image.

To extract a sub image you should define a frame and move it to the appropriate position in the original image. If no frame is defined the whole image is the frame. You can create a white frame around the sub image. The created sub image will be increased by this frame.

enable	Checking this checkbox enables the sub image option.
left / top	Distance of the left / upper edge of the cut-out from the origin
width / height	Defines the width and height of the area to be clipped.
image pad	A white border can be added to all four sides of a sub-image. This value specifies the width of that border.
Position	Indicates the point of origin for the calculation of the upper left corner of the cutout. Thus, e.g. an area to be calculated on the bottom right, regardless of the size of the sheet The values will be automatically converted when changing the origin.
Measurement	The units in which the dimensions are to be stated. The values will be automatically converted when changing the units.
Add Area	Creates a new frame. The new frame will be displayed in the window and is blue. You can change size and position of the frame. Press and hold the left mouse button in a frame to move it. Click the frame margin to change the size of the frame.
Delete Area	Deletes the blue frame of the window and the coordinates of the textfields.

See also [Overview](#)

1.2 Glossary

1.2.1 Base Profile

Base Profile: Within the program a base profile refers a set of configurations. It describes parameters, which will be kept for a particular function.

Base profiles contain basic settings for

- Data source: resolution, paper size, ...
- Data target: target path, file format, ...
- Process: rules for document separation, parameters for recognition and image processing
- View: number and properties of scan windows etc.

Often this settings are grouped and stored as SubProfiles.

Once defined, base profiles can be copied or extended in any way. They can be reused in different tasks for similar batches.

1.2.2 Profiles

A Collection of Parameters is called **Profile**.

There are these types of profiles.

- Task Profile
describes which job step in which order has to be executed.
- Base Profile
describes the basic settings like file formats, file names etc.

- Sub Profile
describes settings related to one topic like barcode recognition, display settings and so on. It will be saved with a separate name and can be reused in many tasks.
- Application Layout Profile
describes the position and contents of the toolbars.

1.2.3 SubProfiles

Sub Profiles: Sub Profiles are subsets of settings for a certain processing step, e.g. the scanning, filtering, or the barcode search. Subprofile are independent and can be used in several Base Profiles or Application Layout Profiles.

Hence deleting a base profile or Application Layout Profile doesn't delete the attached base profiles. On the other hand the attempt to delete a Subprofile fails if it is still used in another base profile.

1.2.4 Task Profile

Task Profile: A task profile, or shortly **task**, is a list of instructions the program should execute. It defines the sequence of the processing steps and objects to work with. (E.G. First search for barcode on bitonal images, then remove lines on bitonal images, then make a copy of the color image.)

Usually a task consist of this steps at least.

Load Base Profile

- Scan or load Images
- Set path name
- Set file name
- Save the image

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Reference Manual Image Enhancement

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Wuppertal, Germany, 2024