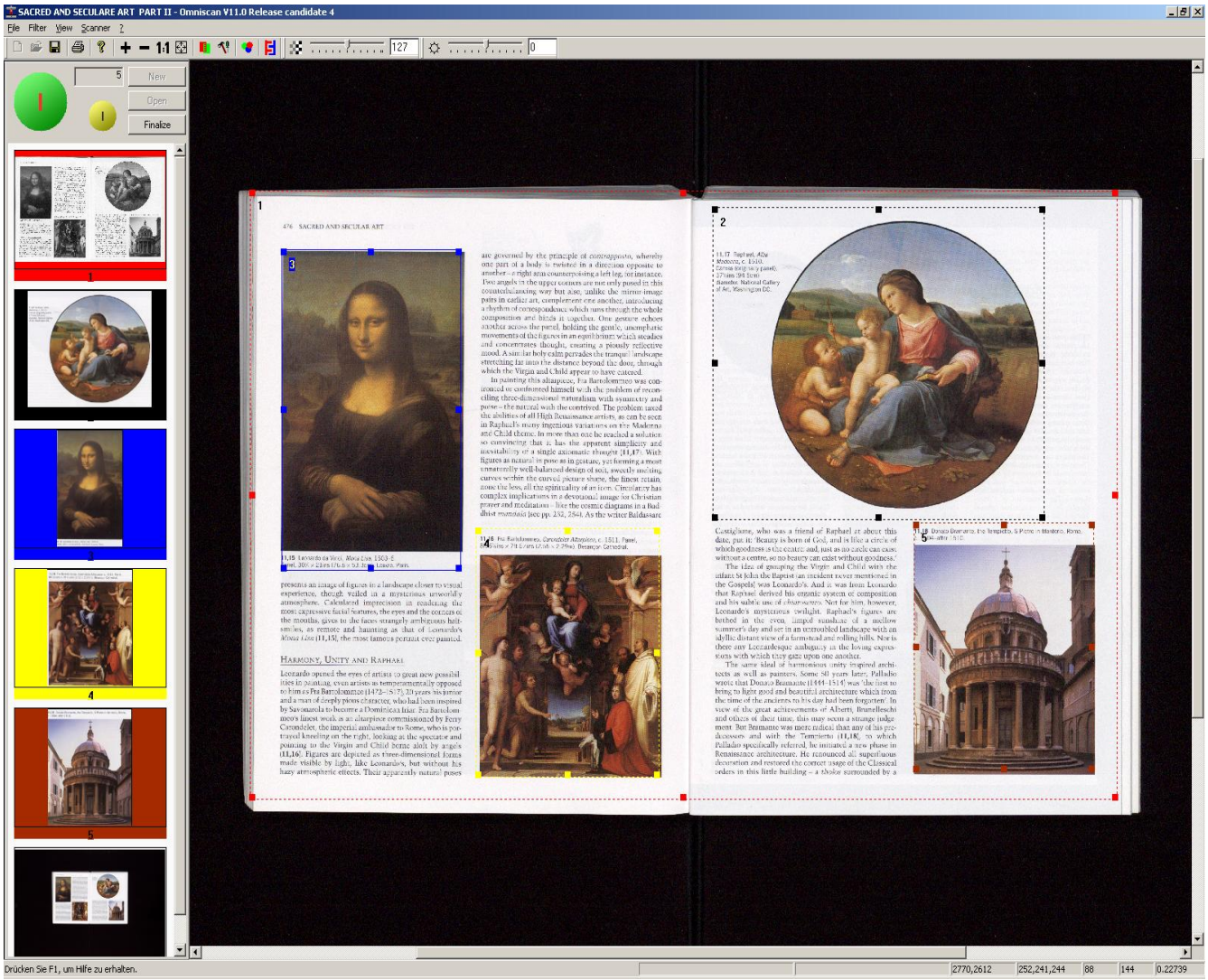
ZEUTSCHEL



OMNISCAN 12

User Manual

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1 Preface

OMNISCAN 12 is a scanning software for professional users.
Each professional scanning operation is determined by the following items:

1. Which scans shall be systematically summarized to one job?
2. Which image processing tools shall be used for the scans?
3. Which color depth, resolution or which compression is suitable for the saving of the scans?
4. Shall a color management be used?
5. What shall happen to the data then?

OMNISCAN 12 makes it possible for you to concentrate on the desired scanning result most largely without compromising with the determination of these items. The workflow is being organized by OMNISCAN 12 so efficiently, that the question for feasibility and speed can be pushed into the background.
This is achieved by

1. the organization of a series of scans to one job, to which all settings are saved, and which can be restored simply and completely any time by the dialog „open file“.
2. the optional „imaging kit“, which provides a variety of image processing tools, which themselves avoid working with an image processing software from outstanding providers and all the data transfer arising with that.
3. the combination of image processing tools with „filter stacks“, which make it possible to apply an arbitrary combination of image processings to a particular image or to a series of images any time.
4. the saving of such filter stacks, so that they are available any time having once been created.
5. the support of the color management, which enables for the keeping of the color fastness within a workflow.
6. the specification of all current color depths, resolutions and storage formats for as many as you like clips and arbitrary combinations, which are scanned with ONE scan operation.
7. the export of these and other „job parameters“ to other jobs, so that settings which have been found once can always be used again.
8. the possibility to organize the automatic transition of the scanned and possibly processed images to a further processing with special „job terminations“, as e.g. bar code recognition, sending, separation of images and text or the imbedding to a DMS software.
9. the permanent development of all mentioned functionalities, especially also those due to special wishes of the customers.

OMNISCAN 12 consists of a basic module and the optional „imaging kit“. Additionally other image processing modules and job terminations are also available.

The basic module covers the possibility to scan an image with two clips which can be selected arbitrarily and to save the images with file formats which are not subject to a license.
The imaging kit allows for the scanning with an arbitrary number of clips and the

use of image processing functions. *(see 8.1 Imaging kit).*

Any OMNISCAN 12 licence offers a trial period with all functioned enabled for 30 days or 1000 scans. *(for more information see 12 Copy Protection).*

OMNISCAN 12 supports all current Zeutschel scanners.

2 Upgrade recomendations

2.1 Special hints for changing from Omniscan 11.8 (or earlier) to 12.0 (or later)

Up to Omniscan version 11.10 it was not posible to choose the filters and the file format independent for each color mode. Now you can choose for instance in one clip the fileformat TIFF JPEG with suitable filtering for color 24 bit and the file format TIFF G4 with different filtering independet from each other.

Also the logic to choose the color mode is changed. Up to now the input color mode for the filtering was selected. Now it's the output color mode. Until now you could choose 24 bit color and select binarisation as a filter function. Now you first choose black and white as color mode and can than select binarisation as a filter. Internal Omniscan automatically decides to scan in grayscale and use the binarisation filter afterwards. So the selected colormode decides about the result of the filtering not of the input into the filtering.

2.2 Upgrade Omniscan 11.x to 12.x

The main difference between Omniscan 11.x and 12.x is the new 64-bit multithreading architecture. This change in the architecture of Omniscan was made because of the requirement to process huge images fast and save. To run Omniscan 12.x, a PC with a 64-bit operating system (Windows XP x64) is required. Omniscan jobs from 11.x installations can be used with Omniscan 12.x. They will be converted into the new format within the first start of the job. There is no guaranty for the correct conversation of the jobs. An Omniscan 12.x Dongle can be used only with Omniscan 12.x and not with Omniscan 11.x and the other way round.
From Omnsican 12.2 on there is additionally a 32 Bit version of the Omniscan 12. This Version contains the same features as the 64 Bit version does, but is of course limited in the memory usage. The dongle for the OS12.2 32 Bit (and upwards) unlocks also the Omnisca 11.12 (and upwards) with all the options unlocked in this dongle.

2.3 Suggested upgrade procedure

With each new version of the Omniscan it happens that the changes are not accepted by the users or there are some initial problems using the new functions. Also the reuse of the old jobs can not be guaranteed under all circumstances even if doing a automatic conversion while loading the job.
It has been found favorable to keep a fallback to the previous version. With a Omniscan 12.x dongle you can always use older versions of Omniscan 12.x. Also you can install as many instances of Omniscan on the same machine in parallel as you like to. To get the settings that where found to be suitable into the new installation the following procedure is recommended.
Copy the complete Omniscan folder of the current installation, normaly found under c:\program files\Zeutschel\Omniscan 12 to another folder named for instance Omniscan12.1. Then uninstall Omnniscan 12.x using "Add and Remove Programs" in the control panel. That removes only the Omniscan 12.x application and not the settings. Then install the new Omniscan over the current version by using c:\program files\Zeutschel\Omniscan 12 as target directory. Now the new Omniscan should have all the settings like for instance the temporary directory for

the scan jobs as the old one had.
If you want to use both versions in parallel you can start the copy also directly. May be you have to switch the language to some other language (s. *6.1.1 Language*) and back and may be you have to switch the scannerdriver to the virtuall scanner (s. *10.1.4.6 Virtual scanner*), and back so that Omniscan can find the belonging files at the new location.
Is the preservation of the settings not that important, or if you want to check the settings anyway it is recommended to install the new Omniscan into a different directory. The settings of the old version remain unchanged and the old version is kept running unchanged.

3 Introduction

3.1 Scan concept

The job administration is the central element of OMNISCAN 12.
Scanning is carried out in principle within a job.
All data relevant for a job are contained in a folder, which is called job folder. The name and the memory location of this folder can be selected by the user when creating a new job (for details see paragraph *5.2 Create new job).*
The job folder contains essentially two elements:
1. Images which have been created within this job.
2. The job file.
By opening the job file a job is completely restored with the state it has been closed for the last time (for details see paragraph *5.3 Open job*).
Among others the „clip settings“ are included in the job file (for details see paragraph *7 Job* Options).
OMNISCAN 12 gains all images from the clip settings. Usually all the images, which have been created by a scanner, are called „scans“. This indication is useful, because normally only **one** image is created with **one** scanning operation.
This indication is misleading with OMNISCAN 12, because **one** scan allows the creation of **as much as possible** different images. These images may be different in their motive, resolution, color depth, the file format they are saved with and the image processing tools, which are automatically applied to the image.
The selection of particular images and their special settings can be carried out before the scanning operation as well as also afterwards.
These options are achieved by the following concept.
The main window of OMNISCAN 12 displays either an empty book cradle or the image lately scanned, as soon as a job has been created or opened.

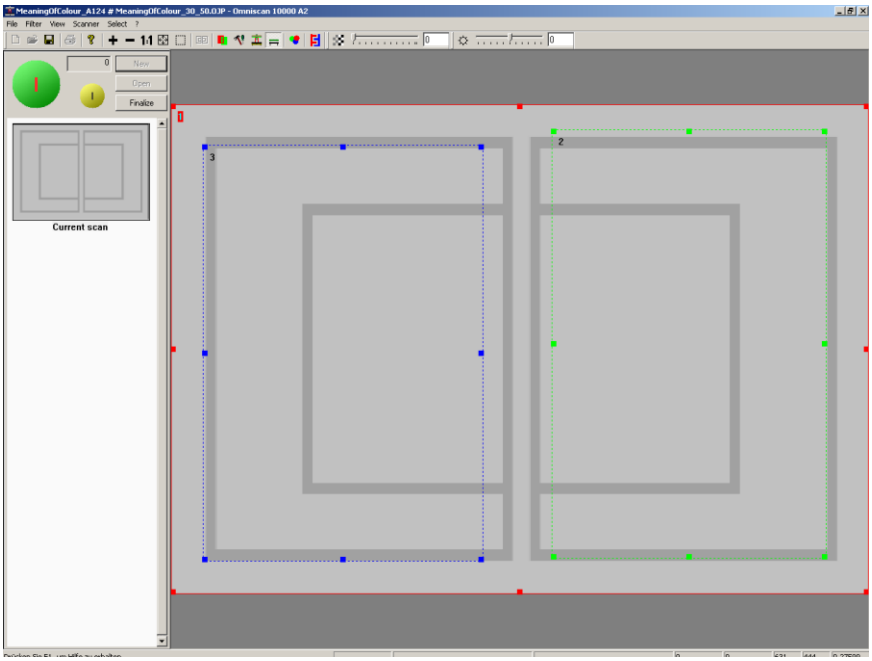


Figure 1: OMNISCAN 12 with an „empty book cradle“

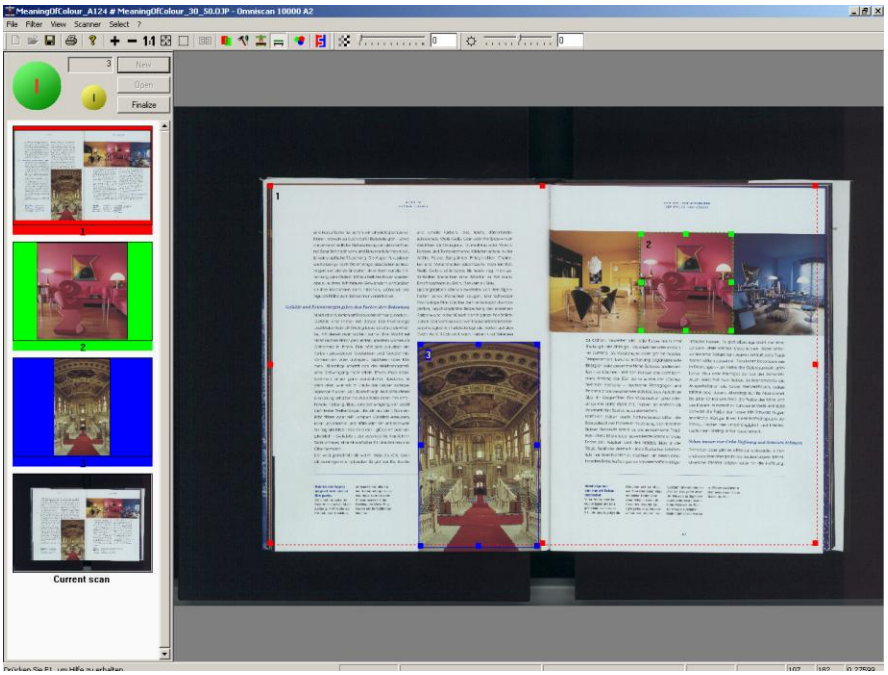


Figure 2: OMNISCAN 12 with a scan

The clip frames can be found in this image.
The actual scan forms the background, that means the image which is directly provided by the scanner. This full-frame image is created and being processed due to the settings of the scanner settings (see paragraph *7.2 Scan* settings).
The clips define the images in this full-frame image, which constitute the content of the scan job and thus the working result. If the clips are placed on the „empty book cradle“, they are applied for the next and all the following scans. If they are included in one scan, the corresponding images are always saved in the job folder. Each new clip and each new setting of an existing clip is immediately carried out. (More information about the clips see *5.6 Clips a*nd *7.1 Clip* settings*).* Therefore another scanning is not required. *(*For more details of the process of a scanning operation see *5.4 Scan).*

Each image belonging to a job is displayed in the thumbnail bar, even if having just been created by inserting a clip. With this thumbnail bar among others an image can be displayed in the main window by double-clicking. In this window it can then be processed as a usual scan, that is be processed and viewed *(for details see 5.8 Thumbnail* bar*).*

The new concept of OMNISCAN 12 requires habituation for all users, which have been working with a conventional scanning program until now. It will be paid off soon by gaining great efficiency with the creation of complex scan jobs.
OMNISCAN 12 makes possible a particularly efficient creation and processing of images.

The efficiency of OMNISCAN 12 gained by the scanning concept is still increasing by the fact, that it is possible to store the settings for the clips once created in a job including the image processing tools to be used and their parameters completely in an extra file, i.a. to export them (see *10.1.1.6 Save job settings* with*)*. It is possible to create as many job parameter files as you like, from which the suitable

file is selected then with each creating of a new job and thus the corresponding settings can be imported (see *5.2.3 Job* parameter*).*
After the images have been scanned and processed, OMNISCAN 12 offers the possibility to start a further processing with an automatic job termination. Here some generally available ways are possible, as e.g. the changing of the names of the image files. This is described in detail in *7.4 Job .* And it is possible there to select additional termination modules. For a description of these termination modules see *9 Job* Terminations*.)*

3.2 Structure of the manual

After an overview of the essential characteristics of OMNISCAN 12 in the preface the introduction explains the scan concept of OMNISCAN 12.
As with the complete manual the introduction often refers to other paragraphs of the manual, in which there is an explanation in detail or a completion of a mentioned item. These references are active on the screen, i.a. clicking to that reference results in a jump to the place of reference.
After the explanation of the scan concept and a list of the „system requirements“ with item 3, chapter *5* describes a *„Quick* Introduction*“*. Here the steps are explained one by one, which must be carried out to work with OMNISCAN 12.
After the quick introduction the set-up options of OMNISCAN 12 are explained systematically. These are the program-related settings in chapter *6 „Program* Options“ as well as the job-related settings in chapter *7 „Job* Options*“.*
Chapter *8* describes the image processing tools, at first those included in the „imaging kit“ (see *8.1 Imaging kit)* and then the additional modules (see *8.2 Optional image* processing module*)*.
Chapter 9 Job Terminations describes spezial functions which may be carried out at the end of a job.
Chapter *10 „User* Interface*“* explains the menu entries and the functions of the buttons of the tool bar.
Functions which can only be invoked with the menu entries and which have still not be described in the „quick introduction“, as for example printing, are explained in detail here.
Chapter *11 „Scanner-specific Options*“ describes the set-up options, which may be different depending on the scanner OMNISCAN 12 is being used with.
Chapter *12*“ is an indication to the copy protection of OMNISCAN 12.

This manual automatically opens as a PDF-file, as soon as key F1 is pressed or the menu entry „help“ has been clicked on. (Absolutely necessary: Acrobat Reader must be installed.)

4 System Requirements

4.1 PC

In order to use the software OMNISCAN 12 effectively, a PC is required, which meets the requirements of the scanner and the tasks to be carried out. Details are included in the separate qualification profile (TS-0404D (German) or TS-0404E (English)) for the PC.

4.2 Operating system

Windows XP x64

5 Quick Introduction

OMNISCAN 12 is job-oriented, i.a., all actions of the user are carried out in principle within a particular job[1], such as scanning, image processing and the set-up of parameters as resolutions, color depths etc.
Therefore after the program start of Omniscan it is necessary at first to create a new job or to open an already existing job.
Scanning is only possible after a job has been created or opened. If a job is opened, all settings for the clips, the corresponding scanner being connected and the job terminations are available.

5.1 Express mode

The dialog “express mode” will be opened after the program start of Omniscan 12 and after the exit of a job, if it is not switched off. It is possible to select one of up to twelve various job settings here (number and position of clips, resolution, color depth, filter stack etc.), which shall be used for the next job.

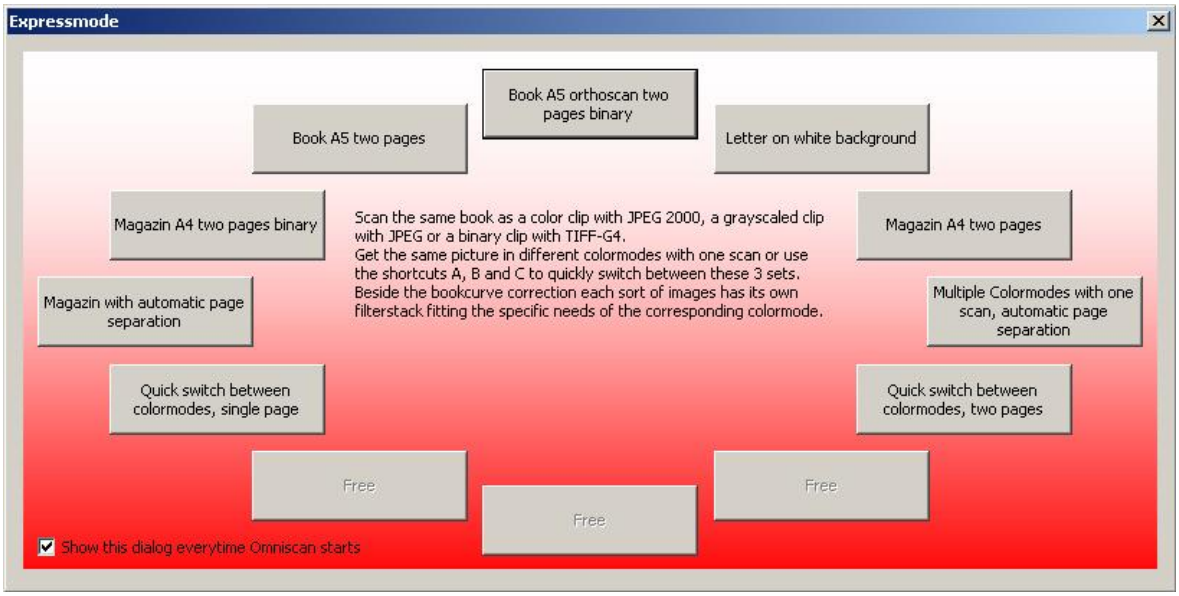


Figure 3: Dialog „express mode“

5.1.1 Display this dialog each time when Omniscan starts

The opening of this dialog after the program start of Omniscan 12 and after having left a job can be stopped, if the check mark has been removed here. Once the display has been switched off it is possible to switch it on again in the dialog “Settings – Omniscan extended” (s. *6.1.18 More Settings*).
In addition, the dialog can be opened again using the menu View, Express Mode Dialog or the corresponding Toolbar Icon.

[1] Since the job settings and the „filter stacks“ can be exported and imported, this does not mean that a new starting is required with each new job

5.2 Create new job

The dialog „new job“ is opened by selecting a button in the dialog “express mode”, the menu item „file - new“, by the button „new“ or by the buttons „scan“ and „rescan“, as far as there is no job opened.

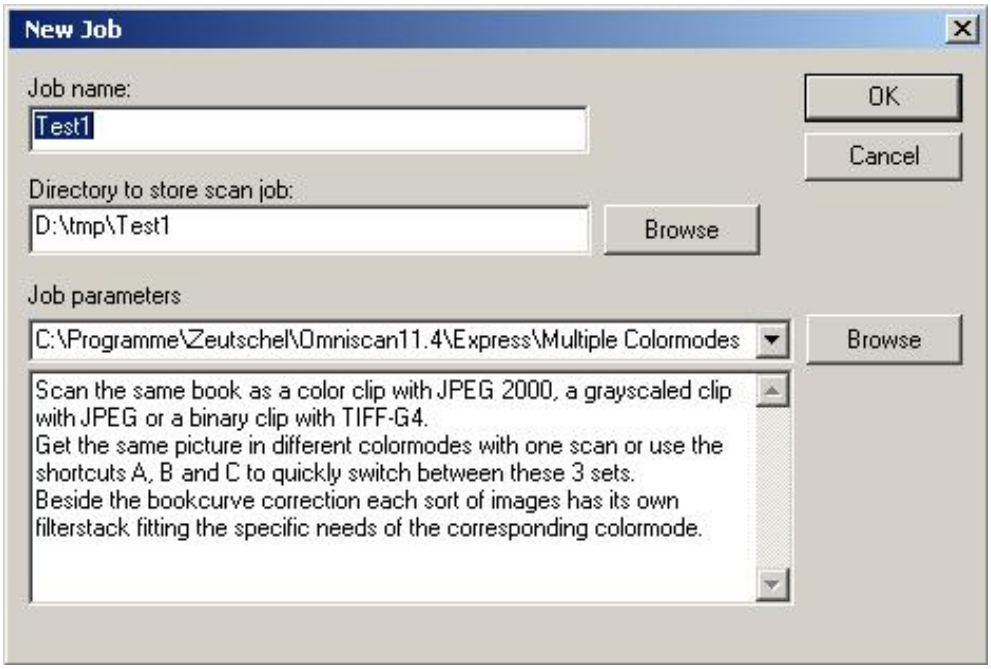


Figure 4: Dialog „new job“

5.2.1 Job name

Here the name of the job is entered. It will be displayed continuously on the title bar of the program (above left). The job name is also the name of the job file, in which all job parameters are saved and which allows to open a job again any time.
A default is offered which can be configured with the dialog „omniscan settings“ *(see 6.1 Omniscan).*

5.2.2 Directory to save the scan job:

Either the file path, in which the folder with the job files is saved, is entered here or it can be selected with the „browser“ and the button „search“. Then the name of this job folder must be attached to the end of the path.
Except of the job folder the folders of the path must already be existing, but they can be created with the „search browser“.
The job folder is created automatically.
A default is being offered, which can be configured with the dialog „omniscan settings“ *(see 6.1 Omniscan).*

5.2.3 Job parameters

Here the job parameters or the job settings are selected, with which the new job is being created.
(More information about job parameters see paragraph *7 Job* Options).
A presetting which can be set by the user is always offered, which can be taken over in a simple way. Additionally all job parameter sets which have been set and saved by users can be selected (see paragraph *10.1.1.6 Save job settings* with).
For this just select (click button „search“) the corresponding job parameter file (ending .ojp) (click to the button “search”) or select a parameter set saved in the express mode history (pulldown menu).

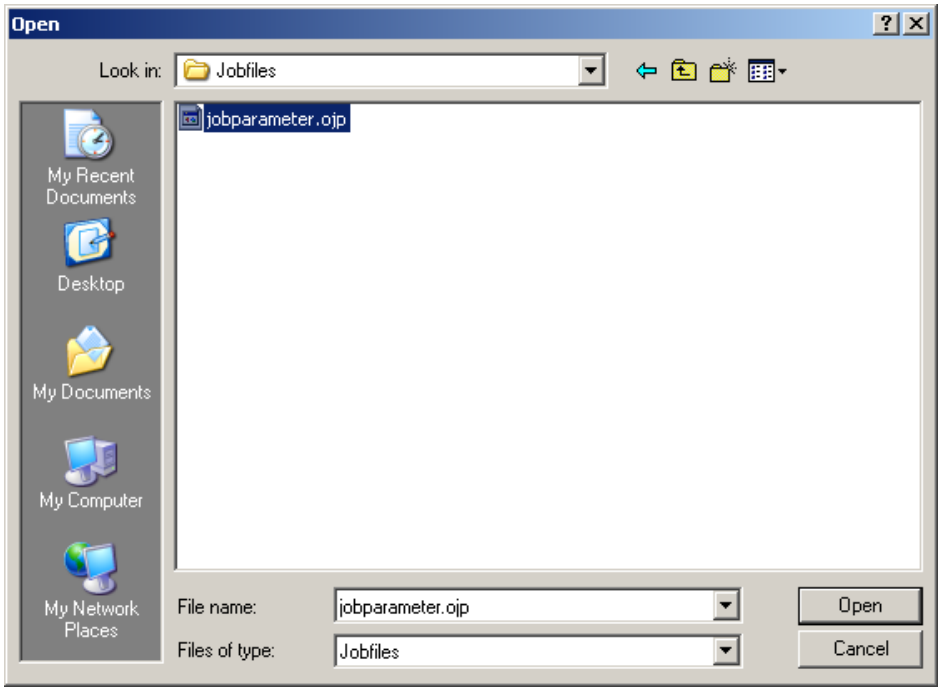


Figure 5: Selection job parameter set

As an alternative option it is possible to take over the job parameters of an existing job by selecting the corresponding job file here. The job parameters will then be extracted from this file.
It is possible to determine any „job parameter set“ as a default job set-up which is offered automatically (see paragraph *10.1.1.7 Save as default).*

5.3 Open job

An already existing job is opened by a standard dialog „open file“. As usual it can be found with the menu entry „open file“ and additionally with the button „open“. Merely the job file „jobname“.ojp“ must be clicked to and opened.
This file is in the job folder with the name selected when having created the job, in which also images and thumbnails of the job can be found.

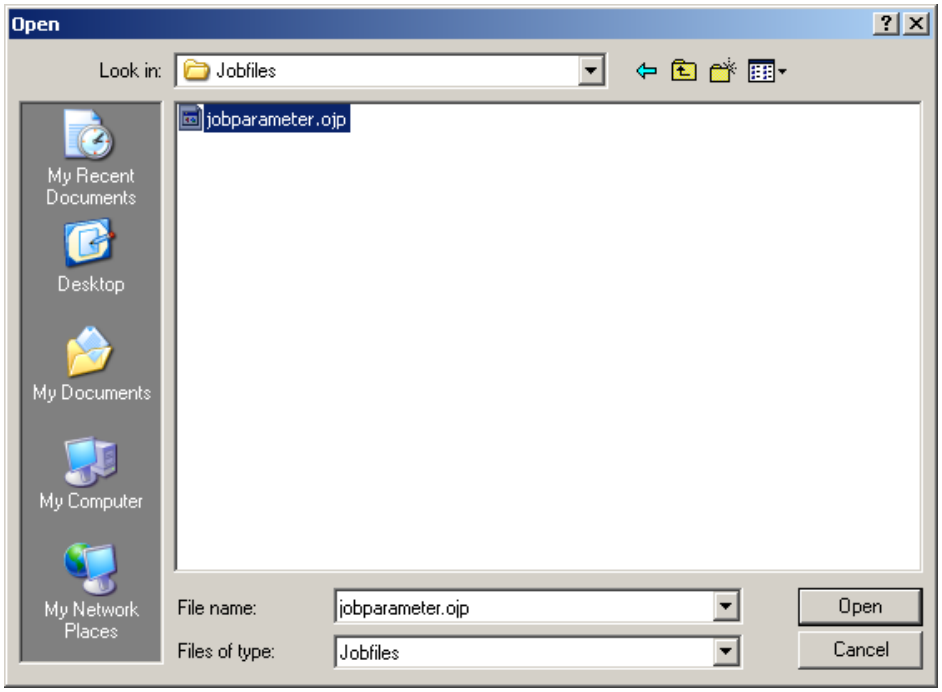


Figure 6: Dialog „open job“

Then the job is opened with just that status in which it has been saved or terminated for the last time.
This function can also be used for the „job recovery“, because the latest status can be restored even after an uncontrolled end of program.

5.4 Scan

If a job is opened, a scanning operation can be started in four different ways.
1. With the button „scan“
2. By the menu entry „scanner -> scanning“
3. By pressing the F2 key.
4. By using the footpedal (see installation instructions TS)

A scanning operation has the following components:
1. A scan is carried out according to the settings of the „scan settings“ (*see paragraph 7.2 Scan* settings).
2. The scanned image is displayed in the main window together with the current clip frames.
3. All existing clips are saved on the hard disk according to their settings with the indication „clip settings“ (see paragraph *7.1 Clip settings*).
4. For the complete scanning operation and all clips or saved images thumbnails are inserted to the thumbnail bar (see *5.8 Thumbnail bar*).
(Whether and how the main scan will be saved is determined by the selection of „memory behaviour scan“ (see paragraph *6.1.11 Create thumbnails*))

After the scanning has been carried out it is possible to edit the clips one by one (see paragraph *5.7.1 (image processing)...individually and manually after the scanning)* and to add clips (*see paragraph 5.6.1 Insert clips*). Newly added clips are realized immediately and saved on the hard disk. A rescan is not necessary.

5.5 Rescan

A rescan overwrites the last scan and all the clips gained from that, but otherweise has the same functionality as the scanning itself. A rescan can be initiated in three ways.
1. With the button „rescan“
2. By the menu entry „scanner-> rescan“
3. By the F3 key.

5.6 Clips

Because the desired images are always gained from a complete scan in OMNISCAN 12, the clips are like that what is indicated usually with the term „scan“. After each scan these „individual scans“ are immediately available on the hard disk.
Therefore at least one clip must have been selected with each scanning operation.
Many clips with any combinations of parameters can be selected, which are all realized by one scanning operation *(see 7.1 Clip* settings*).*
For each clip frame displayed in one image an image corresponding to the clip has been saved on the hard disk in principle. This image is displayed as a thumbnail together with all other images of the current scan job on the thumbnail bar (see *5.8 Thumbnail* bar).

5.6.1 Insert clips

The inserting of clips is always carried out in the main window. There are two starting situations possible:
1. Immediately after a job has been created or opened a clip can be inserted in front of the background of an empty book cradle. Only the clip settings are saved and they are only used with the next scan.
2. If a complete scan is displayed in the main window, clips may be inserted directly to this scan. The images corresponding to the new clips are saved immediately and they are displayed as a thumbnail. Therefore a new scanning is not necessary.
(Exception: Settings for the new clip have been selected which do absolutely not allow a conversion from the existing scan or only with suboptimal results. The former is e.g. the case, if a gray-level scanning has been carried out but the clip is desired as a color image. The second is the case if a higher resolution has been selected for the clip compared to that which has been used for the scanning, and a complete scan with a higher resolution is possible).
The way of inserting a new clip is the same with both cases:
1. By clicking to the right mouse key while the mouse cursor is either in the display area of the „empty book cradle“ or of a complete scan a context menu appears with the entries „new“, „delete“ and „settings“.

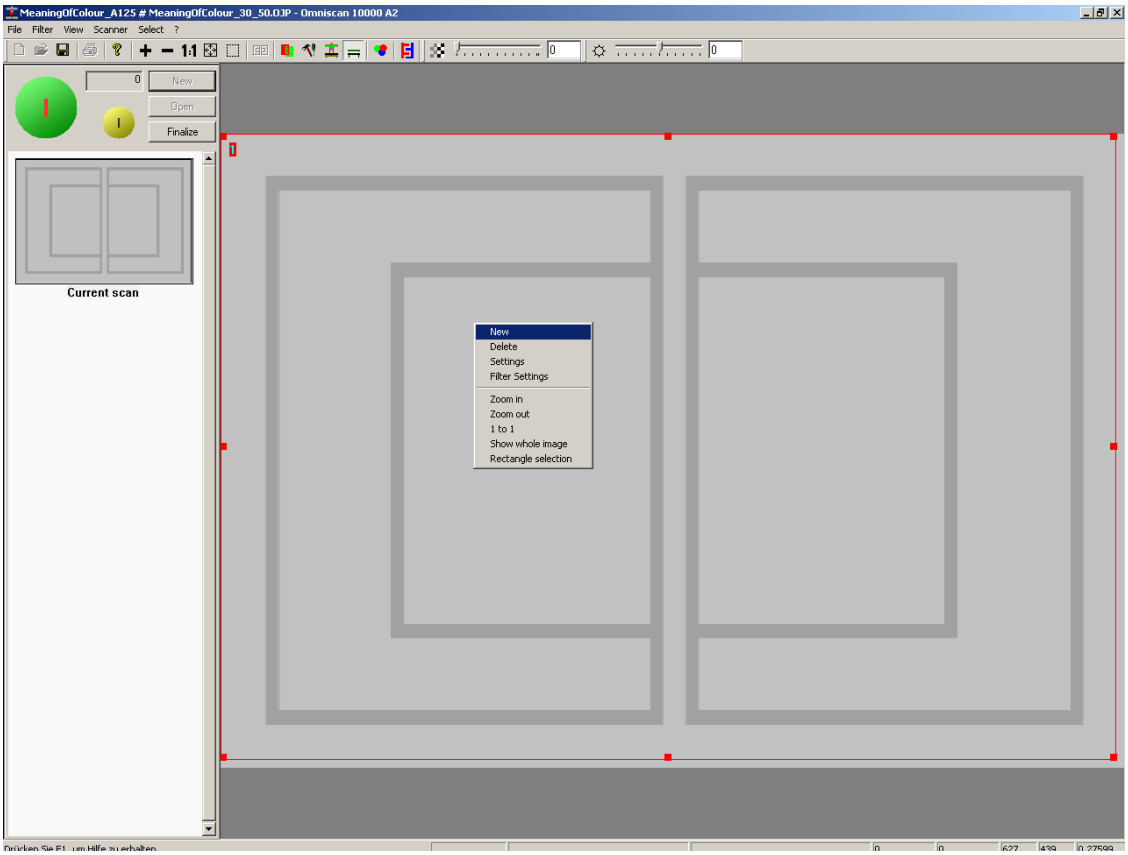


Figure 7: Insert clip in front of empty book cradle

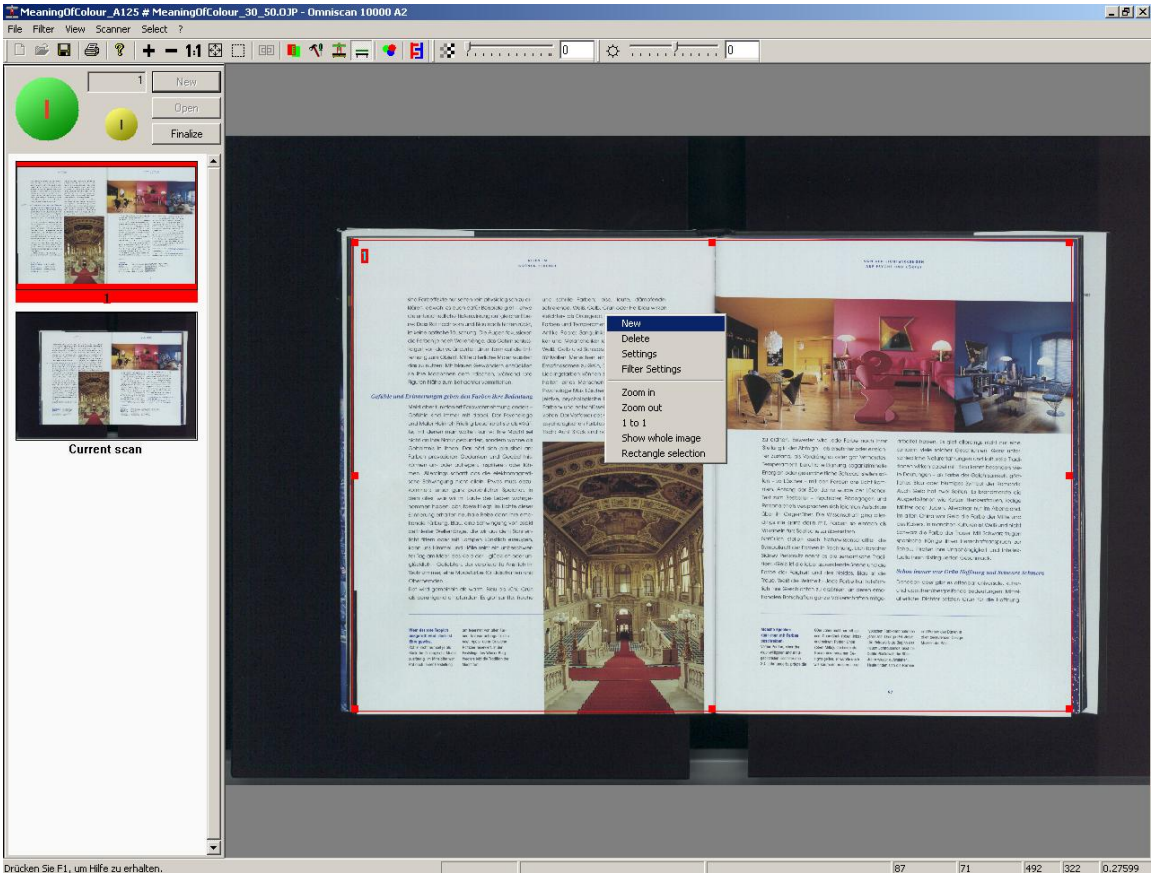


Figure 8: Insert clip to a displayed complete scan

After having clicked to the context menu entry „new“ the index card „clip settings“ of the dialog „settings“ is displayed.
Here the desired settings can be carried out now (see paragraph *7.1 Clip* settings). But it is also possible to take over the presettings and to determine then the position and size of the clip graphically.
As soon as the dialog „settings“ is left, the new clip frame is added to the main window. In case that a scan is already displayed in the main window the new image is immediately written down to the hard disk and it will be displayed as a thumbnail.

Additional you can create a new clip in the clip settings dialog with the button „New clip“ (s. *7.1 Clip* settings). This new clip will be added as last clip to the list and created as copy of the selected clip. The settings dialog to this new clip will be displayed and offers changing. If you want to change size and position of this clip graphically this can be done right after closing the settings dialog.

5.6.2 Delete clips

At first the clip to be deleted must be activated (see *5.6.4 Activate clip* frame*).*
By clicking to the right mouse key while the mouse cursor is in the main window with the clip frames, the context menu with the entries „new“, „delete“ and „settings“ is displayed.
After „delete“ has been selected the following dialog is opened:

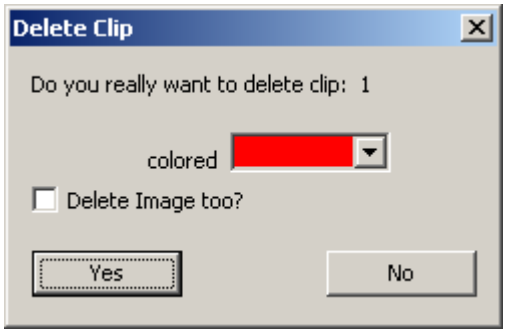


Figure 9: Dialog „delete Clip“

5.6.2.1 Clip number

Here the number of the clip is displayed which will be deleted.
(This is the clip which has been active lately. Because usually a clip becomes active automatically if the context menu is opened in its field, this is the desired clip in most cases. Therefore the activation of the clip to be deleted is not obligatory before the context menu is being opened. But because it is confusing when several clips are laying one above the other, the previous activation of the clip is recommended nevertheless).

5.6.2.2 With the color

To make clear which clip frame will be deleted the color of the corresponding frame is displayed here.

5.6.2.3 Also delete corresponding image

If the context menu with the entry „delete“ has not been opened being in front of the background of an empty book cradle but within a scan, there will be an image belonging to this clip *(see paragraph 5.6 Clips).*
If the check mark has been placed here, this image will be also deleted. Otherwise the deletion of the clip will be effective only with the next scan.

5.6.2.4 Yes

By clicking to the button the deletion will be carried out.
Then the clips will be numbered again.

5.6.2.5 No

Here the deletion can be stopped.

5.6.3 Edit clip settings (graphically)

Paragraph *7.1 „Clip settings“* describes in detail the way of carrying out the clip settings.
Additionally the placing and the size of the clips can be also changed graphically.
At first the clip must be activated whose position or size is to be changed (see *5.6.4 Activate clip frame).*
The activated clip can be changed in two ways:

1. Position
If the mouse cursor is put into the area of an active clip, it changes to a „cross“.
If now the left mouse key is pressed permanently, the complete clip can be moved.
By letting off the left mouse key the clip is placed as it is displayed with the fine frame carried along.

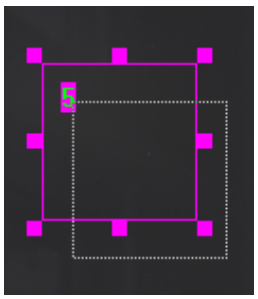


Figure 10: Move clip

The behaviour of the clip can be set as soon as it meets the border of the image (see paragraph *6.1.18.2 Size of a tracker handle (*in pixels*).*

2. Size
Each clip frame altogether has 8 „pointers“ in each corner and in the middle of each side. Their position and size can be set. See paragraphs 6.1.18.4 “Show tracker handles outside (instead of inside)” and 6.1.18.2 “Size of a tracker handle (in pixels”.)
If the mouse cursor moves over these pointers, it will be changed to a double arrow which displays to what direction the frame can be moved at this position by pressing the left mouse key.
By letting off the left mouse key the size of the clip is changed so as it is displayed with the fine frame carried along.

The change of the size and position of a clip is immediately realized, i.a. the new image is immediately saved and it is displayed on the thumbnail bar.
A new scanning is not necessary.

5.6.4 Activate clip frame

An activated clip is highlighted by an uninterrupted frame. All other clips have a hatched frame. Additionally the number of the active frame is displayed in front of the background of the frame color, the numbers of the other frames have no background.
In the following figure the active clip with the number 4 is enclosed by an inactive clip.

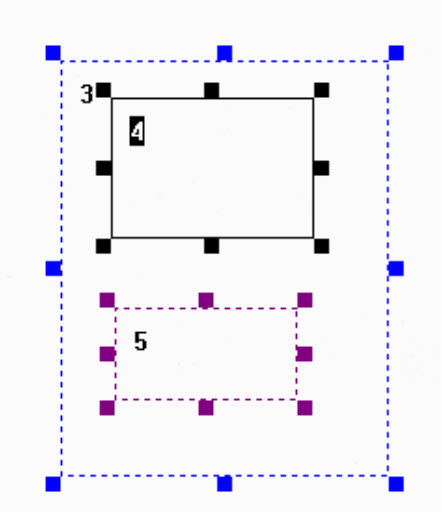


Figure 11: Active and inactive clips

A clip gets active when the left mouse key is clicked while the mouse cursor is within the clip.
If the area of the mouse cursor is enclosed by several clip frames, they will be activated successively.

5.7 Image processing

Scanned images can be processed with a number of image processing tools. Possible are e.g. cutting, sharpening with different methods, smooth or a book fold equalization. Thus e.g. the readability or the brilliance of an image can be improved, noise be reduced or the efficiency of the application of a text recognition software (OCR) be increased.
(An enumeration and description of the processing tools available in OMNISCAN 12 can be found in paragraph *8 „Image* Processing Tools*“.)*
The processing tools can be used with OMNISCAN 12 in the following ways:

5.7.1 ...individually and manually after the scanning

i.a. for each individual image the image processing tools can be used by direct selection.
All images produced within a job are displayed on the right side of the program surface with thumbnails (see *5.8 Thumbnail* bar).
After having clicked to a thumbnail the corresponding image is displayed in the main window.
(For the setting of the display in the main window see *10.1.3 Menu* overview*).*
The image displayed in the main window can be processed. For this purpose several processing tools are available with the menu entry „processing“.

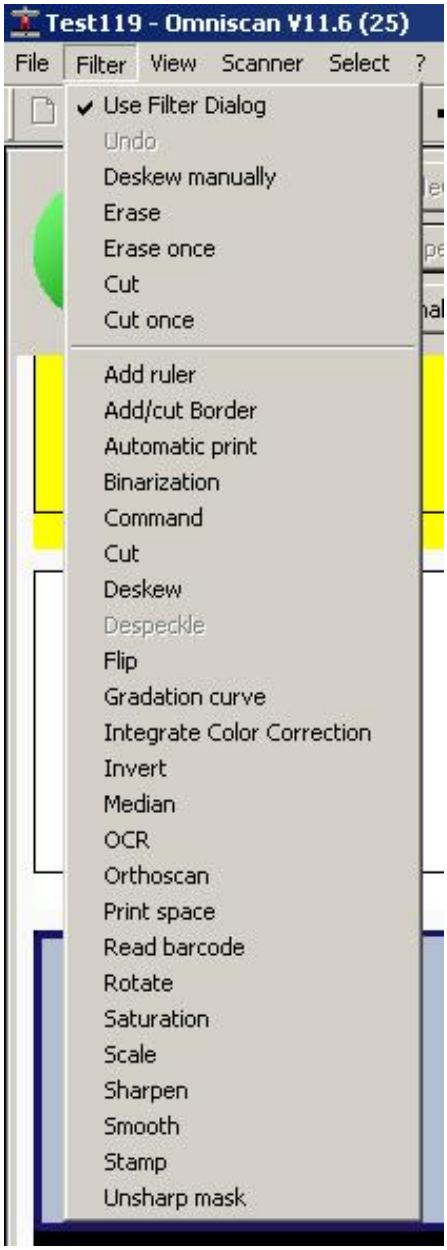


Figure 12: Menu „image processing“

If the option „use the image processing dialog“ has been activated right above in the menu entries, the affiliated set-up dialog is displayed after an image processing tool has been selected *(see paragraph 5.7.5 Set-up dialog for* image processing tools*).*
The processing is carried out when the set-up dialog is left with „OK“.
If the option „use the image processing dialog“ has NOT been activated, an image processing tool selected in the menu bar is immediately applied to the image in the main window according to the lately selected settings.

5.7.2 ...after scanning to batches and manually

It is possible to make out a list with image processing tools for each clip in the clip settings. This selection is applied to the corresponding clip immediately, i.a. the image being processed is immediately saved and displayed as a thumbnail.
(For more details see paragraph 7.1.33 Image processing*).*

5.7.3 ...during scanning to batches and automatically

A list with the image processing tools can be made out for each clip in the clip settings. This selection is automatically applied to the clip with each following scan.

5.7.4 ...during job termination to batches and automatically

NOTE: Not yet realized with Omniscan 11.0.!
It is possible to make out a list with image processing tools for each clip in the clip settings. These settings are automatically applied to all clips with the same clip number during the job termination, provided that the option „directly after the scan...“ is not activated.
(For more details see paragraph 7.1.33 Image processing*).*

5.7.5 Set-up dialog for image processing tools

Image processing tools offer different set-up options to determine how the tool can be applied exactly.
OMNISCAN 12 offers a similar set-up dialog for all image processing tools.
It is explained in the following by the example „sharpen“.
(An enumeration and description of the set-up options also displayed in this dialog respectively and of the processing tools available in OMNISCAN 12 can be found in paragraph *8 „Image* Processing Tools*“*.)

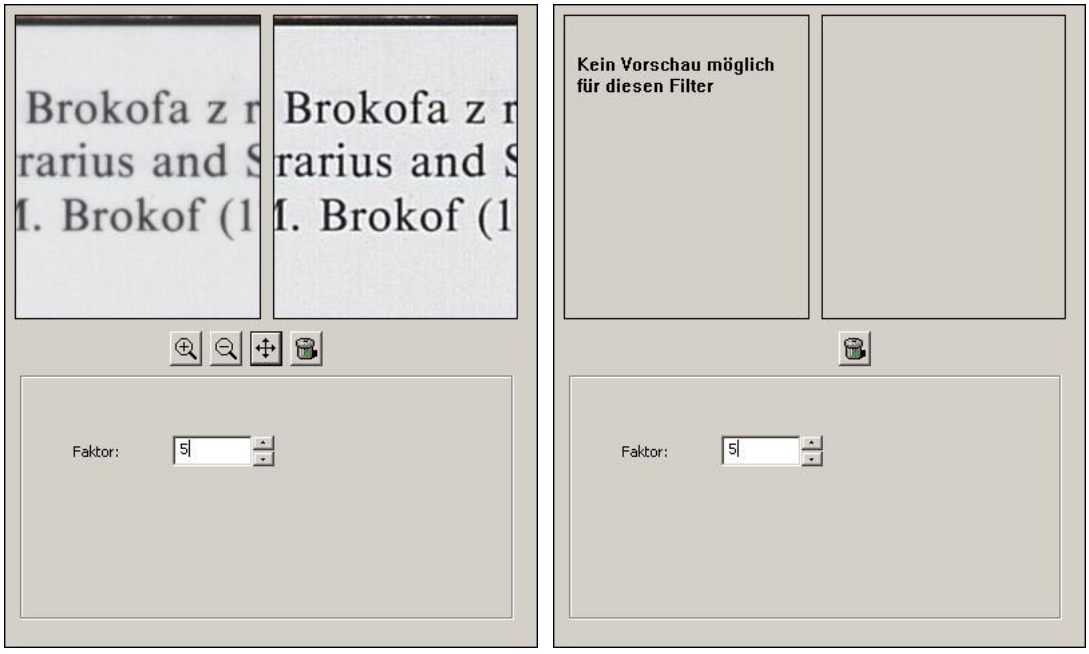


Figure 13: Set-up dialog „image processing tools“

The settings dialog of the filters is divided into three parts.
In the upper third you will find two windows. If a preview is available in the left of these windows a part of the image in the main view is visible. The right window will show this part after processing with the selected filter and the current settings from the dialog. If no preview is possible both of these windows are empty.

The displayed clip can be selected arbitrarily in two ways:
1. By moving the image.
   As soon as the mouse cursor has been moved to the left image, that is the view of the current version, it takes the form of a hand. In this position the mouse cursor is fixed on the image by continuously pressing the left mouse key.
   The clip is moved then by moving the mouse cursor. The movement is done simultaneously with both clips.
   The image processing tool is applied to the preview image when the left mouse key has been let off again.

2. By the navigator.
   See below (Button navigator)

The third below always displays the entry fields which are used for the setting of the corresponding image processing tool.
(Entry fields and meaning of the parameters are described in paragraph *8 „Image* Processing Tools *“*).

The count, position and meaning of the buttons in the middle third depend on the selected filter. Here only the buttons you can find together with each filter are described.

Zoom in: If a preview for the current filter is available clicking on this button shows a smaller part of the image in bigger magnification.

Zoom out: If a preview for the current filter is available clicking on this button shows a bigger partof the image in smaller magnification.

Navigator: If a preview for the current filter is available the displayed part of the image can freely be choosen with the navigator.

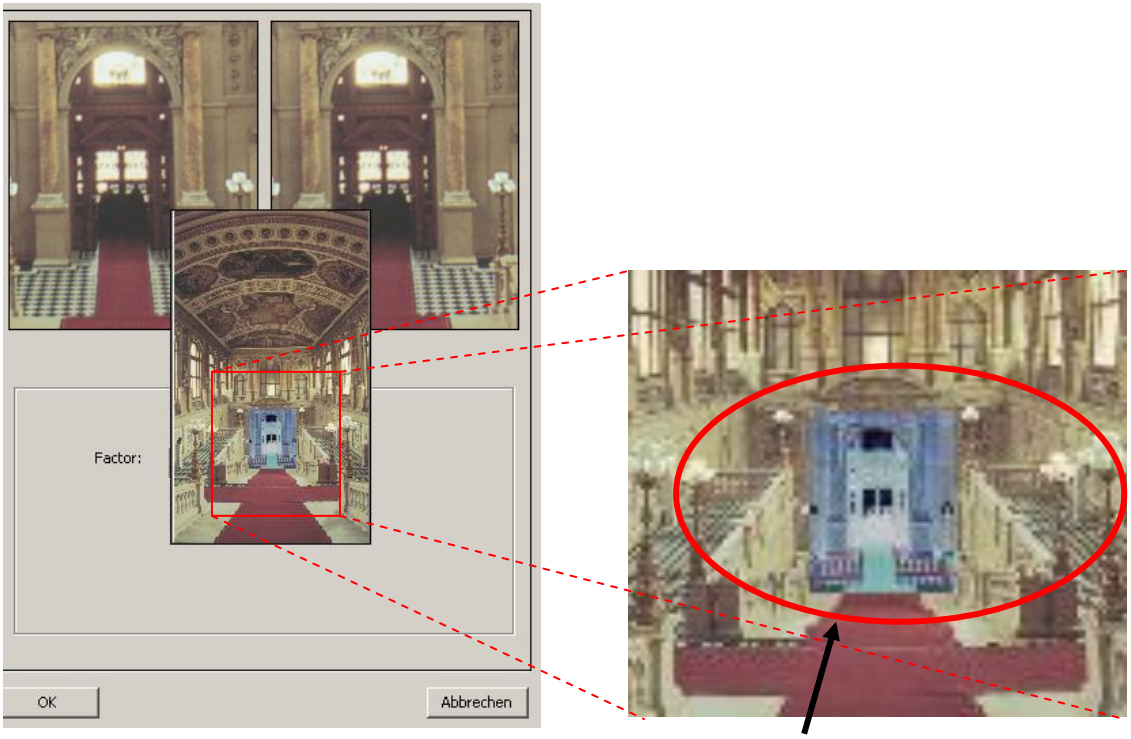


Figure 14: Navigator „image processing“ **Inverted image clip**

With continuous clicking with the left mouse key to the button with the „crossed arrow“ in the middle of the image processing dialog the image to be processed is displayed in a smaller total view.
In the middle of the image below the mouse cursor the clip is displayed invertedly, that is displayed in the preview.
This clip can be arbitrarily moved now, as long as the left mouse key is kept pressed. By letting off the mouse key the navigator disappears and the preview shows up again.

Waste paper basket: The parameters of the current filter can be reset to a suitable start value for further optimization.

5.8 Thumbnail bar

All images belonging to an opened job are displayed in a thumbnail bar. This bar allows an overview of all images already created. By clicking to a thumbnail with the left mouse key the image is displayed in the main window and it can then be processed (see *5.7.1 (Picture processing)...individually and manually after the scanning).*
Viewing an image in the main window is supported by display functions (see *10.1.3.1 to 10.1.3.7)* and the navigator *(see 10.1.3.11 Navigator).*
The clips of the current scan are displayed in front of the background of its frame color.
The images in the thumbnail bar are displayed with a pale gray background, except the clip of the current scan. The background color of the clips of the current scan is identical with the frame color of the corresponding clip.

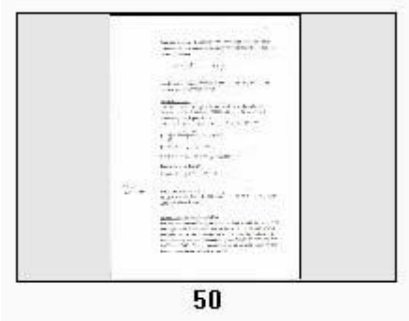


Figure 15: non-current scan

Figure 16: current scan

The background color of a thumbnail changes to a dark blue, when the mouse cursor is being moved over the thumbnail.

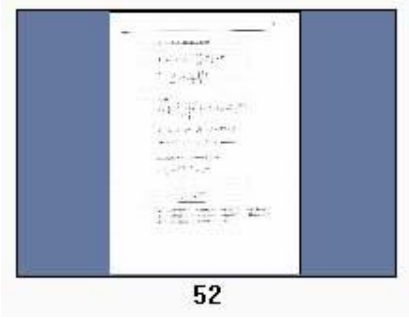


Figure 17: Mouse not over the current scan

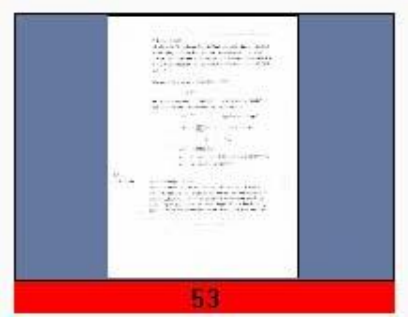


Bild 18: Mouse over current scan

By clicking to a thumbnail using the left mouse key and the resulting display of the image in the main window the background color of the thumbnail to a light blue. In addition the thumbnail gets a pink frame. By this it is indicated as selected.

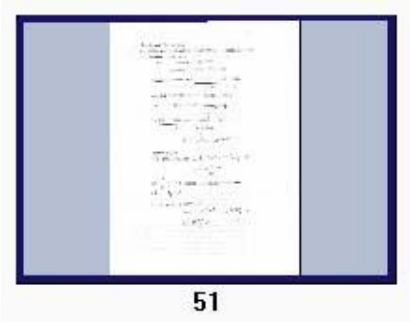


Figure 19: Selected non-current scan

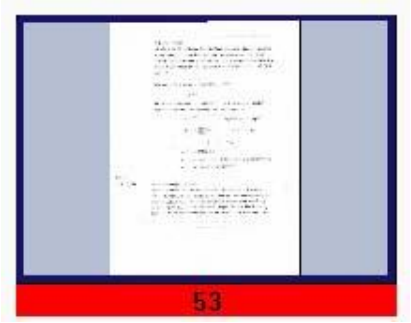


Figure 20: Selected current scan

The selection of other thumbnails is possible by pressing the SHIFT key or the STRG key and the left mouse key simultaneously.The current scan cannot be selected. By clicking to the current scan an existing selection will be cancelled.

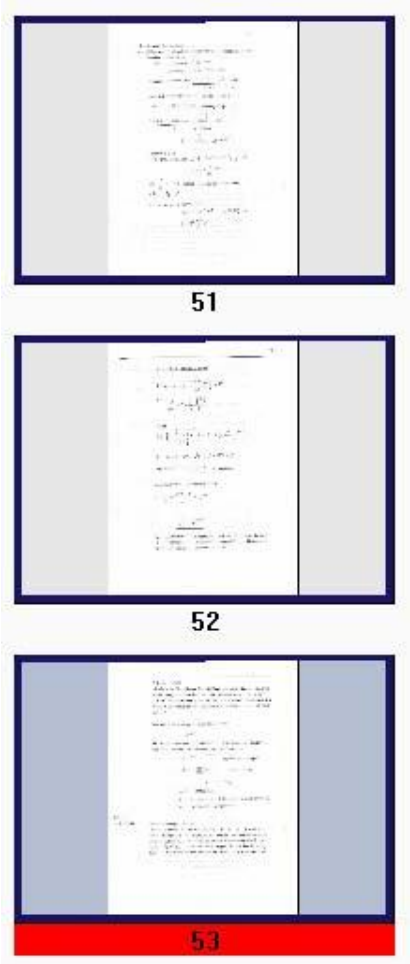


Figure 21: Multiple selection SHIFT key

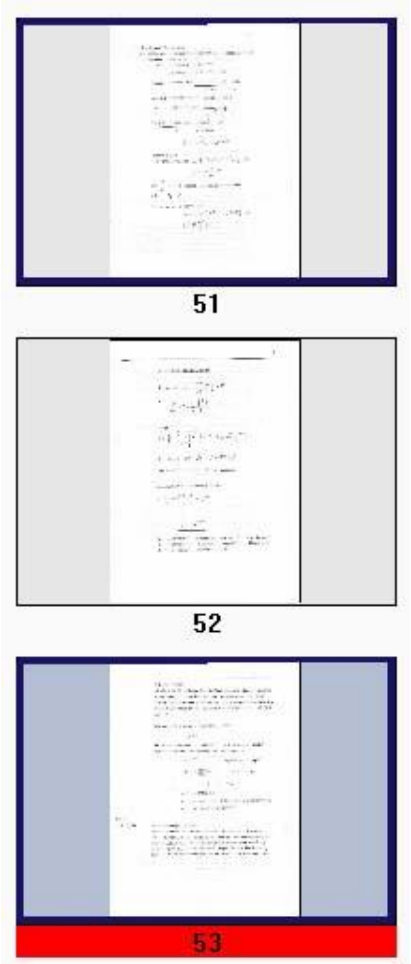


Figure 22: Multiple selection STRG key

5.8.1 Placing of the thumbnails

As a default new images are always inserted to the lower end of the list.
But the position, to which newly scanned images are inserted, can be selected arbitrarily.
For this purpose it is necessary to click with the left mouse key into the field between the two thumbnails where the new image or the new images shall be inserted. After that a thumbnail with an „empty book cradle“ is inserted at the desired position.
If the option „Display inserted image“ is activated (*see paragraph program settings 6.1.6 Display insert image*), the placing of the new clip is supported, because the distance between both thumbnails is automatically enlarged and it is provided with an icon, if the mouse cursor is moved to the field between the thumbnails.
It is possible to drag images from another job or an other source into the current job. Just drop them into the thumbnail bar. The image (or the images) are inserted into the job at the position of the insert marker. In this case no meta data entry is possible.

5.8.2 Moving the thumbnail bar

The thumbnail bar can in principle be moved arbitrarily, e.g. also to a second screen.
The thumbnail bar can be moved by clicking with the left mouse key to the field above the thumbnails. The field can be moved to an arbitrary position with the mouse key kept pressed.
If the new position is placed on the right or left border of the program surface, the bar is „docked“ in the main window, i.a. flushly in line with the borders.
(It may occur after the docking that the display of the bar does not make use of the complete height available. This can be corrected, if the reappearing of the program surface is forced by a single change of size, which is cancelled immediately again by using the reduction or full screen button right above in the corner of the title bar).

5.8.3 Context menu

After having clicked to a thumbnail with the right mouse key a context menu is displayed.

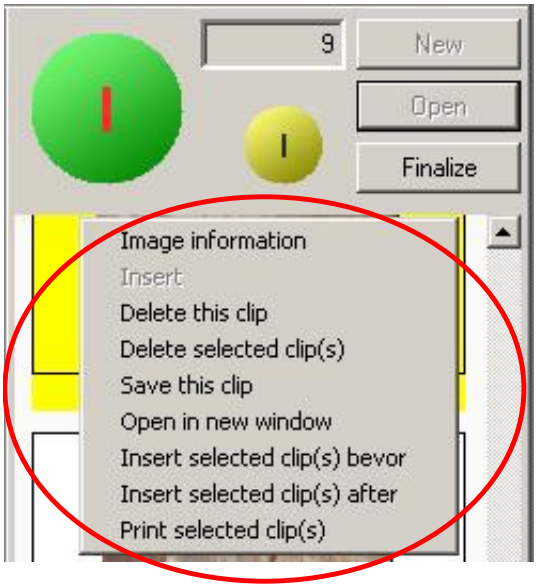


Figure 23: Context menu „thumbnail“

5.8.3.1 Image Information

The following dialog with image information will be opened.

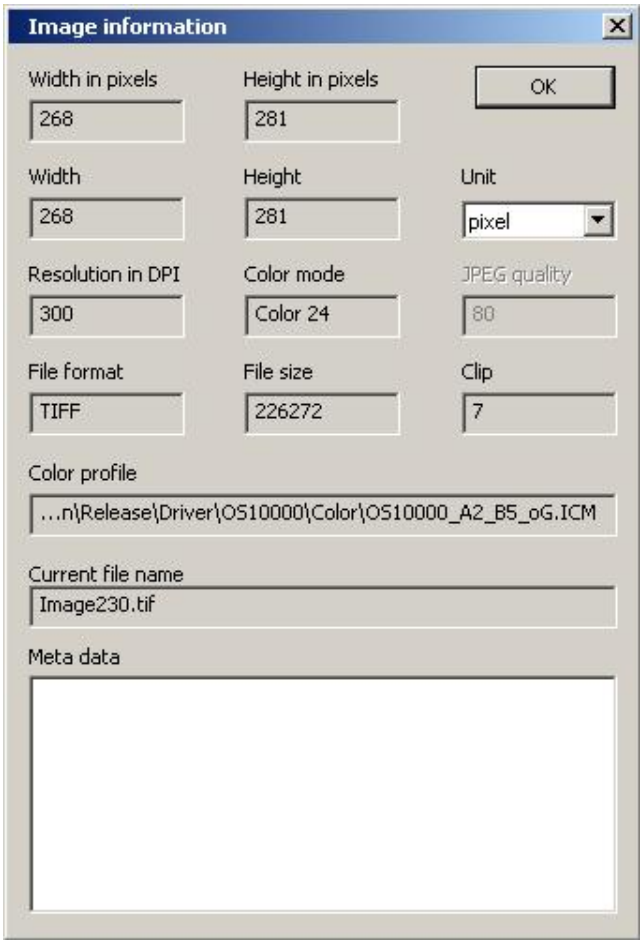


Figure 24: Image information

You can see this information even faster if you click on the thumbnail of this image with middle mouse button (and hold it). The dialog is dismissed automatically if you release the mouse button.

5.8.3.2 Insert.

N.N.

5.8.3.3 Delete this image

Deletes the image over which the mouse cursor is.

5.8.3.4 Delete selected image(s)

Deletes all selected images.
(An image which has been selected and which is currently displayed in the main window may also be deleted with the context menu which can be invoked in the main window using the right mouse key.)

5.8.3.5 Save this image

Opens the file memory dialog and thus offers the option to save the image, over which the mouse cursor is, additionally to an arbitrary directory.
(The memory dialog can also be invoked with the context menu which can be invoked with the right mouse key in the main window, if an image (and not the main scan with the clip frames) is displayed there.

5.8.3.6 Open in a new window

Displays the image belonging to the thumbnail in an additional window.
Then the clip from which the image has been created will be considered. An additional window can be opened for each clip. Images which may be assigned to the same clip will always be displayed in the same additional window (the image selected lately will always be displayed.) After a scan or rescan the clip formed of the current scan will be displayed in each opened additional window.

5.8.3.7 Insert selected image(s) before or behind

All selected images will be moved before or behind the image, over which the mouse cursor is, with “insert selected image(s) before” or “insert selected image(s) behind”.

5.8.3.8 Print selected image(s)

Prints all selected images.
The printing dialog will be displayed before the first image is printed (*see 10.1.1.11 Print...)*. The active settings there will be used for all images to be printed.

6 Program Options

Program options are settings which are valid with all actions of the program, i.a. which are not job-specific.
These settings can be carried out even then, if no job is loaded.
The corresponding index cards „omniscan“ and „color management“ are available either with the context menu „settings“ and the selection of the corresponding „index card“, or with the menu „view“ and the selection of the entry there.

6.1 Omniscan

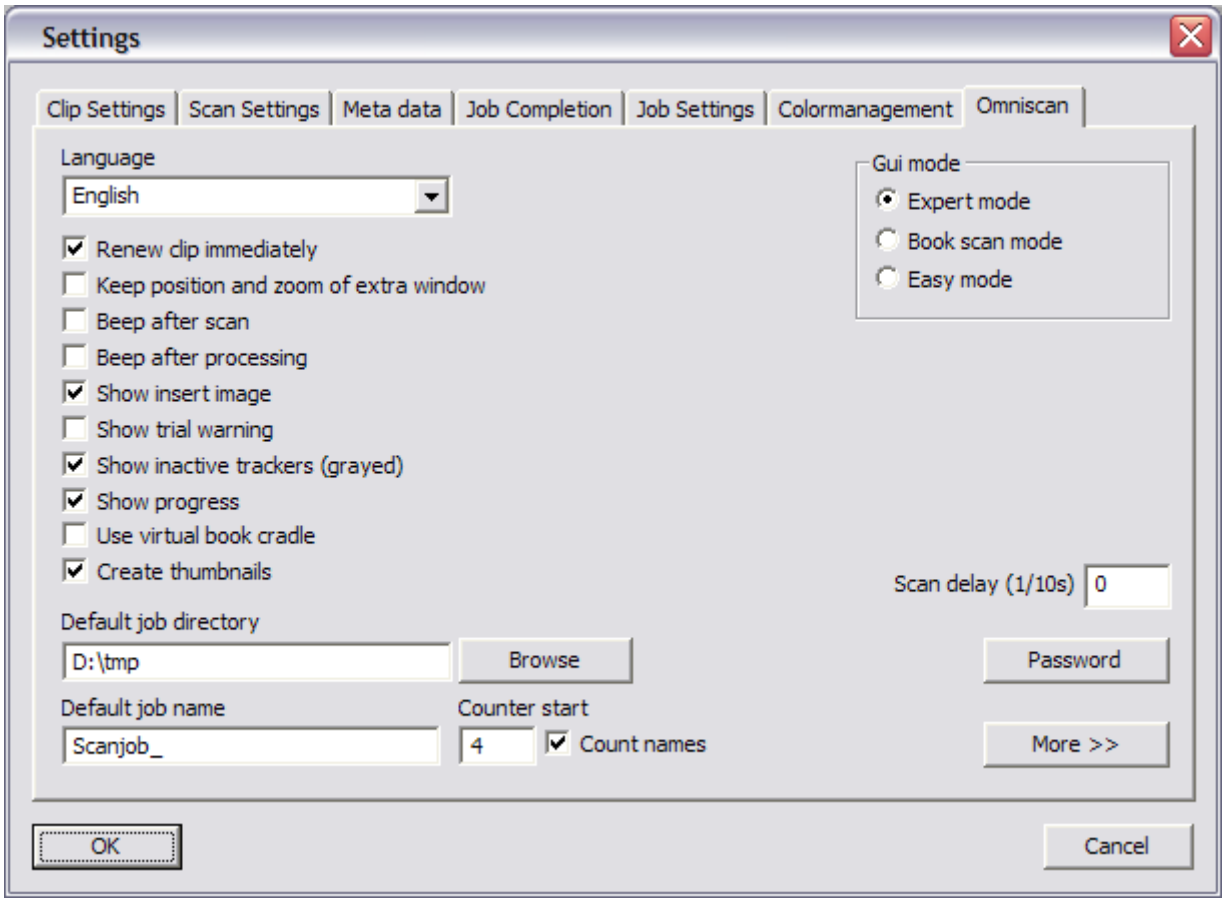


Figure 25: Index card „omniscan“

6.1.1 Language

Here the language settings are made. They will be only effective after a restart of OMNISCAN 12.

6.1.2 Create clip immediately again

If a check mark has been set here, all modifications which have been made with the clip settings are realized immediately. If for example the frame is moved or the resolution is changed, the image corresponding with the new frame will be saved immediately and the display in the thumbnail bar will be updated.
If no check mark has been set here, the modifications of the clip settings are applied to the saved image only after having clicked to the scan button, the color of which changes to orange after the first modification. A scan will only be possible after this update has been carried out. Alternatively the rescan button can be used

to apply the changed clip settings to a rescan operation and therefore to reject the current scan completely.

6.1.3 Remember position and zoom of the extra window(s)

If some additionaly windows are opened using the thumbnail contect menü „Open in new window“ (see Chapter *10.4 Context menu thumbnail bar*) information about position, size and zoom of this window are saved together with the job. The windows will be restored after the next scan.

6.1.4 Beep after the scan

After the scan a tone is sounding.
For changing the standard tone an event group „Omniscan“ can be found at „characteristics of sounds and audio devices“ (start, settings, system control, sounds and audio devices). There the tones of ScanComplete, Processing Complete (*see 6.1.5 Beep after image processing*) and StartScan (if activated in the Omniscan.XML) can be set.

6.1.5 Beep after image processing

After the image processing a tone is sounding (see also *6.1.4 Beep after the scan*).

6.1.6 Display insert image

All images of a scan job are displayed in a thumbnail window (see *5.8 Thumbnail* bar*).*
In this window the position can be selected to which the next clip shall be inserted.
For this purpose ist is necessary to click with the right mouse key in the field between both thumbnails. Then a thumbnail with an „empty book cradle“ is inserted at the desired position.
If „display insert image“ is activated, the placing of the new clip is supported by the automatic increasing of the distance between two thumbnails and its providing with an icon, if the mouse cursor is moved to the field between the thumbnails.

6.1.7 Display test period warning

If the check mark is set here a message is issued with each start of OMNISCAN 12 during the “trial period”, that the dongle unlocks all options for a trial period or that after this period has expired the not unlocked options will be blocked.

6.1.8 Display inactive frames

Inactive frames for which no image is generated, will be displayed corresponding to this setting either not at all or with a grey frame.

6.1.9 Display progress

If a check mark is set here, the progress of the current step in the status bar will be displayed.

6.1.10 Use the simulated book cradle

If only a clip is scanned instead of the complete scan area, there are two display options of the not scanned area.
1. A virtual book seesaw is displayed. It is possible then to move the clips just as it is possible with a frame scan.
2. Only a black frame is displayed, which makes clear the position of the clip on the book seesaw. But a moving of the frames beyond the actually scanned clip is not possible. This option is recommended when the size of the scanned images reaches the limit of the PC.
If a check mark has been set, the first option will be used.

6.1.11 Create thumbnails

If no check mark has been set here, only the affiliated file names will be displayed instead of images in the thumbnail bar. The setting or removing of the check mark is only possible if no job is loaded

6.1.12 Default job directory

Here the job directory can be set, which will be offered as a default any time a new job is created *(see 5.2 Create new job)*. The path can be entered into the text field or it can be selected after having clicked to the button „search“.

6.1.13 Default job name

Here the job name can be entered, which will be offered as a default any time a new job is created *(see 5.2 Create new job)*.

6.1.14 Counter start value

Here a number can be entered which is automatically attached to the default job name and which is incremented then, if the option „increment name“ (see *6.1 Omniscan)* is activated.

6.1.15 Increment name

Here the option can be selected that an incremented number is attached automatically to the default job name starting out from the entry „counter start value“ *(see 6.1 Omniscan)*.

6.1.15.1 Mode

Here you have to choose between three different modes. They differ in the amount of usable functions and settings of Omniscan.

6.1.15.2 Expert Mode

The Expert Mode is intended to be used by experienced users who want to use all functions and posibilities of the current Omnsican installation. If you find subjects in the manual you can't see in the Omnsican this mode has to be used.

6.1.15.3 Book Scan Mode

The Book Scan Mode is optimized for quick and easy work with books. It covers the same functions as the easy mode does and additionally the configuration and entry of meta data (*7.3 Meta data*) can be used. Also the menu entry „BookMode" (*10.1.6 Menue Book Mode*) and some new buttons in the toolbar (10.5 Symbol bar (toolbar)) becomes visible. You should only switch into the bookmode without a job loaded since some filters and clips have to be switched/defined for correct working. This is done automatically while creating a new job in the bookscan mode. If for some reason you want to switch a loaded job into the book scan mode you have to have two clips that will be used for the left and right side of a book.

6.1.15.4 Easy Mode

This mode is used to quickly start working without having to deal with many mostly irrelevant settings. In the easy mode all functions and settings not necessary are hidden and uses standard or automatically choosen values. If for some reason it becomes necessary to manually adapt some of these settings you can do that by temporarily switching into the expert mode. Also under the thumbnails you will find the filename of the image instead of the consecutive number found in the expert mode.

6.1.16 Scan delay

Here a time period can be indicated with tenths of a second, by which a scan will be started delayed after having been triggered by mouse click, keyboard, foot pedal or „continous mode".

6.1.17 Pass word

The button opens the dialog, in which a pass word can be deposited, which must be entered before the changing of settings is possible.
The moving and activating or deactivating of clips is furthermore possible without pass word.

Figure 26: Dialog „Password“

If the pass word has been forgotten, please consult the support department.
The button „password“ will only be displayed if there is no user group „ScanOperator“ (pay attention to capitalization and use of small letters) on the computer Omniscan is installed on.
If this group exists, all users of the user group „ScanAdmin“ (pay attention to capitalization and use of small letters) may use Omniscan unrestrictedly and all users of the user group „ScanOperator“ may use it restrictedly (what means entering the password as described above). The access to Omniscan will be refused to the users of all other user groups.

6.1.18 More Settings

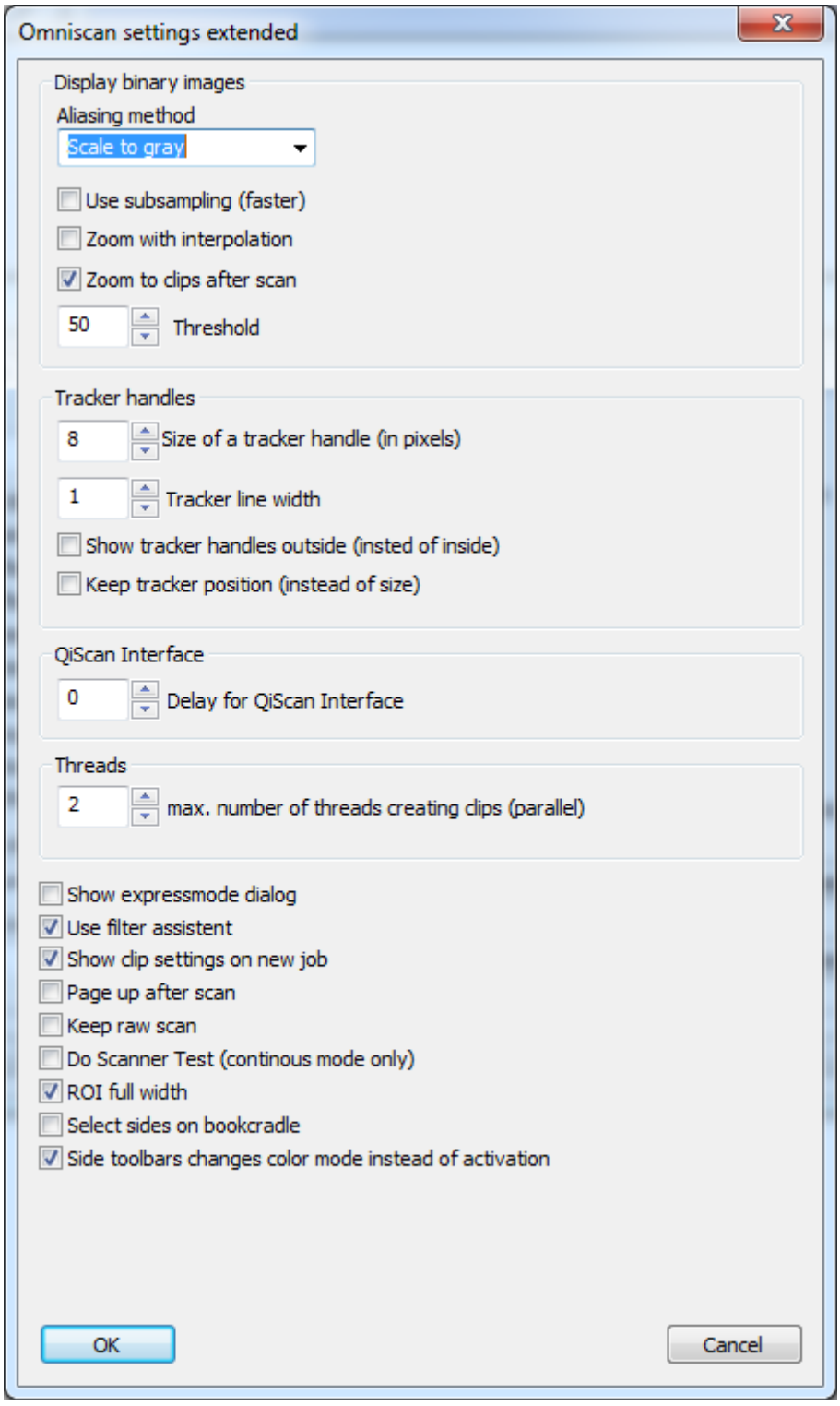


Figure 27: Dialog "Omniscan settings extended"

6.1.18.1 Aliasing method

Here the method can be selected and parameterized, which is used for the display of monochrome images on the screen. It has no influence on the saving of the

images.

6.1.18.2 Size of a tracker handle (in pixels)

Here the size of the targets of the mouse cursor for the graphic change of the size of the clip frame can be selected.
(see *5.6.3 Edit clip settings* (graphically)).

6.1.18.3 Tracker linie width

Here you can choose the thicknes of the lines that mark the clips (frames).

6.1.18.4 Show tracker handles outside (instead of inside)

Here the position of the targets of the mouse cursor for the graphic change of the size of the clip frame can be selected
(see *5.6.3 Edit clip settings* (graphically)).

6.1.18.5 Keep tracker position (instead of size)

If the frame for a clip reaches the edge of the image while moving (see *5.6.3 Edit clip settings* (graphically)), there are two options.
1. The clip reaches the edge. There is no further moving towards the edge of the image possible.
2. The clip will be cut for the area going beyond the edge of image.
If „keep position of the clips (instead of size)“ is activated, the second option will be carried out, otherwise the first.

6.1.18.6 Threads

Here you set up how many clips are created at the same time (in parallelI, if multithreading is unlocked in the dongle). It is recommended to use not more threads than cores in the used processor are available. If more clips are defined and active than threads set up here the remaining clips will be created consequtively.

6.1.18.7 Show expressmode dialog

If a check mark has been set here, the dialog “express mode” will be displayed after the program start of OMNISCAN 12 or after a job has been finished.

6.1.18.8 Use filter assistent

With this you can switch on and off the filter assistent. More information about the filter assistant is available in 7.1.33.2 Active image processing tools.

6.1.18.9 Show clip settings on new job

If this is checked after creating a new job the clip settings are displayed automatically (*7.1 Clip settings*).

6.1.18.10 Page up after scan

This directly shows the last clip in the main window after a scan. This is identically to the shortcut (s. Chapter *14.1 Shortcuts*) Shift + F2 used together with a normal scan. If “Page up after scan” is activ and the shortcut Shift + F2 is used the man

window shows the second but last image.

6.1.18.11 Keep raw scan

This setting has the effect that the unfiltered scan is kept to reflect changes in the filter settings without the need of a rescan. This option should only be used if the used computer has enough ram memory. Using that together with big scanners and high resolutions could be inhibited through restrictions of windows.

6.1.18.12 Do scanner test (continous mode only)

This leads to a scanner test if you activate “contionus mode“ from the scanner settings too (*10.1.4.3 Continuous scan*). Don’t use for normal operations.

6.1.18.13 ROI full width

If ROI scan is activated only the area that is necessary to create the clips is scanned (plus a small border). Using a line scanner like the OS14000 you particularly earn the time that would be used to move the scanhead over the whole area. The scan width only influences the scan speed if the data transmission time is responsible for the time. With a scanner like the OS14000 you can scan the whole width without a speed loss, but earn the possibility to make the clip wider or move the clip horizontaly without a rescan. This is especially important if you scan books with pop up extensions. Using this switch causes Omniscan to create ROI scans in full width.

6.2 Extended settings Omniscan 12

6.2.1 General

The switches described below are intended for spezial purposes and because of that are not available in the user interface to avoid puzzlement. Changes this switches is on your own responsibility and should only be done if the corresponding paragraph has been read and understoud. If in doubt you should contact your local service partner.
All these switches are located in the file “Omniscan.xml” in the Omniscan directory.
Switches that are not described here are only for internal purposes and should not be changed. The possible consequences vary from “useless” over “annoying” to “catastrophic”.

6.2.2 FullscanFirst

With this switch you can decide whether the first scan is done allways as fullscan (instead of a ROI scan) to position the clips acording to the complete view of the bookcradle (default). If this is not set to true even the first scan wil be made as ROI scan.

<FullscanFirst>false</FullscanFirst>	First Scan is made as ROI scan
<FullscanFirst>true</FullscanFirst>	First scan is allways a fullscan

6.2.3 SkipCheck

This controls whether the position of a window is checked for beeing on the main screen. If set to false (default) before displaying a window of a settings dialog whether it is on the main screen. If not it is repositioned to a save default value. If this is set to treu this check is not done and the window will be set to its last position. Particularly if you use more than one monitor this enables you to move windows permanently to a secundary screen. If windows disapear completely in this state you can temporarily set this switch to false, redisplay the windows and the set the switch back.

<SkipCheck>false</SkipCheck>	Positioncheck is done
<SkipCheck>true</SkipCheck>	Positioncheck isn’t done

6.2.4 MagnifierSize

This controls the size of the screen magnifier. The standard size is a 200x200 pixel window. If you use bigger windows check whether the view on the window becomes too slugish, especialy on slower PCs.

<MagnifierSize>200</MagnifierSize>	Size of the screen magnifier in pixels

6.2.5 ProcessLogging

With this you can Omniscan put to create a log file. Detail for that on request.

<ProcessLogging>false</ProcessLogging>	Logging switched off
<ProcessLogging>true</ProcessLogging>	Logging switched on

6.2.6 UseCardReader

With that Omniscan can be put to use a cardreader to check for a charge card and enough deposit on it. Also the card can be charged for a configurable amount. Details for that on request.

<UseCardReader>false</ UseCardReader>	Check of the card reader is switched off.
<UseCardReader>true</ UseCardReader>	Check of the card reader is switched on

6.2.7 MetaDataOnFragments

Omniscan can ask for new meta data for clip specific data not only for each new clip, but also for parts of it (so called fragments) that are created e.g. by the cut or orthoscan filter. If such a filter is active and this switch is set for each side of the book new meta data is asked for. If this switch is not set both of the sides get the same mata data (default).

<MetaDataOnFragments>false</MetaDataOnFragments>	Shares meta date for each fragment of a clip
<MetaDataOnFragments>true</MetaDataOnFragments>	For each fragment of a clip new meta data is asked for.

6.2.8 BeepOnStartScan

With that you can select a sound for the start of a scan. If Omniscan is run once with sound on you will find a entry in the system settings of windows in the tab sounds for “Start scan” under “Omniscan”. There you can select the desired sound (*.wav file). This is true for „BeepAfterProcessing“ and „BeepAfterScan“ too. However these two can be switched in the Omnsican settings.

<BeepOnStartScan>false</BeepOnStartScan>	Sound on start of a scan switched off
<BeepOnStartScan>true</BeepOnStartScan>	Sound on start of a scan switched on

6.2.9 CheckMemoryAvailable

At the start Omniscan checks whether enough memory is available. This can be switched off here. This includes trying to put the various modules of Omniscan in such a way in memory that the address space is optimaly used. If just the annoying message should dissapear its better to just switch of the following ShowMemoryWarning.

<CheckMemoryAvailable>true</CheckMemoryAvailable>	Memory checking switched on
<CheckMemoryAvailable>false</CheckMemoryAvailable>	Memory checking switched off

6.2.10 ShowMemoryWarning

With this you can switch of the message about to few memory. This switch only can work if at least enough memory is available to scan in full resolution. If this is the case the the user is asked whether he wants to see this message again. If answered with no this switch is set to false.

<ShowMemoryWarning>true</ShowMemoryWarning>	Warning if low memory switched on
<ShowMemoryWarning>false</ShowMemoryWarning>	Warning if low memory switched off

6.2.11 SuppressResWarning

This can supress a warning message if you create a clip with a higher resolution than the scan. If set to false the operator will be warned if he tries to increase the resolution to more than a factor of 2. If this switch is set the warning message is not shown.

<SuppressResWarning>false</SuppressResWarning>	Warning message for increasing of the resolution activ
<SuppressResWarning>true</SuppressResWarning>	Warning message for increasing of the resolution switched off

6.2.12 SuppressRedock

Normaly if nothing else is to do Omniscan rearranges its toolbars. With that a change in the window size doesn't lead to a ugly display. Some graphic drivers interpret this as new activity of Omniscan and renew the rearranging of the toolbars. This leads to a flickering display which can be suppresed with this switch.

<SuppressRedock>false</SuppressRedock>	Rearranging of the toolbars active
<SuppressRedock>true</SuppressRedock>	Rearranging of the toolbars switched off

6.2.13 CorrectSubfileType

The used library creates even single TIFF-files as multipage Tiffs with just one image inside. Some software is not capable of handling this. To enable these programms for precessing of data Omniscan created to patch the subfile type for all images it is writing on disk.

<CorrectSubfileType>false</CorrectSubfileType>	No patching of the subfile types
<CorrectSubfileType>true</CorrectSubfileType>	Subfile type will be changed to „single page“

6.2.14 FootPedalMode

The USB-footpedal has to be used different according toi the used operating system. Especialy for windows versions in foreign languages the detection of the windows version is not allways reliable. To force the correct mode it can be selected here.

<FootPedalMode>0</FootPedalMode>	Automatic detection
<FootPedalMode>1</FootPedalMode>	Use XP Mode
<FootPedalMode>2</FootPedalMode>	Use Windows 2000 Mode
<FootPedalMode>3</FootPedalMode>	Use Polling Mode

6.2.15 PercentUpscale

To compute the necessary scan resolution from the selected clip resolutions first off all the maximum clip resolution is determined. If this is between two resolutions the scanner can deliver directly one of these resolutions has to be choosen. With this value you can influence this decision. Is the maximum clip resolution higher than 70% (default) of the difference above the lower scanner resolution the higher on ewill be choosen. If it is lower the scan will be mad in the lower resolution.

<PercentUpscale>70</PercentUpscale>	Automatic resolution chooses the higher resolution only if the target resolution is more than 70% higher than the lower scanner resolution.

6.2.16 ShowThumbIDs

Instead of the sequential number of the clip ist ID can be displayed below ist thumbnail. This is intended for development purpose only.

<ShowThumbIDs>false</ShowThumbIDs>	Show sequential number under thumbnail
<ShowThumbIDs>true</ShowThumbIDs>	Show ID under the thumbnail

6.2.17 ShowTrialWarning

Omniscan can be used with all options in the first 30 days or 1000 scans. After that only the bought options are available any longer. At startup Omniscan alerts the user that not all options available now will remain in perpetuity. This message can be suppresed with this switch. Allways if the warning message shows up the user has the oportunity to suppress this message. This switch will be cleared then.

<ShowTrialWarning>true</ShowTrialWarning>	Show warning message about demo period
<ShowTrialWarning>false</ShowTrialWarning>	Don't show warning message about demo period

6.2.18 ShowTrialEnd

Omniscan can be used with all options in the first 30 days or 1000 scans. After that only the bought options are available any longer. At startup Omniscan alerts the user that this time is over now. This message can be suppresed with this switch. Allways if the warning message shows up the user has the oportunity to suppress this message. This switch will be cleared then.

<ShowTrialEnd>true</ShowTrialEnd>	Show warning message about expired demo period
<ShowTrialEnd>false</ShowTrialEnd>	Don't show warning about expired demo period

6.2.19 ShowScannerResolution

To create scans in Omniscan you just have to define the desired clips. Omniscan computes from these clip parameters the necessary scan parameters. The resolution belongs to this parameters. To avoid confusion of the operator this computed resolution normally is not displayed. With this switch you can activate the display of the computed (necessary) resolution.

<ShowScannerResolution>false</ShowScannerResolution>	Computed scanner resolution is hidden
< ShowScannerResolution>true</ ShowScannerResolution>	Computed scanner resolution is shown

6.2.20 ROIFullWidth

If ROI is selected only the necessary part of the book cradle is scanned (added by a definalbe border). Using a line scanner like the OS14000 you primarily save part of the time to move the scan head over the book cradle. The width of the scan only has some influence if the data transfer limits the speed. With a scanner like the OS14000 you can scan over the whole width without loss in speed, but you obtain the possibility to move or resize the clip without the need of a rescan. Especially if you scan books with unfolding extended pages. This switch causes Omniscan to get all the scans with maximum width.

<ROIFullWidth>false</ROIFullWidth>	Width of a scan depends on the size and position of the clips.
<ROIFullWidth>true</ROIFullWidth>	Width of a scan always maximum.

6.2.21 ContinousRescan

In the „continous scan“ mode normally every image will be put on harddisk. For endurance testing (or on a fair) you can cause Omniscan to do rescans allways. This is intended for development purpose only.

<ContinousRescan>false</ContinousRescan>	Scan normal in continous mode
<ContinousRescan>true</ContinousRescan>	Do rescans in continous mode

6.2.22 StartScanOnGlas

This switch enables Omniscan to scan if the glass plate of the OS12000 is closed. Additionally the automatic glass plate opening must be activated.

<StartScanOnGlas>false</StartScanOnGlas>	Don’t scan on closing the glass plate.
<StartScanOnGlas>true</StartScanOnGlas>	Scan on closing the glass plate.

6.3 Color management

OMNISCAN 12 supports working with color management.
On this index card profiles can be selected, which can be attached to the images created with OMNISCAN 12, and which can be used with the display or the printing of the images.

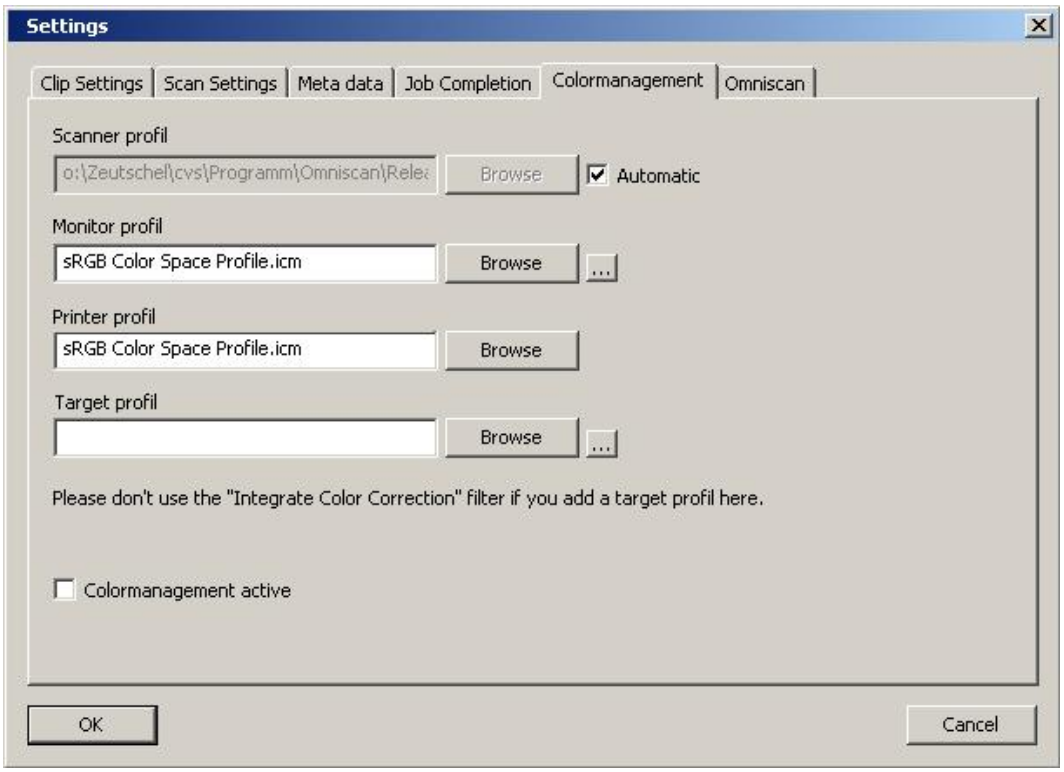


Figure 28: Index card „color management“

6.3.1 Scanner profile

Here the profile can be selected which is attached to the images created in OMNISCAN 12 with the use of the color profile.
The path to the profile can be entered to the text field or it can be selected by clicking to the button „search“.
If the use of color profiles should be completely deactivated the „automatic“ has to be unchecked (*6.3.2 Automatic*) and the entry filed has to be cleared completely.

6.3.2 Automatic

If a check mark has been set here, an enclosed standard color profile is attached to the images.

6.3.3 Monitor profile

Here the profile can be selected, which is used with the display on the screen. The path to the profile can be entered to the text field or it can be selected after the button „search“ has been clicked to.
The „Rendering Intent“ can be set using the small button next to the search button. This setting should only be changed by experts.

6.3.4 Printer profile

Here the profile can be selected, which is used with the printout of an image. The path to the profile can be entered into the text field or it can be selected after the button „search“ has been clicked to.
NOTE: In Omnican 11.0 the use of the printer profile has still not been realized!

6.3.5 Target profile

Here the profile can be selected in whose color space the image will be saved. If the image is still not available in this color space it is converted immediately before it will be saved. The target profile will then be attached to the image depending on the file format.
If nothing is entered here there will be no conversion and the scanner profile will be attached.
The „Rendering Intent“ can be set using the small button next to the search button. This setting should only be changed by experts.

6.3.6 Color management active

Only if this check mark has been set, the selected monitor profile is used for the display on the screen. (The use of the profile delays the process of the build-up of the image).
This setting has **no** influence, whether a selected scanner profile is attached to scanned images or not.
Profiles may be attached to TIFF files and JPG files. This can be easily reached by merely selecting the correct profile here. Of course, this will be only done with color images.
The file name of the used color profile will be saved in addition to each image in the job file and then be used with the display then. So it is made sure that the correct color profile for the display will be used even with changes of the settings during a running job.

7 Job Options

The job options include the settings or parameters which are not valid for all jobs in contrast to the program settings, but can be selected for each job individually. These are:

1. Scan settings
   These settings define the kind of scanning, i.a. what kind of image is transferred from the scanner to OMNISCAN 12. These settings are carried out with the index card „scan settings“ of the dialog „settings“ (see *7.2 Scan* settings*).*
2. Clip settings
   These settings define the number of images and the kind of settings which are actually gained and stored by the image transferred from the scanner.
   These clips are normally indicated as a „scan“. They are the images desired by the user.
   These settings are carried out with the index card „clip settings“ of the dialog „settings“ *(see 7.1 Clip* settings*).*
3. Meta data
   OMNISCAN 12 offers the option to write texts of information with each job and to provide them with a title. It is possible then to assign the texts to a job, a particular scan or a single image. These texts of information, called meta data, can be stored as a TIFF-tag together with the images.
   These metadata are established with the index card „meta data“ (see *7.3 Meta* data).
4. Job termination settings
   These settings define how to proceed with all images of a scan job finally.
   These settings are carried out with the index card „job termination“ of the dialog settings (see *7.4 Job).*
5. Job settings
   You set up the basic job settings here. This for instance includes the visibility of the toolbars (*10.5 Symbol bar (toolbar)*). These settings are located in the „Job settings“ part of the settings dialog (*7.5 Job Settings*).

The settings selected here are saved in the job file and they are restored each time when a job is opened.
Additionally all these settings can be saved in one file separately as one job parameter set (see *10.1.1.6 Save job settings* with*).*
It is possible to take over the job parameters with this file when a job is created newly *(see paragraph 5.2 Create new job)*, i.a. the job settings can be exported and imported.

The set-up of the job settings requires that a job is opened. If this is not the case, the user is requested to create a new job or to open an existing job when trying to open the corresponding index cards.

7.1 Clip settings

With this index card those settings are carried out which are used for one clip respectively.
The direct way to this index card is to activate the desired clip in the main window and to select „settings“ in the context menu, which is opened with the left mouse key.

Figure 29: Direct call „clip settings“

The settings of the desired clip are then displayed automatically.
The „clip settings“ can also be invoked with the menu entry „scanner – settings“ and the selection of the corresponding index card there.
In addition this index card is opened immediately when a new clip is created.
After having left the dialog „settings“ with „OK“, the selected settings are immediately used with the clip.

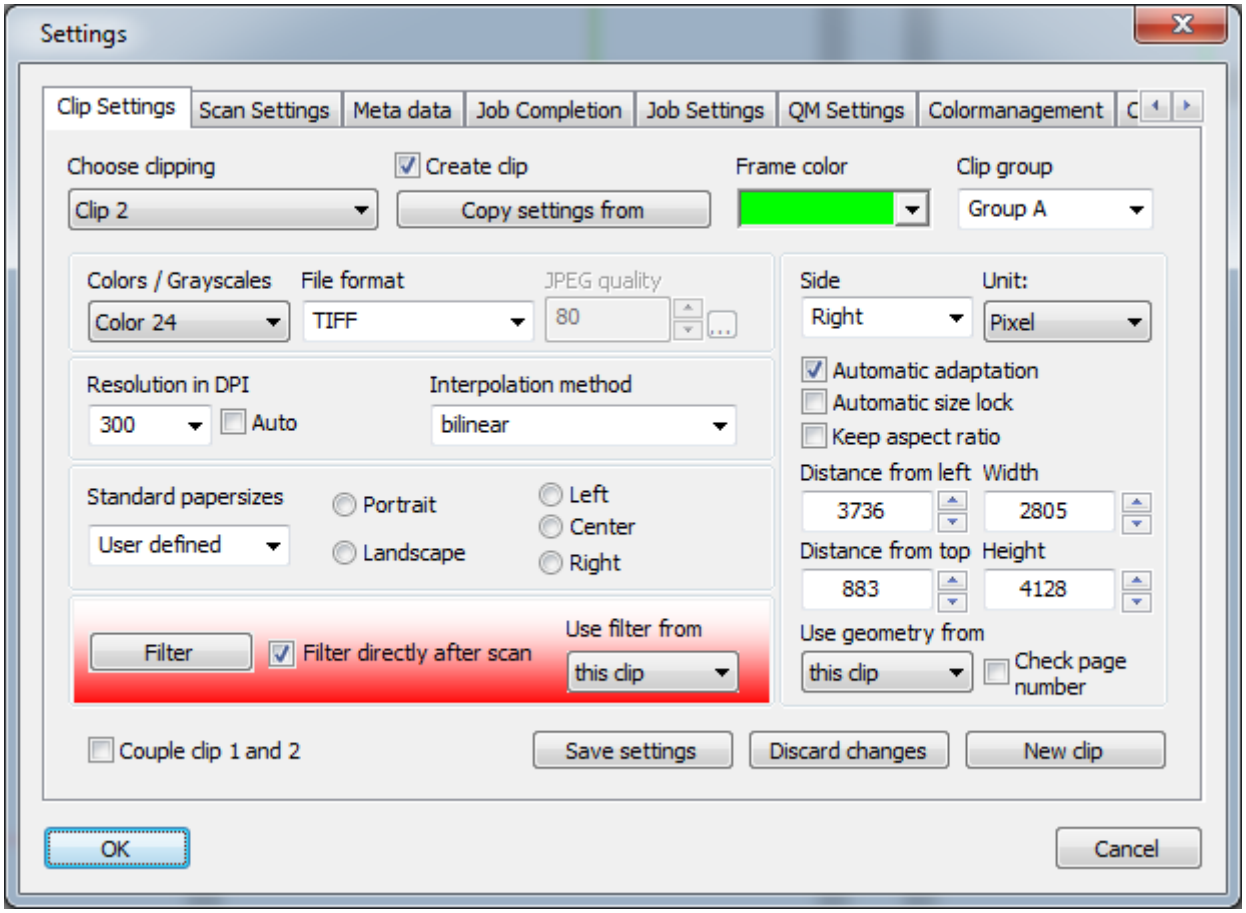


Figure 30: Dialog „clip settings“

7.1.1 Select clip

Here all currently existing clips can be selected from the list being displayed below the text field after having clicked to the small arrowhead. The settings of the selected clip which are displayed immediately can then be changed.

7.1.2 Clip group

Each clip can be assigned to one of five clip groups (A – E). These clip groups and with that the clips assigned to it can be activated by keyboard commands or menu entries. So it is possible for example to activate or deactivate several clips simultaneously with one keyboard command.

7.1.3 Page

Here a clip may be defined as left or right. If this has happened, the color mode of the corresponding page can be switched over or the page can be switched off with an appropriate control in the toolbar.

Fig 31: Left / right control (big)

With that only those buttons will get active for which a corresponding clip is available. By clicking to one of the color symbols for off, black-and-white, grey or

color all clips of the color mode for the corresponding page will get active respectively, and all other color modes will be deactivated. If the prohibition sign (off) occurs the page will be switched off completely. All clips which belong to the other page or which have not been classified as left/right will not be influenced by that.

By clicking to the book symbol a compressed display can be selected. There the color symbol can be switched to by clicking. The highest color mode of all active clips will be displayed then.

Fig 32: Left / right control (small)

The example shows a setting of black-and-white for the left page, and color for the right page. If in the following clips are activated or deactivated in a different way (e.g. with the clip settings), this will be displayed accordingly.
The controls may be teared off from the toolbar (like all other toolbar controls) and they can be placed on the desktop arbitrarily.

7.1.4 Create clip

If a check mark has been set here the clip is taken into account with the scanning, i.a. a corresponding image is created and saved.
If a check mark has not been set here, the clip settings remain unchanged, but with the following scanning operations there is no corresponding image created or saved.
This setting can also be set with shortcuts (s. *14.1 Shortcuts).*

7.1.5 Frame color

Here the color can be selected with the help of the palette which appears if the arrowhead is clicked to.

7.1.6 Copy settings from

If the same characteristics, as another existing clip has, shall be assigned completely or partly to an existing clip, this is possible by clicking to the button “copy settings from”. The dialog “copy settings” will be displayed , in which the desired settings and the clip can be selected, from which the copy shall be made.

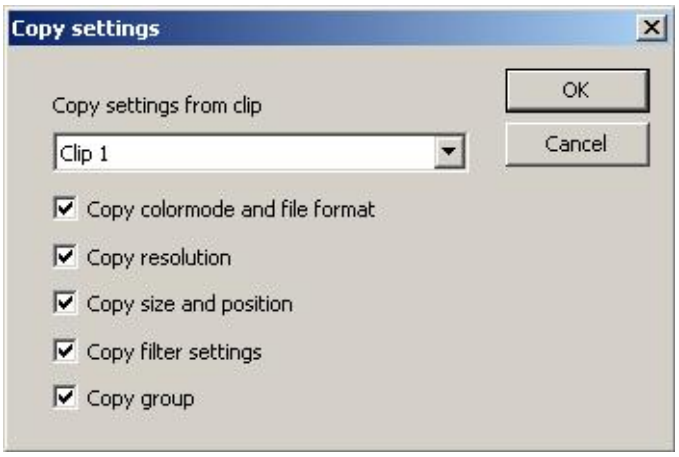


Figure 33: Dialog „copy settings“

7.1.7 Unit

Here the units „pixel“, „inch“ and „mm“ can be selected for the indications of length „distance from the left“, „distance from the right“, „width“ and „length“.

7.1.8 Automatic Adaption

If this option is activated all clips that are set as left or right side are automatically relocated to he left or right side of a book if Orthoscan or Perfect Book (*11.1.8 Perfect Book*) is used. This is done until a clip is moved with the mouse. This manual settings has priority. If you want to reactivate the automatic select “Ajust trackers” from the „Select” menue (see chapter *10.1.5.4 Adjust trackers*).

7.1.9 Automatic size lock (>= OS12.2)

If this checkmark is set the size of the clip is memorized with the first image that is saved for this clip. If you try to change the size of this clip afterwards by dragging the frames with themouse you will be notified and can get back to the saved size. If automatic adaption is used too (see 7.1.8 Automatic Adaption) the position of the clip is adapted to the new found position, but the size is not altered. The clip is centered around the found position.

7.1.10 Keep aspect ratio (>= OS12.2)

If this checkmark is set the ration between height and width is memorized . Every change of the width with the mouse will also change the height accordingly and vice versa.

7.1.11 Distance from the left

Here the distance of the clip to the left border of the image can be entered indicated with the unit selected with „unit“.
The value can either be entered directly or it can be incremented step by step up or down using the little arrowheads on the right edge of the field.
This setting can also be carried out graphically in the main window.

7.1.12 Distance from above

Here the distance of the clip to the border above of the image can be entered indicated with the unit selected with „unit“.
The value can either be entered directly or it can be incremented step by step up or down using the little arrowheads on the right border of the field.
This setting can also be carried out graphically in the main window.

7.1.13 Width

Here the width of the clip can be entered indicated with the unit selected with „unit“.
The value can either be entered directly or it can be incremented step by step up or down using the little arrowheads on the right border of the field.
This setting can also be carried out graphically in the main window.

7.1.14 Height

Here the height of the clip can be entered indicated with the unit selected with „unit“.
The value can either be entered directly or it can be incremented step by step up or down using the little arrowheads on the right border of the field.
This setting can also be carried out graphically in the main window.

7.1.15 Use geometrie off

Here the geometrie (position, height and width) of another clip can be used for the current clip (stack clips). Changes of the geometrie of the clip selected here will be automatically used for all connected clips. So the current clip has no longer tracker handles, but can only be manipulated by changing the connected clip.
If you for instance choose „this clip“ in clip 1 (Color, JPEG) and select in clip 2 (black & white, TIFF-G4) clip 1 for the geometrie size and position of clip 1 and 2 is allways identical, even if you move or resize the frame of clip 1.
A small differenz (less than 10 pixels) can ocur if you binarise with the optibin filter. This function tries to find a dynamic, optimized binarisation threshold from the environment of a pixel. This could lead to decrease in image size.
A litte different is the case where clip 1 is marked as left side and clip 2 is marked as right side. Then the right one is mirrored at the right side of the left clip. So the two clips don’t lie on the same position, but can only be manipulated by moving or resizing clip 1.

7.1.16 Check page number (>= OS12.2, 32 Bit only)

If this option is selected a additional frame for this clip will become visible. This frame should be positioned so that the page number is visible inside this frame. This page number is red via OCR and checked against a internal page number which is the last (may be manual altered) page number + 1. If these two numbers

are different a non modal dialog shows up giving you the chance to use the number read via OCR, manual correct the number or use the expected pagenumber.
This can be used to check whether all pages of the book are scanned without skipping pages or double scanning pages. In case of differences the user will be notified, but can also adapt the page number as necessary.

7.1.17 Standard paper size

Here standard formats and the option „maximum“ for frames can be selected for the determination of the size of the clip.

7.1.18 Portrait/landscape format

If a standard format has been selected, it is possible to select between portait and landscape format here. A change is only accepted when it is possible geometrically.

7.1.19 Left

The clip is moved up to the left border of the image.

7.1.20 Right

The clip is moved up to the right border of the image.

7.1.21 Centering

The clip is moved to the center of the image.

7.1.22 Couple clip 1 and 2

The coupling of the clips 1 and 2 results in the coordination of the setting of the size and the placing of both clips. This is e.g. useful then, when both pages of a book shall be scanned.
If the coupling is activated, each modification of the placing and of the size of one of the two clips is transferred to the other one. It is started there from the settings which were existing at the time of coupling.
If one of the clips is moved, the same is done with the other one. So both pages of a book whose position has been changed can be „moved“.
If the size of one of the two clips is changed, the size of the other one is changed „with mirror image“. If therefore a clip is enlarged to the center of the book, a clip placed on the other side of the book approaches this clip.

7.1.23 Save settings

By clicking to the button “save settings” the current settings of all clips will be saved.

7.1.24 Reject changes

By clicking to the button “reject changes” the changes are rejected which have been made since the opening of the dialog “settings” or which have been made

since the last saving of the settings (*s. 7.1.23* Save settings).

7.1.25 New clip

With this a new clip can be created.

7.1.26 Resolution in dpi

Here the resolution of the clip can be selected.
If the automatic system is activated, the sanner selects the resolution automatically with the scanning operation. If a resolution has manually been set, which differs from the resolution actually used for scanning, an interpolation will be carried out.
If the option „auto“ is set with the settings of the resolution in the scanner settings (see *7.2.8 Resolution in dpi)*, the scanning is carried out automatically with the most favourable resolution. An increasing of the resolution by interpolation is avoided if possible.

7.1.27 Method of interpolation

The method according to which the interpolation shall be carried out, if the clip resolution deviates from the scanner resolution.

7.1.28 Colors/gray levels

Here the „color depths“ of a clip can be selected.
Possible are: black/white, gray level 4 bit, gray level 8 bit, and 24 bit color.
If the option „auto“ is set with the settings of the color depths in the scanner settings (*see 7.2.9 Colors/gray* levels), then automatically the scanning is carried out with the highest color depth selected in one of the clips. If a color depth can not be accomplished because a lower color depth has been entered manually with the scanner settings, the user is informed about this.

7.1.29 File format

Here the file format is selected, with which a clip will be saved.
The offer of the file formats varies according to the color selected with the color depth. For each color format the file format can be selected individually.

Black/white und b/w Photo	Gray level 4 bit	Gray level 8 bit	Color 24 bit

TIFF	TIFF	TIFF	TIFF
TIFF G3 D2	TIFF packed	TIFF JPEG	TIFF JPEG
TIFF G3	TIFF LZW[3]	TIFF packed	TIFF packed
TIFF G4	Windows BMP	TIFF LZW[4]	TIFF LZW[5]
TIFF Huffmann	Windows BMP RLE	Windows BMP	Windows BMP
TIFF packed	GIF	Windows BMP RLE	JPEG
TIFF LZW[2]	PCX	GIF	JPEG 2000
Windows BMP	PNG	JPEG	PCX
GIF		JPEG 2000	PNG
PCX		PCX	
PNG		PNG	

Table 1: File formats

7.1.30 Compression factor

For JPEG
JPEG is a lossy compression procedure with which the rate of compression and the image quality can be adapted to the corresponding requirements. It must be observed there that each increasing of the rate of compression and therefore the reduction of the file size results in a deterioration of the image quality.
As far as JPEG has been selected as file format, the image quality can be set here from 0-100. Higher values result in a better image quality, lower values on the other hand result in a higher rate of compression.

For JPEG 2000
The compression factor defines the factor, for which the amount of data will be reduced. The indication of the factor „0“ results in a loss-free compression.
(Depending on the image content this results in a reduction of the amount of data with factor 2). In general settings between 10 and 20 have been proved.
In addition the filters for the discrete wavelet ransformation and the wavelet level can be selected. For this purpose the following dialog can be opened with the little button right besides the window for the setting of the compression rate.

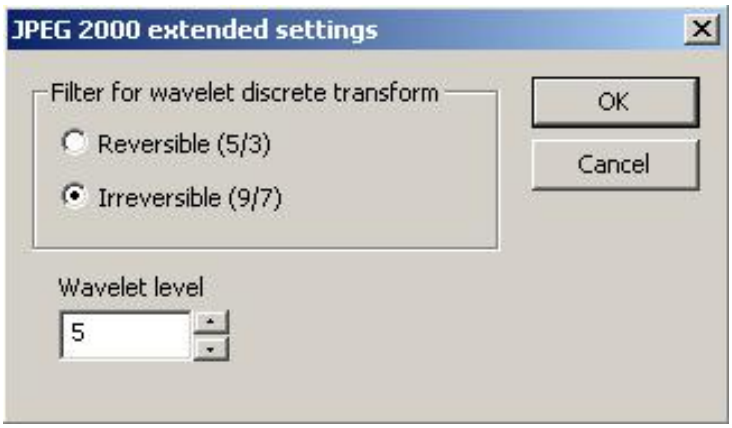


Figure 34: Extended settings „JPEG 2000“

[2] Nur mit Option LZW
[3] Nur mit Option LZW
[4] Nur mit Option LZW
[5] Nur mit Option LZW

7.1.31 Use filter of

If the same image processing functions shall be applied to several clips, it is possible then to determine these image processing functions once for one clip and to refer to this clip when using the other clips.

7.1.32 Process all clips directly after the scan

By removing the check mark it is possible to carry out the image processing functions of all clips only with the job termination. A switching is possible any time with a loaded job. Images which are already processed are indicated as such and they will not be processed again.

7.1.33 Image processing

Here is the option of a preselection of image processings which can be applied to the just selected clip. Here for each color mode the filters can be selected independently.
If the check mark „directly after the scanning..“ has been set, the image processings are carried out immediately after the scanning operation and the result is displayed in the main window according to the selection of the corresponding clip. If the check mark has not been set, the image processings are carried out only during the job termination (see *7.4 Job).* The use of the image processings only during the job termination is e.g. useful, when the immediate use would delay the scanning operation. The work off of the image processings, called filter stack, during the job termination can be carried out e.g. even at night without staff.
(NOTE: In Omnican 11.0 the option of realizing image processing batches only with the job termination is not realized! Therefore the check mark is gray).

The arrangement of the image processing tools is carried out in the following dialog „image processing settings“, which is displayed by clicking to the button „image processing“.

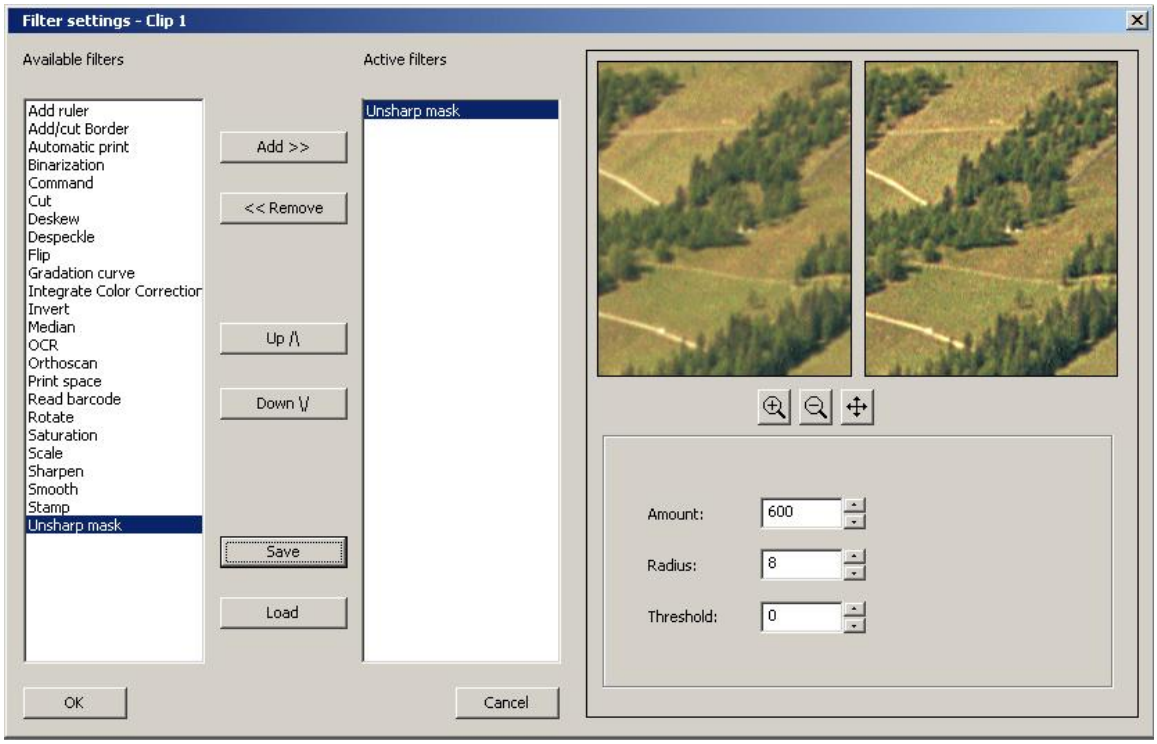


Figure 35: Dialog „image processing settings“

7.1.33.1 Available image processing tools

All available image processing tools are offered in the list on the left side (see paragraph *8 Image* Processing Tools*).*

7.1.33.2 Active image processing tools

The image processing tools included in this list are applied to the selected clip.
The image processing tools are being processed from above to below. Therefore the sequence must be useful and it must be corrected, if necessary, by using the button „upwards“ or „downwards“.
If, for example, „cut“ and „deskew“ are used simultaneously, first “deskew” and then „cut“ should be used. Since „orthoscan“ cannot be used for 1 bit black/white images, the image processing „binarization“ must only be used after „orthoscan“.

The filter assistant working in the background supports the arrangement of the image processing sequence. Recommendations or a note will possibly be given when unreasonable arrangements occur. With this recommendations the filter assitant asks whether this recommendation shall be displayed again.

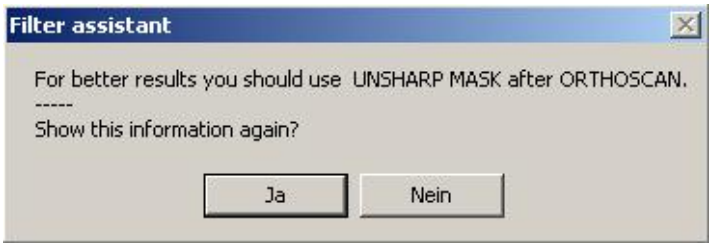


Figure 36: Recommendation of the filter assistant

“Yes”
The recommendation will be displayed again during the current arrangement of the image processing sequence.

“No”
The recommendation will be displayed again at the earliest when the image processing is invoked again.

Together with the notes the filter assistant asks whether the last change shall be cancelled.

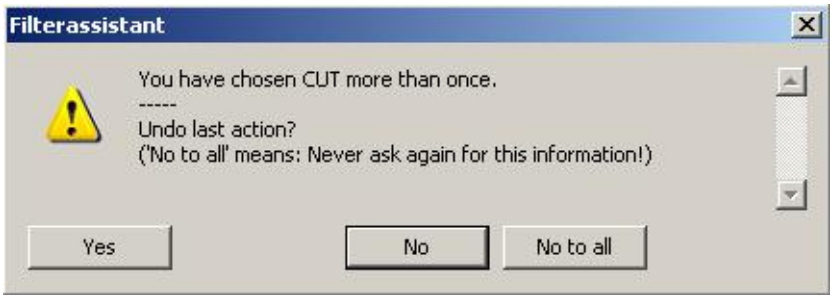


Figure 37: Note of the filter assistant

“Yes”
The last change will be cancelled.

“No”
The last change will not be cancelled.

“No for all”
The last change will not be cancelled. Further this note will not be given again by the filter assistant during the current arrangement of the image processing sequence.

In the case of impossible arrangements the filter assistant displays an error message and it issues a note, if necessary. After the dialog has been confirmed the last change will be cancelled.

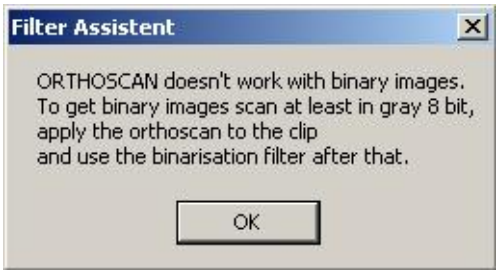


Figure 38: Error message of the filter assistant

7.1.33.3 Add

Using this button, the processing tools selected from the list „available image processing tools“ by clicking can be added to the list „active image processing tools“.
The set-up options are displayed according to the added image processing tool on the right side.
(For more details about image processing tools see paragraph *8, Image Processing Tools).*
New image processing tools can also added to the filter stack using drag’n’drop from the “available processing tools” to the “active processing tools” area.

7.1.33.4 Remove

Removes marked entries from the list „active image processing tools“. A entry can also be removed ba dragging it out of the “active processing tools” area.

7.1.33.5 Up...

Moves up a marked entry in the list „active image processing tools“.

7.1.33.6 Down...

Moves down a marked entry in the list „active image processing tools“.

7.1.33.7 Save

Saving of the current image processing sequence in a file, which makes it possible to take over the image processing sequence set once for following clips (even in other jobs).

7.1.33.8 Load

Loading of a image processing sequence from a file.

7.1.33.9 Conceptiual Changes

Up to Omniscan version 11.10 it was not posible to choose the filters and the file format independent for each color mode. Now you can choose for instance in one clip the fileformat TIFF JPEG with suitable filtering for color 24 bit and the file format TIFF G4 with different filtering independet from each other.

Also the logic to choose the color mode is changed. Up to now the input color mode for the filtering was selected. Now it’s the output color mode. Until now you could choose 24 bit color and select binarisation as a filter function. Now you first choose black and white as color mode and can than select binarisation as a filter. Internal Omniscan automatically decides to scan in grayscale and use the binarisation filter afterwards. So the selected colormode decides about the result of the filtering not of the input into the filtering.

7.2 Scan settings

Scan settings are the settings which are used for the actually carried out scan,

called main scan. The selected clips are cut from this main scan and they are converted according to their individual settings.

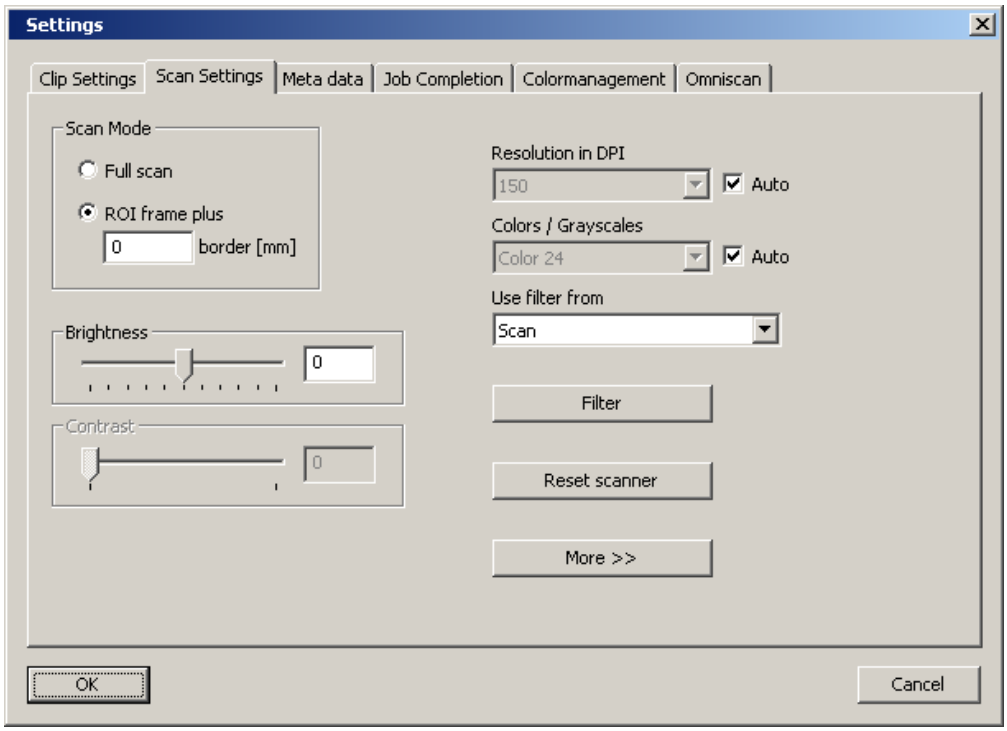


Figure 39: Index card „scan settings“

7.2.1 Scan mode

Here the size of the main scan is determined.
There are two options possible.

7.2.1.1 Complete scan

If this option has been set, always a scan with the greatest possible expansion is scanned and it is displayed in the main window.

7.2.1.2 Circumscribing rectangle / ROI frame

If this option has been set, a scan with the smallest possible expansion is scanned, from which all selected clips can be gained. This is the rectangle circumscribing all clips.
It is possible to determine in the entry field „pixel border“ how big the border may be to be scanned around this circumscribing rectangle.
This setting may result in an acceleration of the scanning operation.
This option can not be selected if it is not supported by the connected scanner.

7.2.1.3 First scan always fullscan

With this you can decide whether the first scan is made as a fullscan to position the clips more easily or directly as a ROI scan (you have to know where the clips have to be).

7.2.2 Image processing

Image processing tools can be assigned here analogously to the option of the clip settings already for the complete scan, which are used automatically during the scanning operation (see*. 7.1.33 Image* processing).

7.2.3 Scanner reset

Here a scanner reset can be triggered.

7.2.4 Extended

The surface for the scanner-specific settings is opened by clicking to this button. For more details see the scanner-specific part of these instructions (see *11 Scanner-specific Options).*

7.2.5 Use filter of

Here the clip can be selected, the „filter stack“ of which is already be applied to the main scan. (For *„filter stack of the clips“ see 7.1.33 Image* processing*).* Since it makes no sense usually to apply a filter stack twice to an image area (first the main scan and then the clip), the clip with the “filter stack” taken over will be inactive usually. Several „filter stacks“ can be applied with „dummy clips“, i.e. such which will never be activated, which can then be applied here as required. This selection is also possible with keyboard commands (see 14.1 Shortcuts).

7.2.6 Brightness

Here the brightness of the main scan can be set.
The control is not active (underlaid gray), if such a setting is not supported by the connected scanner.

7.2.7 Contrast

Here the contrast of the main scan can be set.
The control is not active (underlaid gray), if such a setting is not supported by the connected scanner.

7.2.8 Resolution in dpi

Here the resolution which is used for scanning is displayed or set up.
If the option „Auto“ is active, a resolution is automatically selected which is optimal for the gaining of the resolution selected for the clips.
If „auto“ is not active, all resolutions are offered for the manual selection here supported from the connected scanner on a hardware base.
If the manual selection does not make possible the realization of all settings selected in the clip settings, the user is informed correspondingly.

7.2.9 Colors/gray levels

Here the color depth used for the scanning is displayed or set up.
If the option „auto“ is active, a color depth is automatically selected, which is required for the gaining of the color depth selected for the clips.
If „auto“ is not active, all color depths are offered for the manual selection here supported from the connected scanner on a hardware base.
If the manual selection does not make possible the realization of all settings selected in the clip settings, the user is informed correspondingly.

7.3 Meta data

OMNISCAN offers the possibility to enter additional information, which cannot be directly taken from the image, by the scan operator directly with the capturing. This may be arbitrary information as e. g. the title of the scanned book, an index, the name of the person, who has made the scans or the customer.
Therefore a name must be given for each meta datum. The content can then be entered directly or it can also be queried during the scanning operation according to the configuration. For this purpose 4 different classes of meta data are available. A meta datum may be valid for the complete job (job-specific), be valid for one chapter (chapter-specific), be allocated to a scan (scan-specific) or be valid for a particular image (clip-specific). The clip-specific meta data may be allocated to a particular clip in addition or they may be valid for all clips. In addition, there is even the option to possibly increment numbers in a meta datum automatically and to use a meta datum as a TIFF tag.
The such determined data can then be written to an index file in the job termination, which may be also configured here.
The meta data are part of a job and they will be saved in the job parameters. Therefore they can be taken over for a new job together with them (for more details about job parameters s. *7 Job* Options).

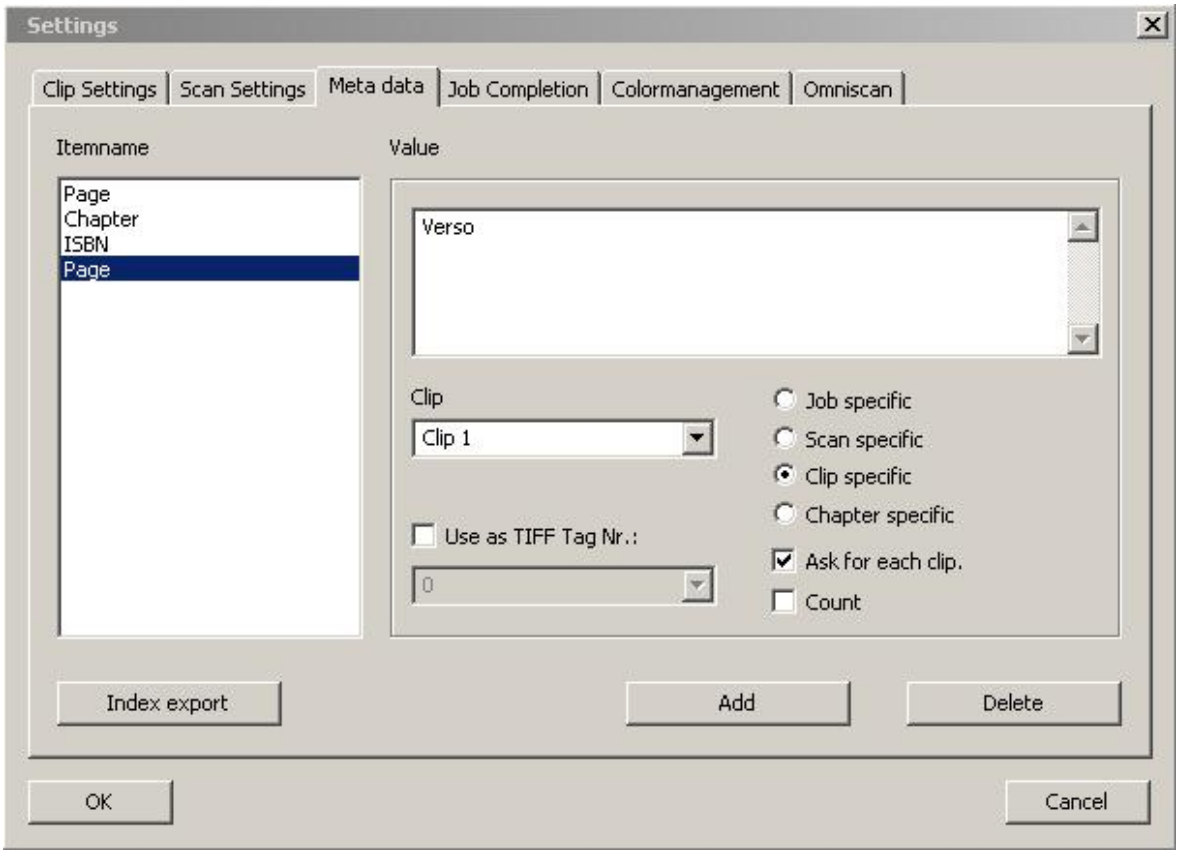


Figure 40: Register carde „meta data“

The field of the radio buttons and checkboxes of the register card “meta data” changes insignificantly according to the selection of the radio button.

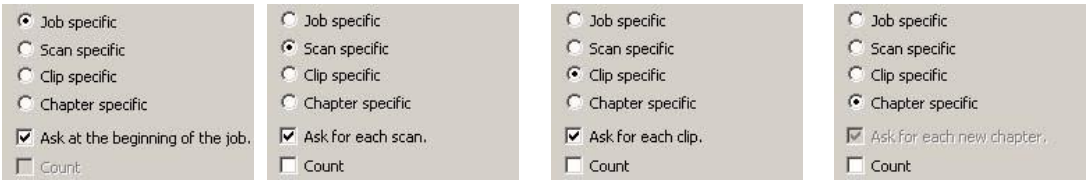


Figure 41: Checkbox text according to the selection of the radio button

7.3.1 Entry name

Here the available meta data can be selected or a new meta datum can be added. The configuration of a selected meta datum may be changed by typing over the “value” belonging to it, for example, and/or the type belonging to it is changed by selection of a radio button.

7.3.2 Job-specific

Data are job-specific when they are allocated completely to a job.
If the check mark has been set for the checkbox “ask once with job start” a query dialog will be displayed for the user after the first scan, which is pre-allocated with the last allocated value for this meta datum.

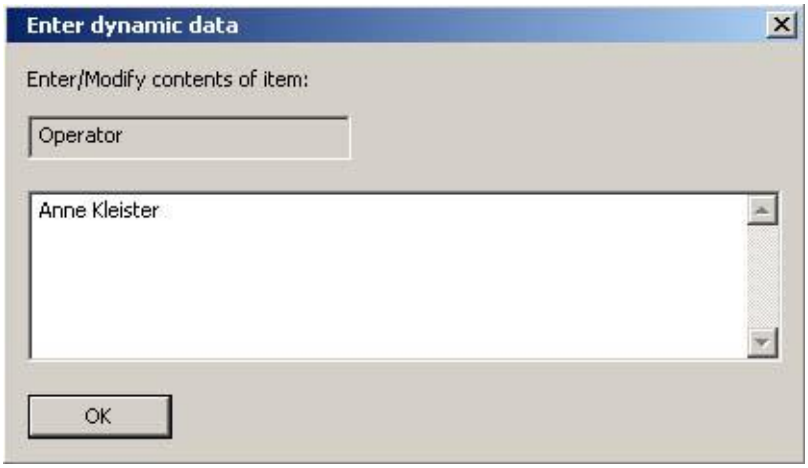


Figure 42: Dialog „Entry of dynamic data“

The user may either take over or change the content of the meta datum here. After the “OK button” has been confirmed the meta datum will be saved allocated to the job.
If the option „use entry as TIFF tag no.“ (see *7.3.13*) has been set, this meta date will be attached to each individual image which is scanned within the job as a TIFF tag.

7.3.3 Scan-specific

Data are scan-specific which are allocated completely to a scan.
(For more details what a scan in OMNISCAN 12 means see the chapter *Introduction)*.
If the check mark has been set for the checkbox “ask once for each scan” a query dialog will be displayed for the user after each scan, which is pre-allocated with the last allocated value for this meta datum.
Meta data, which have been marked as scan specific, are displayed after each scanning operation.

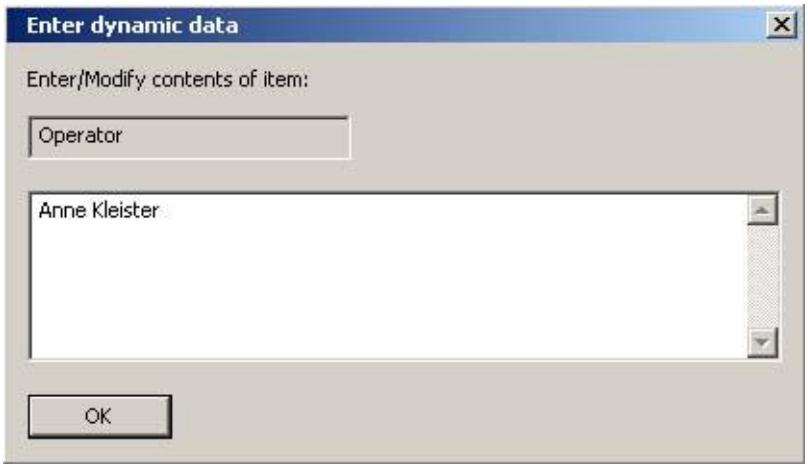


Figure 43: Dialog „Editing meta data dynamically“

The user can either take over or change the content of a meta datum. After the „OK button“ has been confirmed the meta datum will be saved allocated to the scan.

If the option „use entry as TIFF tag no.“ (see *7.3.13*) has been set, this meta datum is attached to each image which has been made due to the clips in this scan as a TIFF tag.

7.3.4 Clip-specific

Data are clip-specific which are allocated to an individual clip. The individual images are made due to the clips.
(For more details what a clip means exactly in OMNISCAN 12 see the chapter *Introduction)*.
If the check mark has been set for the checkbox “ask for each clip” a query dialog will be displayed for the user after each scan, which is pre-allocated with the last allocated value for this meta datum.

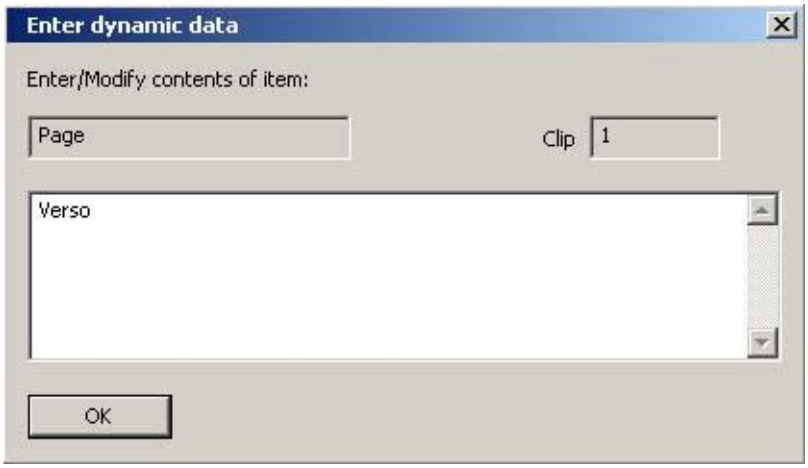


Figure 44: Dialog „Entry of dynamic data“

Here the user can either take over or change the content of the meta datum. After the „OK button“ has been confirmed, the meta datum will be saved allocated to the clip.
If the option „use entry as a TIFF tag no.“ (see *7.3.13*) has been set, this meta datum is attached as a TIFF tag to the image, which has been made due to this clip.

7.3.5 Chapter-specific

Data are chapter-specific which are allocated to all clips of a chapter.
With a chapter-specific meta datum a query dialog for the user will be displayed with the last allocated value for this meta datum then, if he selects a new chapter per menu command (select, new chapter) or per shortcut (Alt-C).

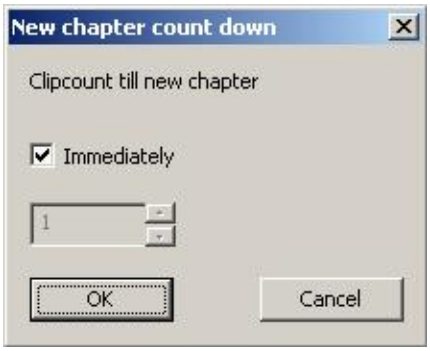


Figure 45: Dialog "New chapter"

If a change of chapter between the left and the right page of a book occurs with the scanning of a book the start of the next chapter may also be delayed. If the check mark is set to "immediate", the information for the next chapter is queried immediately after OK has been clicked to and it will be used immediately. If this check mark is deleted, the number of pages can be determined in the entry field getting active below, which shall still belong to the old chapter, before the information for the new chapter shall be queried. If therefore the left page of the book lying on the plate still belongs to the old chapter and the right page belongs to the new one (two clips), the 1 results in the fact that the left page still eblongs to the old chapter and therefore gets assigned the corresponding meta data. As soon as this has happened, the information for the new chapter will be queried and the new information will be assigned to the right page.

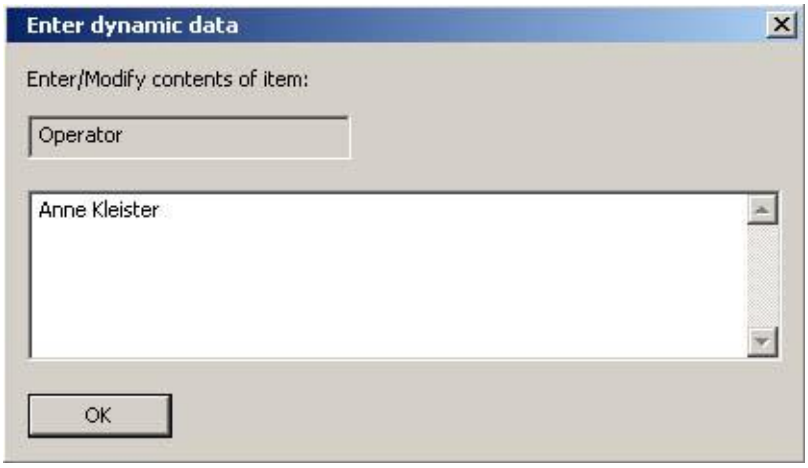


Figure 46: Dialog „Entry of dynamic data"

The user can either take over or change the content of the meta datum here. After the "OK button" has been confirmed the meta datum will be saved allocated to each clip.
If the option "use entry as TIFF tag no." (see *7.3.13*) has been set, this meta datum will be attached as a TIFF tag to the image which has been made due to this clip.

7.3.6 Count

If the checkbox "count" is activated, the content of the meta datum will be searched for a number and this will be increased by one. If there is no number

found a “1” will be set at the end of the content.
If the checkbox “query” is activated, the content being made of the meta datum may still be manually influenced in the displayed query dialog before using it.

7.3.7 Close on enter

Is the Checkbox „Close on enter“ checked you can complete the input of a meta data entry with the enter key. A new line is then created by with Ctrl-Enter. If it is not checked „Enter“ creates a new line. You can close the dialog with Ctrl-Enter then. In any case the dialog can be closed with a click on the OK button.

7.3.8 Use text from filter (Barcode)

With this checkbox the value of the current meta data entry is automaticaly the result of the barcode reading filter (*8.1.17 Read barcode*). This can be used for job- and clip spezific entries.

7.3.9 Show this item in extra window

If this is checked the currently selected meta data is shown in a seperate window. If this option is selected for a couple of entries they are all shown together in one window.

7.3.10 Value

The content of the selected meta datum is entered to or displayed in this field.
A displayed content can be changed.

7.3.11 Add

If meta data entries are already available in the list “entry name” an entry will be searched for there which is mostly similar to the new one to be made and the button “add” is pressed then. The new name is entered to the mini dialog which will be opened after that. After having clicked to OK a new entry in the list exists.

Figure 47: Dialog for the entry of the indication of a new meta datum

7.3.12 Delete

The button „delete“ deletes the just selected meta datum.

7.3.13 Use entry as TIFF tag no.

If this option has been set, the meta data are attached to the images according to their allocation as a TIFF tag (*see 7.3.2 Job-specific, 7.3.3 Scan-specific, 7.3.4 Clip-specific and 7.3.5* Chapter-specific*).*
TIFF tags are provided with a number from 0 up to 65535. Some of these numbers are combined in the TIFF specification with particular contents.

Five of them can be selected from the list box after having activated the check box.
269 Document name
270 Image description
285 Page name
315 Artist
33432 Copyright
An arbitrary number between 0 and 65535 can be selected deviating from these defaults.
If the meta datum contains a dummy of the form %04n (where a number between 4 and 9 may be placed instead of 4), a sequential number will be entered at this place in the job termination which corresponds with the numbering of the thumbnail list. The number in %04n … %09n indicates how many digits the number to be displayed has.

7.3.14 Index export

To get the included meta data into a format which can be processed by the programs and to which the included images are passed on, the index export is available.

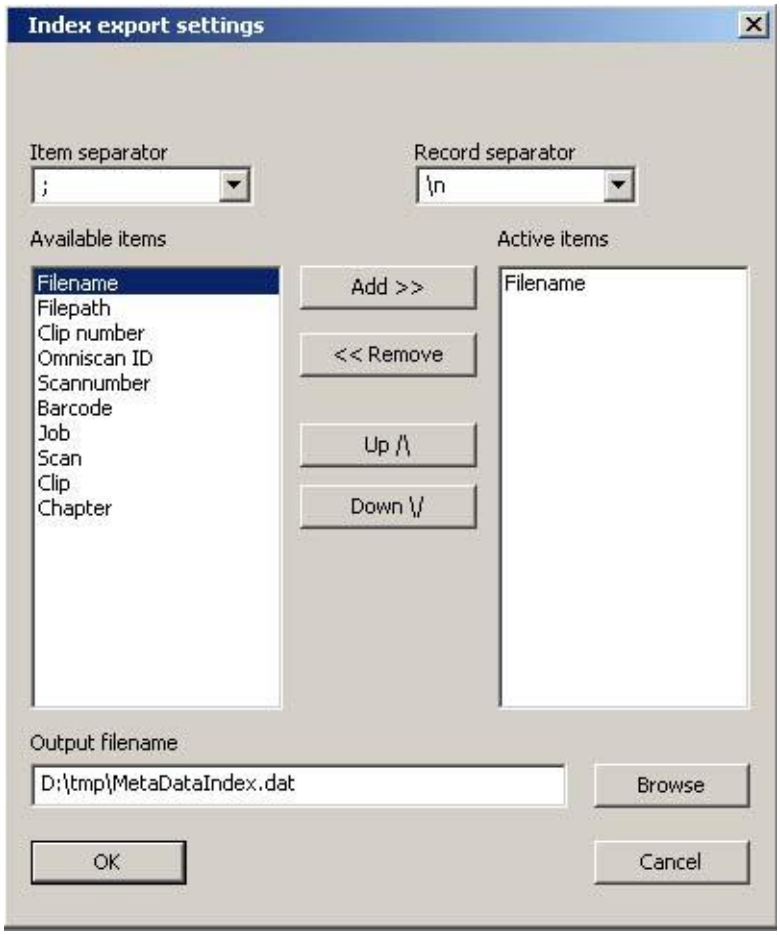


Figure 48: Dialog „settings for index export“

7.3.14.1 Entry separator

Here the symbol is selected or entered, with which the particular entries of an image shall be separated in a file.

7.3.14.2 Data set separator

Here the symbol is selected or entered, which shall separate the particular data sets in a file.

For a better distinction of entries and data sets it is useful to select different separators.

7.3.14.3 Available entries

All available meta data are offered in the list on the left side.

7.3.14.4 Active entries

The meta data listed here will be exported.

7.3.14.5 Add >>

The meta data selected in the list “available entries” can be added to the list “active entries” using this button.

7.3.14.6 << Remove

Removes marked entries from the list “active entries”.

7.3.14.7 Up /\

Moves a marked entry up in the list „active entries“.

7.3.14.8 Down \/

Moves a marked entry down in the list „active entries“.

7.3.14.9 Create XML Output

If this is checked the fields will change like in the image below. The “Index export settings” become the “XML index export settings”.

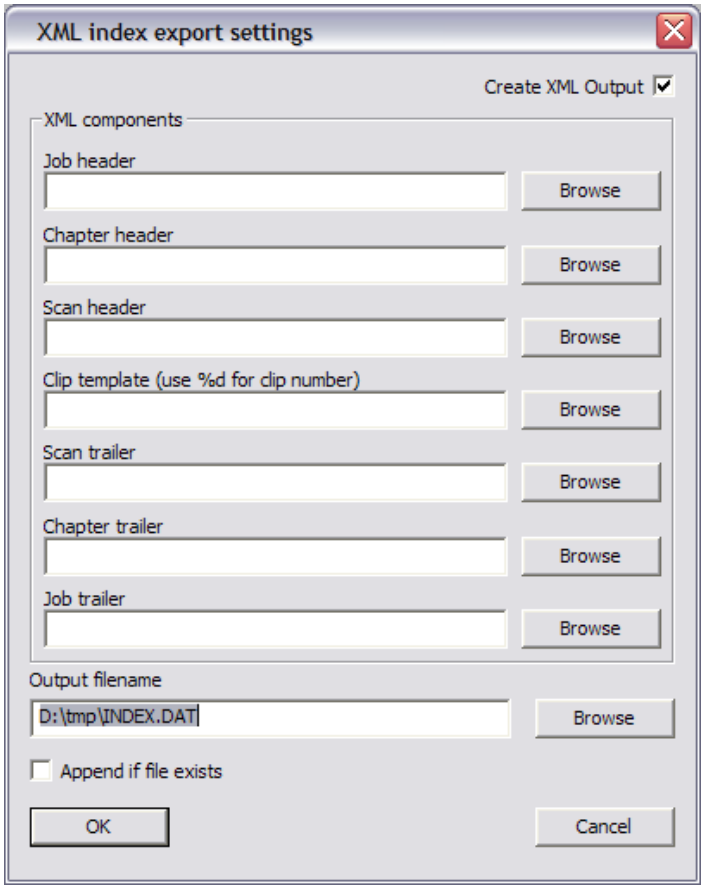


Figure 49: Dialog „XML Index Export Settings

The creation of the XML-file is done by using a couple of template files that have to be declared here. The “Job header” is the file that describes the beginning of the XML-file. At the beginning of the output this file is copied. In doing so a couple

of placeholders are replaced (see below) with a current value. The “Scan header” is used respectively at the beginning of each scan. The placeholders are replaced as well. The same is done for the “Scan trailer” and the “job trailer” that are included at the end of the respective section. For each image in the job the “clip template” is used. If you want to use different templates for different clips you can include a %d into the filename which is then replaced with the respective clip number. If no %d is in the “clip template” the same file is used for all defined clips.
If a chapter head or trailer is specified Omniscan searches for a chapter specific meta data entries saved together with the image. If the value of this entry changes from one image to the other a chapter head and/or trailer is included into the output. If a scan head or trailer is specified too this is done only between scans. So, if you want a chapter change between to images from the same clip (left side old chapter, right side new chapter) the fields for scan header and scan trailer have to be empty. Also it is recomended to use only one chapter specific meta data entry.

Output filename specifies where Omniscan should put the XML-file. If no absolute path is used (something like c:\example...) the file is created in the job directory. It is recommended to use something like „index.xml“.

The Platzhalter in the XML components (Templates) are:

```
%pSerial%              Serialnumber of the XML creation
%pClipCounter%         Counter for each single image
%pScanCounter%         Counter for the scans
%pPaginator%           Paginator
%pWidth%               Image width
%pHeight%              Image height
%pResolution%          Resolution of the image
%pFilename%            Filename (without Pfad)
%pUser%                Logged in user
%pComputer%            Current computer name

// Current date and time
%pYear4%               Year 4-digits
%pYear2%               Year 2-digits (without century)
%pDay3%                Day of the year 3-digits
%pMonth%               Month 2-digits
%pDay%                 Day 2-digits
%pHour%                Hour 2-digits
%pMinute%              Minute 2-digits
%pSecond%              Second 2-digits
%pMilli%               Milliseconds 3-digits

// file time of used image
%pfYear4%              Year 4-digits
%pfYear2%              Year 2-digits (without century)
%pfDay3%               Day of the year 3-digits
%pfMonth%              Month 2-digits
%pfDay%                Day 2-digits
%pfHour%               Hour 2-digits
%pfMinute%             Minute 2-digits
%pfSecond%             Second 2-digits
%pfMilli%              Milliseconds 3-digits
```

Use a introductory %p, a keyword and a closing % sign. The whole placeholder is replaced by the respective meaning. If a %p without closing % or a unknown

placeholder shows up Omniscan gives you a error message while trying to create the XML-file.

Additionally you can use placeholders for a meta data entry defined inside Omniscan. Use as usual a %m, the name of the meta data entry and a closing % sign. Example: %mChapter% is replaced with „Contents“, „Chapter 1“, „Chapter 2“ and so forth, depending on the entries saved together with the image.

7.3.14.10 Output file name

Here the name (including the complete path) of the output file is entered directly or supported by clickking to the button “search”.
If the output file is already existing with the job termination the user will be asked whether he wants to attach or write over. If the check mark is set at “attach if file already exists” this query is dropped and the file will always be attached.

7.4 Job completion

Images scanned with OMNISCAN 12 are automatically saved in a job file (see *5 Quick* Introduction*)*.

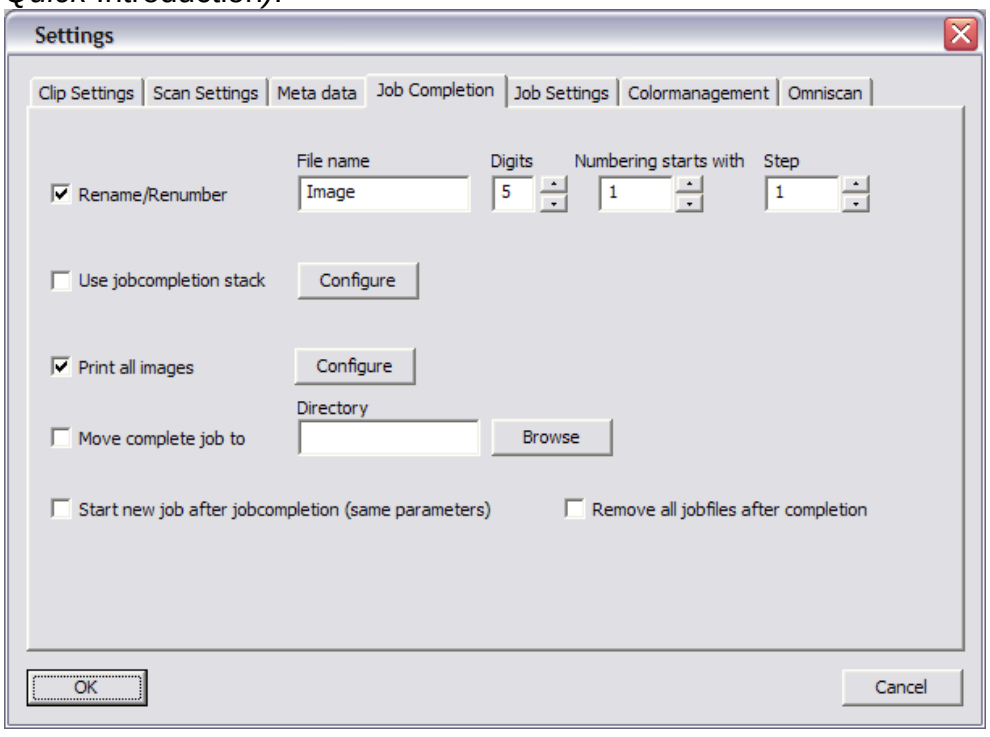


Figure 50: Index card „job completion “

It can be set with this index card whether and, if yes, how all these images are being processed with the job termination.
(Provided that for the list or lists with the image processing tools to be used „only use with job termination“ has been selected (see *7.1.33 Image* processing), the working off these lists takes place at first with the job termination. Then the settings selected here are used).
The following options are available:
(The sequence from above to below corresponds with the sequence, with which the job terminations are used).

7.4.1 Renaming

There are two options offered for the „renaming/renumbering“.
1. A serial number, which is incrementing all images, is inserted to the file name, which can arbitrarily be selected.
2. One or two numers are inserted to the file name, which can arbitrarily be selected. One of the numbers counts the scan, from which the clips have been gained. The other number increments the individual clips, which is starting from the beginning for each scan.
The options can be realized with the following settings:

7.4.1.1 Numbering starts

The numbering of the images starts with the number displayed or entered here.

7.4.1.2 Increment

The numbering will be incremented with the increment entered here.

7.4.1.3 Digits

The number of digits of the numbering can be indicated here, which can be completed with “leading zeros”, if necessary.

7.4.1.4 File name

Here the file name is entered, to which a numbering can be attached due to the predefined values.

In addition the following options are available for a free placing of the numbering and a distinction of the numbering according to clip and scan:
To increment the images one by one and to select the placing of the numbering freely, the file name must have the following form:

„arbitrary or no text“%n“*arbitrary or no text*“.

„%n“ is the token for the numbering.
I.a., the token “%n“ must be attached to the file name at an arbitrary place.

Example:
The entries

Figure 51: Setting „rename“ for partial incrementing

result in the following names with 9 clips:

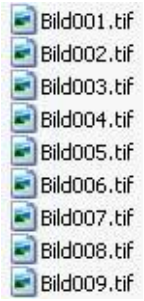


Figure 52: File names with partial incrementing

To increment individually first the scan from which the clips have been gained and then the clips of each scan, the file name must have the following form.
„arbitrary or no text“(%s or %c)“arbitrary or no text“(%c or %c) „arbitrary or no text“.
„%s“ is the token for the numbering of the scan.
„%c“ is the token for the numbering of the clips.
I.a. the tokens „%s“ and „%c“ must be added to the file name at an arbitrary place and in an arbitrary sequence.

If %s is used, %c must also be used. %c may be combined alternatively with %s or %n. If file names are occuring twice with that (e.g. by automatic page separation), an “a” will be attached to the second file name to get a definite file name.

An example:

The entries

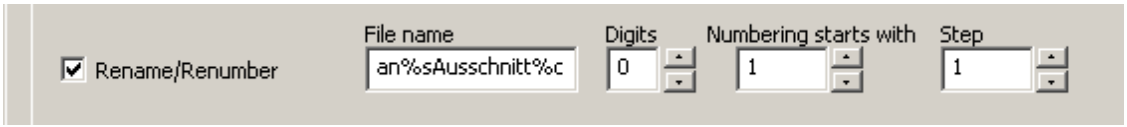


Figure 53: Settings „rename“ for stepped incrementing

(complete entry in the field **„file name“: „Scan%s_Auschnitt%c“**)
result in the following names:

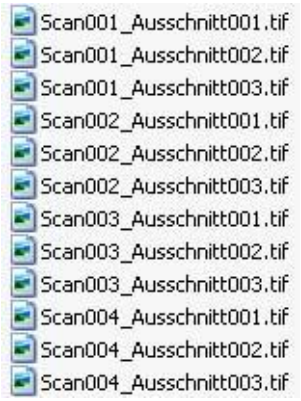


Figure 54: File names with stepped incrementing

Number of digits

It is possible to combine the token for the numbering („%n“,“%s“,“%c“) with a specification about the number of the leading zeros.
The specification has to be placed between the “%” and the letter „n“, „s“oder „c“. It has the form “0-number of leading zeros”.
An example:
“%04n” means that the number will consist of 4 digits.
The numbers “1”, “7”, “12” and “100” will be displayed as „0001“, „0007“, “0012” and „0100“.
If you supply neither %n,%s nor %c and the number of digits is set to 0 (direct entered) then no numbering occurs. To omit repeated filenames a meta data has to be part of the filename. Its up to the user to make sure that all files will get different names and don’t overwrite each other. This can be eased e.g. by using automatic counting (checkbox “count”) meta data entrys.

More tokens

Additionally it is possible (>= OS12.2) to use the tokens „%C“,“%P“ and “%S“.
%C is the chapter number. It is counted similar to the scannumber %s, but increased only on a chapter change. The token %S belongs to this. It is the page number inside a chapter. With this you can have chapters with independent numbering or scan different material into one job and distinguish the various components afterwards.
%S is the sheet number. This number is increased if the side mode of the according clip changes from left to right. So the front and back page of a sheet can get the same number which is necessary for instance for the recto/verso numbering scheme.

Meta data

With the renaming the meta data may be used as a part of the file name. For this purpose the token %m<Metaname>% must be included to the file name. There <Metaname> stands for the name of the meta datum. The complete token will be replaced then by the value of this meta datum which is belonging to the corresponding image.

7.4.2 Use job completion stack

If this box is checked all the job completions will be done that are selected inside the dialog that shows up if the button configure is clicked. (Further details to job completions under 9 Job Terminations).

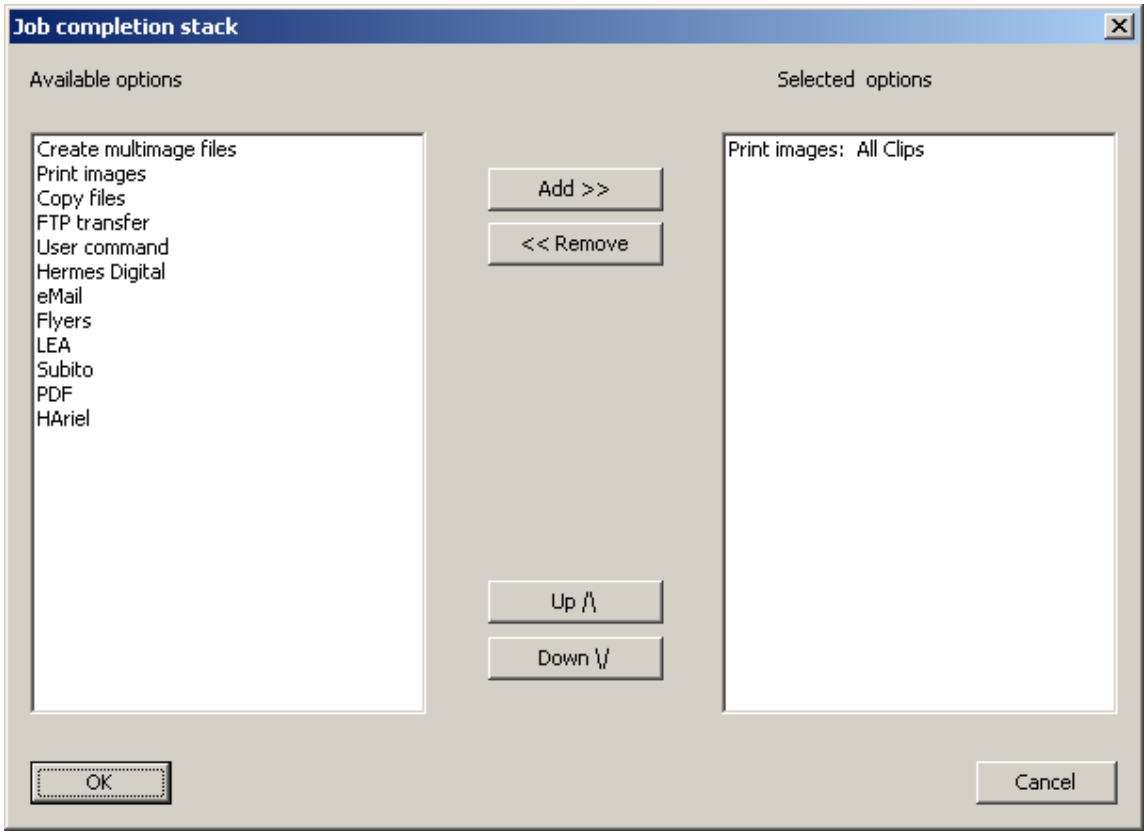


Figure 55: Dialog „Assemble job completion“

7.4.2.1 Available job completions

In the left list all available job completions are offered. (Further details to job completions under 9 Job Terminations).

7.4.2.2 Selected job completions

The job completions shown in the right list will be executed in the shown order from above to below. The order can be influenced with the up and down buttons. A click with the left mouse button on such a entry opens the according configuration dialog for this job completion.

7.4.2.3 Add >>

The in the list of the available job completions selected item can be added to the active items in the right list.
The configuration dialog of this job compleiton opens then and offers more detailed settings.
(Further details to job completions under 9 Job Terminations).

7.4.2.4 << Remove

Deletes the selcted item from the list „selected options“.

7.4.2.5 Up /\

Moves the selected entry up one step in the list „selected options“.

7.4.2.6 Down \/

Moves the selected item one step down in the list „selected options“.

7.4.3 Print all images

This is working like the job completion print image files, described in Section *9.8 Print all images*.

7.4.4 Move complete job

Here the moving of the complete job to another directory can be arranged. This option is deactivated automatically after moving the job. Otherwise the job would be moved to itself if a job completion is carried out another time (batch processing).

7.4.5 Start a new job after job termination (same parameters)

A new job is automatically created after the job termination.
The name will be given according to the same configurable rules of the Omniscan settings as that which will be offered with the creating of a new job. Those parameters will be taken over, which have lately been selected with the creating of a new job (*see 5.2 Create new job*).

7.4.6 Delete all job files after termination

All job files are (irrevocably!) deleted after the job termination.

7.5 Job Settings

Set up job specific settings here.

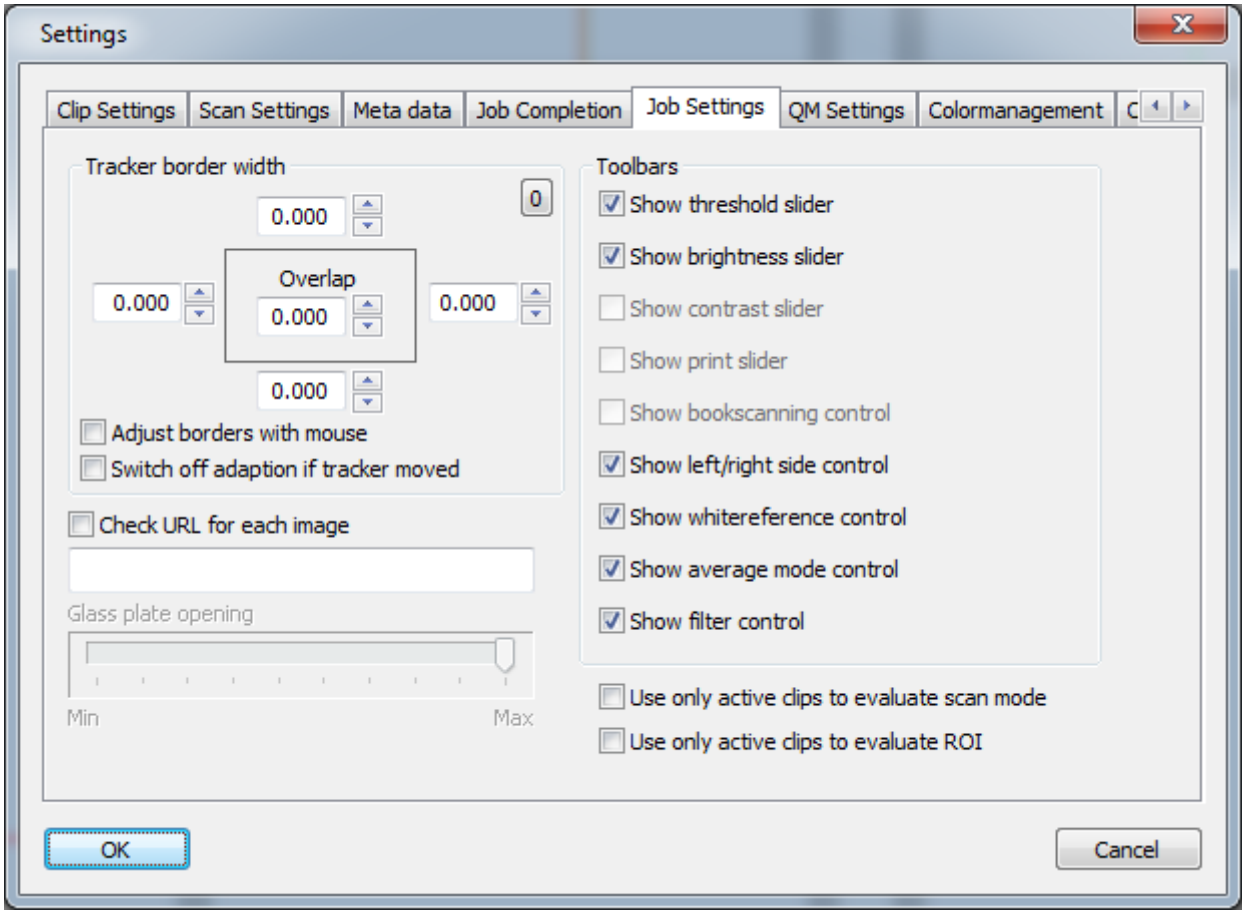


Figure 56: Dialog "Job Settings"

7.5.1 Tracker border width

If the autmatic adaption (s. Section *7.1.8 Automatic Adaption*) is active you can influence the position and size of the clip here by giving a positive value for further cutting of the clip or a negative value for including some more of the image than Omniscan decided. With the value for overlap you can decide how much of the left side will be visible on the right side and vice versa. A overlap of 0 cuts the two clips without any overlap, a negative value creates a gap between the sides.

7.5.2 Adjust borders with the mouse

If the tracker of the clip is changed with the mouse, the size of the border (s. Section 7.5.1 Tracker border width) is adapted in such a way that the difference between the found and the current clip is remembered as the border for the next scan.

7.5.3 Switch off adaption if tracker is moved

If the autmatic adaption (s. Section *7.1.8 Automatic Adaption*) is active it is switched off if the user moves thee clip frame around and so forces a absolute

positioning.

7.5.4 Use only active clips to evaluate scan mode

Normaly the resolution and color mode of the scan is evaluated from all defined clips. So you can activate a clip without the need of a rescan. If such a clip is used only rarely the scan speed could be increased by checking this checkbox. Then the scan mode is evaluated only from the active clips and the scan is done with lower resolution or in grayscale instead of color.

7.5.5 Use only active clips to evaluate ROI

The same as above (7.5.4 Use only active clips to evaluate scan mode) is used for the determination of the ROI (Region of interest = Used scan area).

7.5.6 Check URI for each image

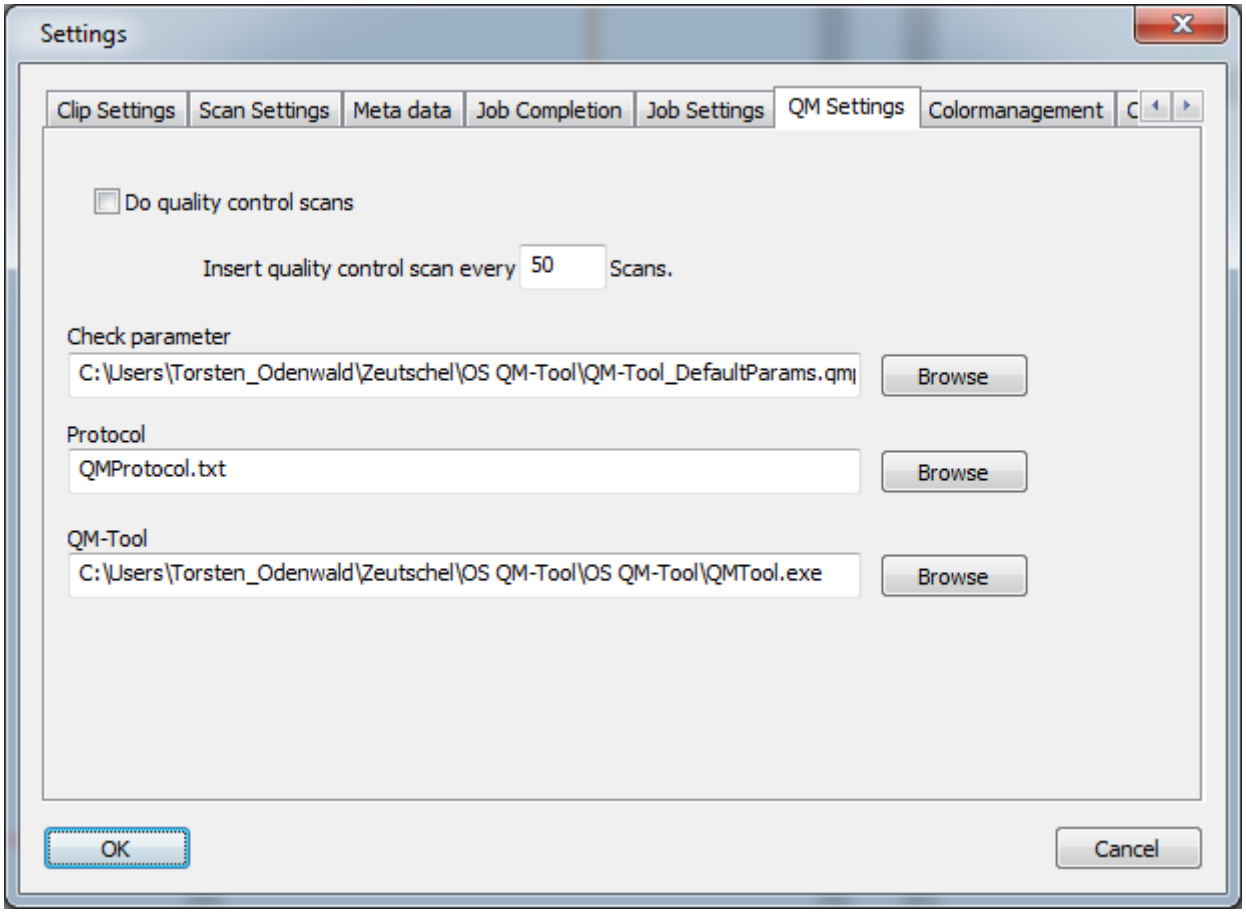
Omniscan can request data from a external system (*9.1 Hermes digital*), by giving a respective URI here. For this purpose Omniscan has to tell something about the current job. This can for instance be done by using a barcode recognized by the barcode filter (*8.1.17 Read barcode*) or some manual entry. Normaly you would request this data on time after the first scan (with barcode). If this checkbox is checked this request is carried out for each image. This data can then be shown in a separate window on the screen if defined as meta data (*7.3 Meta data*). It is also possible to set up the used language for the OCR (***Fehler! Verweisquelle konnte nicht gefunden werden. Fehler! Verweisquelle konnte nicht gefunden werden.***).

7.5.7 Toolbars

With these checkboxes you can switch on and off all available toolbars (*10.5 Symbol bar (toolbar)*). All curently not usable toolbars are grayed out.

7.6 QM Settings

Here you can set up the automatic scanner quality control.



7.6.1 Do quality control scans

This defines whether the Omniscan regularly request to put the UTT on the Scanner, creates a scan from that and passes this image over to a quality check program like the Zeutschel QM-Tool.

7.6.2 Insert quality control scan every n Scans

This determines who often such a quality control scan is done.

7.6.3 Check parameter

This is the name of a file that contains the check paramters for the QM-Tool.

7.6.4 Protocol

This is the file that is used to gather the protocol text from the QM-Tool. The file name is supplied as parameter to the QM-Tool.

7.6.5 QM-Tool

This ist he filename (incl. path) of the executable that is used for the check of the qualtiy control scan.

8 Image Processing Tools

8.1 Imaging kit

The imaging kit includes the following image processing tools.

8.1.1 Median filter

8.1.1.1 Purpose

The median filter is used for the reduction of the image noise and it may result in a clear improvement of the image quality. With gray scale images its use is completely uncomplicated, with color pictures there may be a color change.

8.1.1.2 Mode of operation

The values of the pixels in the direct environment of a pixel are sorted according to the quantity. The origin pixel value is replaced by the value in the middle of this row or, if there is a even number of pixels, the average of both values. There are two advantages by the fact, that the middle value and not the average value is used, that is no average of the number of environment pixels.
1. Ruggedness against particular deflections of pixel values, because extreme values are not considered at all.
2. Pixel values are not „invented“, but always an already existing value is taken over. By this particularly sharp edges remain mostly unchanged.

8.1.1.3 Set-up options

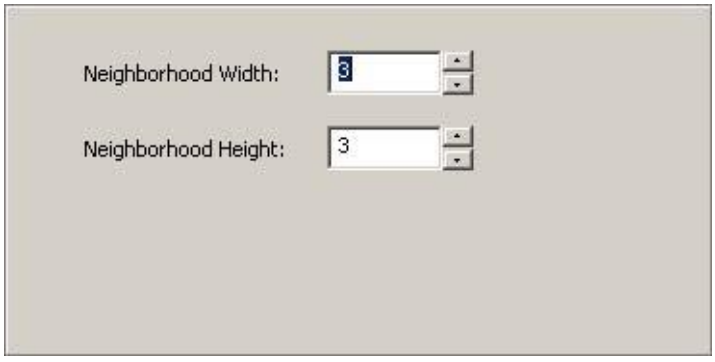


Figure 57: Set-up options „median filter“

As a rule the settings „3 and 3“ and „5 and 5“ will produce the best results.

8.1.1.3.1 Neighborhood width

Set-up of the width of environment, which is consulted for the determination of the middle value.

8.1.1.3.2 Neighborhood height

Set-up of the height of environment, which is consulted for the determination of the middle value.

8.1.2 Sharpen

8.1.2.1 Purpose

Increases the sharpness of an image.

8.1.2.2 Mode of operation

Contrasts found in an image are increased by the set-up of a darker value which is set even darker and of a light value which is set even lighter. Contrast-free areas remain unchanged.

8.1.2.3 Set-up options

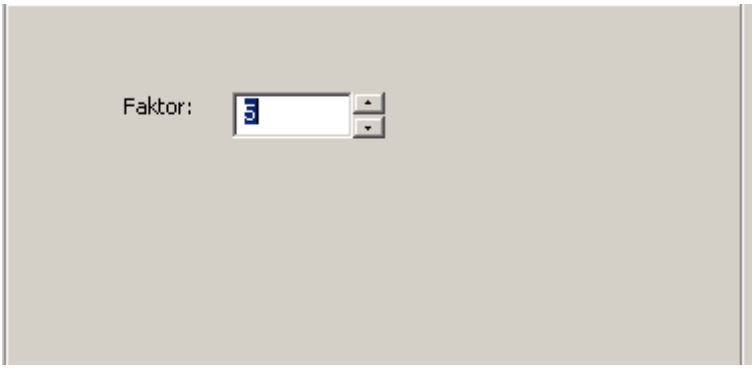


Figure 58: Set-up options „sharpen“

The settings 1 to 5 can be selected. The higher the value, the better the sharpness. With the settings 1 and 2 an area of 3 * 3 pixels is considered respectively, otherwise an area of 5 * 5 pixels. Therefore the processing is carried out much quicker with the settings 1 and 2.

8.1.2.3.1 Factor

Here the setting for the strength of the sharpening can be carried out.

8.1.3 Smooth

8.1.3.1 Purpose

It is for noise-reduction. The image seems to be more soft and so as if it would be slightly unsharp.
It is particularly suitable for the correction of high deflections, i.a. of pixel values, which exceed clearly the values of their neighbours. It is more careful as far as edges are concerned than other glazing image processing tools, i.a. it results in very low detail losses and fringements.

8.1.3.2 Mode of operation

If the value of a pixel is higher than all those of its neighbored pixels, it is set to the highest value of these neighbored pixels. If the value of a pixel is lower than all those of its neighbored pixels, it is set to the lowest value of these neighbored pixels.

8.1.3.3 Set-up options

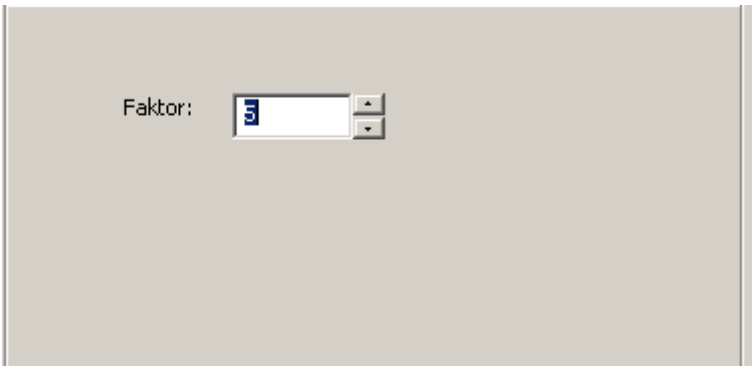


Figure 59: Set-up options „smooth“

The settings 1 to 4 can be selected. The higher the value the stronger the smooth will be. For the setting 1 „3 * 3“ pixels are considered, for the setting 2 „5 *5“ pixels, for the setting 3 „7 * 7“ pixels and for the setting 4 „9 *9“ pixels. The processing is therefore quicker the more less the value is set.

8.1.3.3.1 Factor

Here the setting for the strength of the smooth can be carried out.

8.1.4 Rotation

8.1.4.1 Purpose

Turn of the image

8.1.4.2 Mode of operation

The resulting image is increased as far as the turned image fits completely after the turning. I.a. only with turns of 90 degrees or a multiple of that the file size remains unchanged and the turn can be made undone. Turns with other angles should be only used once.

8.1.4.3 Set-up options

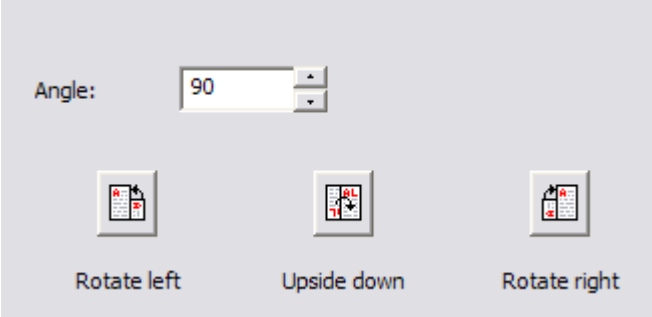


Figure 60: Set-up options „rotate“

An arbitrary angle (number of degree) can be entered, for which the image shall be turned. The three buttons in the lower part of the window make it more easy to rotate the image left or right (-90 or 90 degrees). Also you can turn the image upside down what is the same as a rotation by 180 degrees.

8.1.4.3.1 Factor

Here the setting for the extent of the turn can be carried out.
An angle (the number of degree) is entered, for which the turn shall be carried out. Positive angles result in a clockwise turn, negative angles result in a counterclockwise turn.

8.1.5 Unsharp masking

8.1.5.1 Purpose

Mask unsharp is used contrary to its name to increase the edge contrasts. The image makes a clearly more brilliant impression after processing.

8.1.5.2 Mode of operation

The term „unsharp masking“ is derived from a procedure, which has been used with analoguous black/white films to sharpen the edges.
This procedure is repeated digitally. For this purpose differences between the original pixel values and those of a duplicate calculated „unsharp“ are calculated at first. Then these differences are added up with the original pixel values.
As a result the lower value of an edge is additionally reduced and the higher value is additionally increased. The contrast increases then.

8.1.5.3 Set-up options

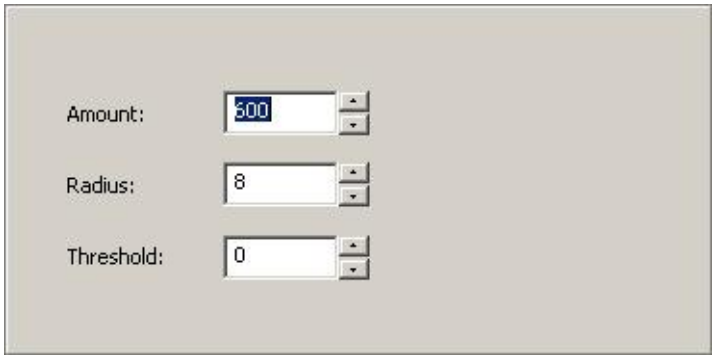


Figure 61: Set-up options „unsharp masking“

Altogether there are three configurable parameters: Quantity, radius and threshold.
The setting is much dependent from the copy and it is nearly impossible to give obligatory rules for how to achieve the best results. The most suitable values can only be determined with trial and error procedures. The pixel radius should be kept rather small there and the „quantity“ should be set as high as possible without producing a disturbing noise.

8.1.5.3.1 Quantity

Here it is set how strong the sharpening shall turn out. But the effects are within the values predefined by the parameters „radius“ and „threshold“ and they are rather for a fine setting.
Values between 100 and 999 can be set.

8.1.5.3.2 Radius

Here it is predefined how wide the range should be, which shall be taken ahead of and after the edge for the edge sharpening.
The values 0 to 32 are possible, though the high values are hardly used.

8.1.5.3.3 Threshold

Here the value is influenced by which the pixel values of the original and of the unsharp copy must be different of each other to be treated as an edge, which shall be sharpenend.
The values 0 to 255 can be set. The lower the value the higher the areas in which sharpening appears. Values above 20 might be useful only in special cases.

8.1.6 Cut

8.1.6.1 Purpose

The filter „cut“ automatically removes black borders. For this purpose the borders of the image are moved to the borders of the copy.

Figure 62: Picture before „cutting“

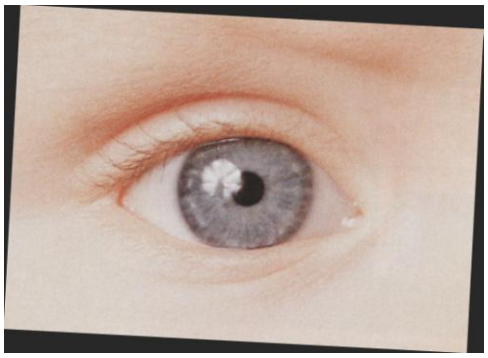
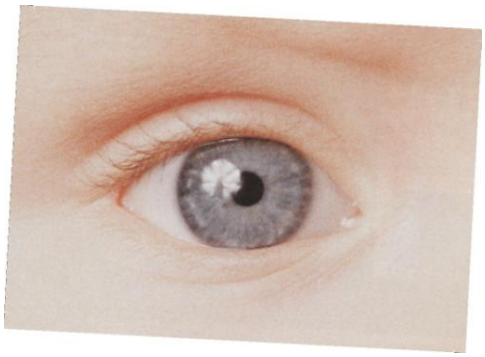


Figure 63: Picture after „cutting“



with “Fill black border”

8.1.6.2 Mode of operation

OMNISCAN 12 moves closer to the placing of the copy using the „document parameters“(see *8.1.6.3.1 Job* parameter *and 8.1.6.3.2 Document pixel*), and it cuts the black edge then using “leave edge” (see).
If the black border, which remains after the cutting of the image, shall be filled, the edges of the pattern are determined with the „edge parameters“ (*see 8.1.6.3.3 Edge threshold and 8.1.6.3.4* Edge pixel*)*.

8.1.6.3 Set-up options

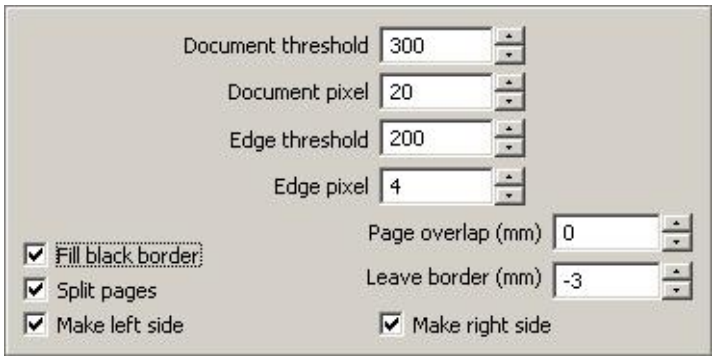


Figure 64: Set-up options „cut“

8.1.6.3.1 Document threshold

Threshold which determines when a pixel is considered as a possible part of the document. The threshold is indicated in one per thousand in relation to the level of brightness white. Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 300.

8.1.6.3.2 Document pixel

Number of pixels within a line or column, which must meet the threshold indicated above (brightness of the pixel must be greater than the document threshold or be equivalent to it), so that a line or a column can be treated as start of the copy.
Can be set from 1 to 100. If an ideal value is searched for, it is recommended to start with a value of 20.

8.1.6.3.3 Edge threshold

Threshold which determines when a pixel is considered as a possible part of an edge of the document. The threshold is indicated in one per thousand in relation to the level of brightness white.
Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 200.
This dialog entry is only be activated if the option “fill black border” has been selected (see 8.1.6.3.5 Fill black border).

8.1.6.3.4 Edge pixel

Number of pixels within a line or column, which, laying directly side by side (line) or among each other (column), must meet the threshold indicated above (brightness of the pixel must be greater than the edge threshold or be equivalent to it), so that an edge of the copy is considered as recognized.
Can be set from 1 to 100. If an ideal value is searched for, it is recommended to start with a value of 4.
This dialog entry is only be activated if the option “fill black border” has been selected (see 8.1.6.3.5 Fill black border).

8.1.6.3.5 Fill black border

Results in the replacement of the black image background by a white one.

8.1.6.3.6 Split pages

The image is divided into two halves of the same size, which are saved in two files.

8.1.6.3.7 Create left page

If the option “split pages” (see 8.1.6.3.6 Split pages) has been selected, then there is the option that an image will be created of both halves or of only one of the two halves. If a check mark has been set for this dialog entry, an image of the left half will be created.

8.1.6.3.8 Create right page

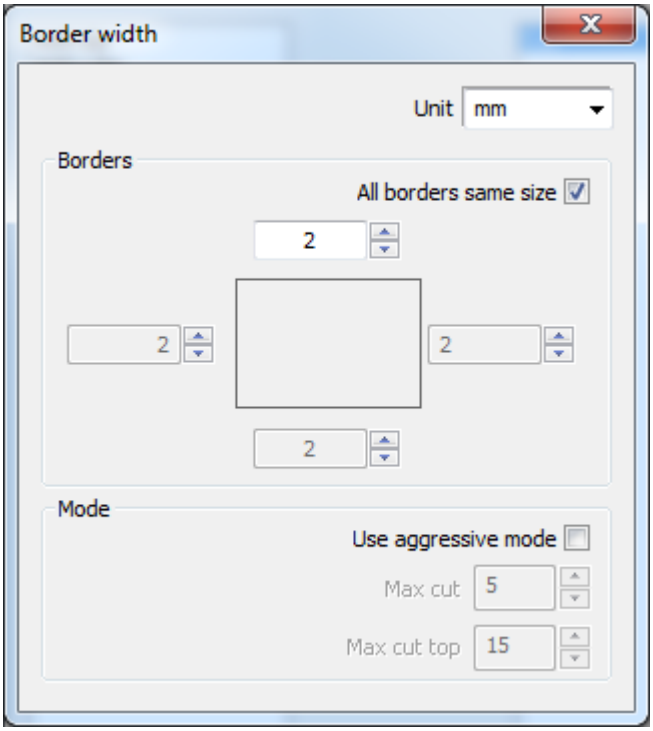
If the option “split pages” (see 8.1.6.3.6 Split pages) has been selected, then there is the option that an image will be created of both halves or of only one of the two halves. If a check mark has been set for this dialog entry, an image of the right half will be created

8.1.6.3.9 Page Overlay

If the option “split pages” has been selected, it is possible to set here by how much millimeters both halves of the image shall be overlapped to each other.

8.1.6.3.10 Leave border

If this option is checked a dialog shows up where you can set up the border for each side individually. Using of negative values cuts even more of the image.



8.1.6.3.11 Mode

If the option “Use aggressive mode” is enabled the cut function tries to cut off all surrounding dark elements to create a nice looking result. Max cut tells how many units may be cut of additional to the normal sheet edge finding. For the upper edge there is a separate value because on this edge the bookfold is visible and so a little more has to be cut off sometimes.

8.1.7 Deskew

8.1.7.1 Purpose

Deskew is for the automatic straightening of pictures. The scan copy is turned so that the borders form a parallel with the image borders. It is often an unjustifiable effort to place the scan copy so that it is being scanned exactly straight. A post-processing is often more effective.
(For deskew manually see *10.1.2.3 Deskew manually*)

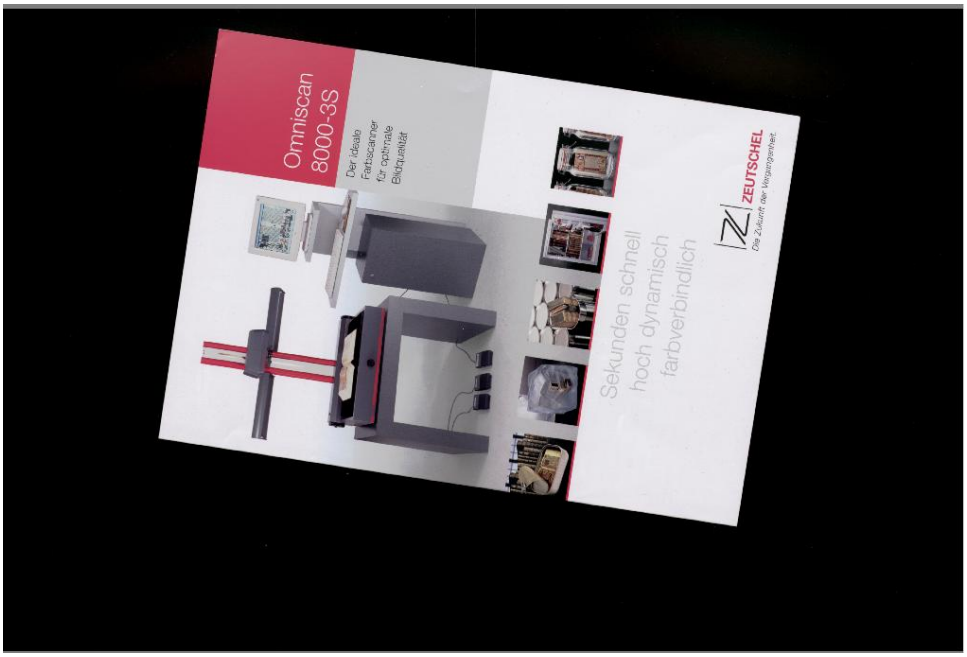


Figure 65: Picture before „deskew“

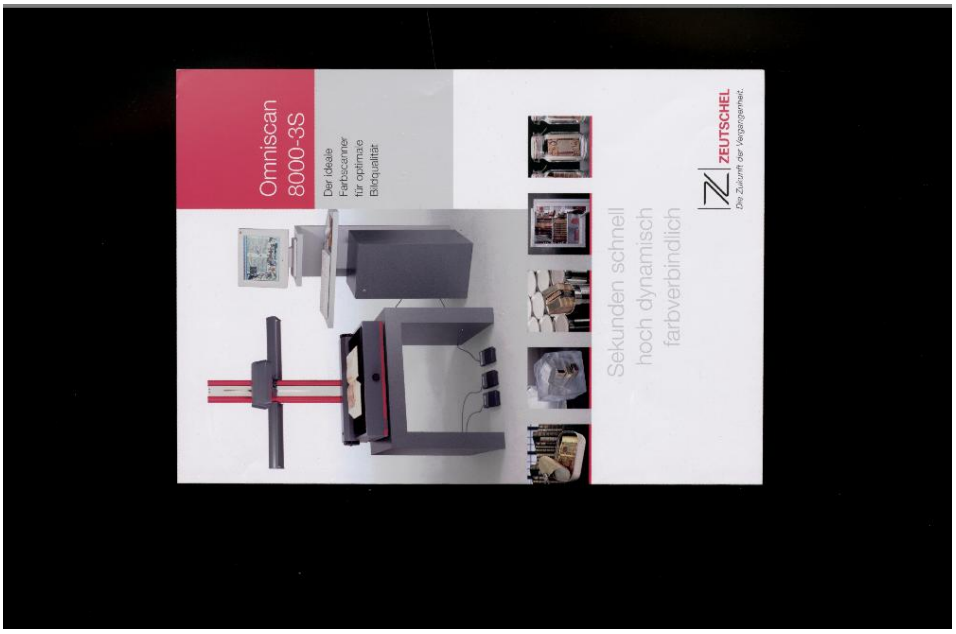


Figure 66: Picture after „deskew“

8.1.7.2 Mode of operation

OMNISCAN 12 moves closer to the placing of the scanned document with the „document parameters“ (see *8.1.7.3.2 and 8.1.7.3.3 Document pixel*). Then the upper border of the copy is determined due to the „edge parameters„ (*see 8.1.7.3.4 Edge threshold and 8.1.7.3.5 Edge pixel*). This upper border is then parallelized with the upper image border.

8.1.7.3 Set-up options

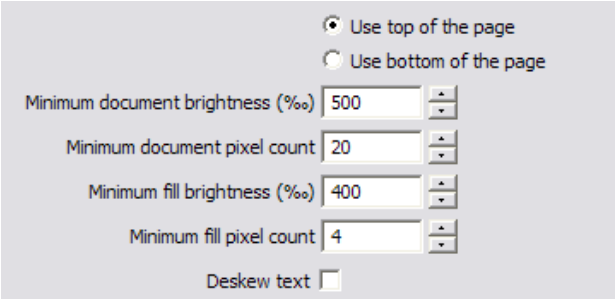


Figure 67: Set-up options „deskew“

8.1.7.3.1 Use top/bottom of the page

To deskew the document one border (edge) is searched for. The document will then be rotated so that this edge is horizontal. You can choose here whether to use the top or bottom of the page for that.

8.1.7.3.2 Document threshold

Threshold which determines, when a pixel is considered as a possible part of the document. The threshold is indicated in one per thousand in relation to the level of brightness white.
Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 300.

8.1.7.3.3 Document pixel

Number of pixels within a line or column, which must meet the threshold indicated above (brightness of the pixel must be greater than the document threshold or be equivalent to it), so that a line or a column can be treated as start of the copy.
Can be set from 1 to 100. If an ideal value is searched for, it is recommended to start with a value of 20.

8.1.7.3.4 Edge threshold

Threshold which determines, when a pixel is considered as a possible part of an edge of the document. The threshold is indicated in one per thousand in relation to the level of brightness white.
Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 200.

8.1.7.3.5 Edge pixel

Number of pixels within a column, which, laying directly among each other, must meet the threshold indicated above (brightness of the pixel must be greater than or be equivalent to the edge threshold), so that an edge of the copy is considered as recognized.
Can be set from 1 to 100. If an ideal value is searched for, it is recommended to start with a value of 4.

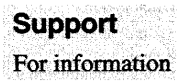
8.1.7.3.6 Deskew text

If this box is checked Omnican tries to deskew the text. Otherwise the top or bottom border is used for that (see section *8.1.7.3.1 Use top/bottom of* the page*)*.

8.1.8 Despeckle

8.1.8.1 Purpose

Removes deflections of pixel values and is therefore for noise reduction. May improve clearly the readability.
Can only be used in the black/white 1 bit mode.

Before: 

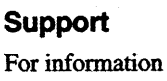
Afterwards: 

Figure 68: Picture improvement by despeckle function

Mode of operation
A 3 x 3 median filter is used, where all 9 pixel values are set to the median.

8.1.8.2 Set-up options

None

8.1.9 Flip

8.1.9.1 Purpose

Reflects the copy

8.1.9.2 Mode of operation

The opposite lines or columns are exchanged. I.a. with the vertical reflecting the right outside column is exchanged with the left outside column, the second from the right is exchanged with the second from the left etc.

8.1.9.3 Set-up options

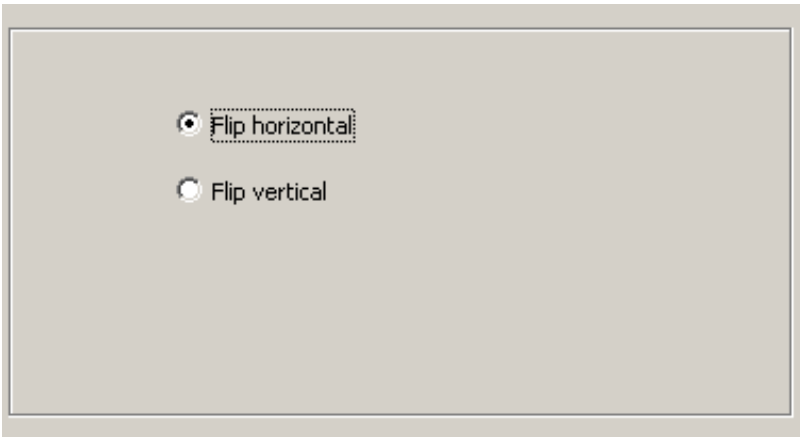


Figure 69: Set-up dialog „flip“

8.1.9.3.1 Horizontal flip

The copy is reflected horizontally.

8.1.9.3.2 Vertical flip

The copy is reflected vertically.

8.1.10 Inverting

8.1.10.1 Purpose

Inverting of the image.

Figure 70: normal picture

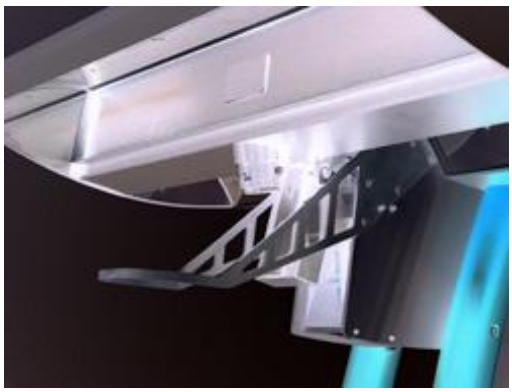


Figure 71: inverted picture

8.1.10.2 Mode of operation

Pixel values are converted to their counterpart. With black/white 1 bit images black values are changed to white values and vice versa. With 8 bit images the value 255 is changed to the value 0, the value 254 is changed to the value 1 and so on.

8.1.10.3 Set-up options

None

8.1.11 Stamp

8.1.11.1 Purpose

Inserts an image (stamp) or a text to an image. Makes possible e.g. the indication of scans with the name of the institution that has created the scans.

8.1.11.2 Mode of operation

The image, which is inserted, i.a. the stamp, is converted to the bit depth of the image, to which it shall be inserted. Then the pixel values are calculated in a way that can be selected with the selection options of the „merge mode“.
When a text is being entered, a separate image will be created from it before stamping.

8.1.11.3 Set-up options

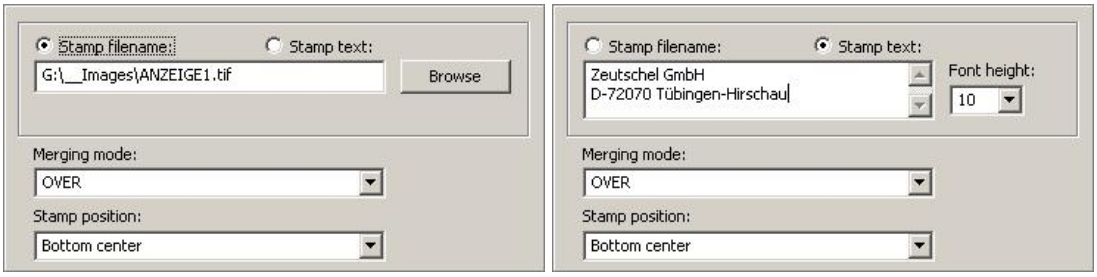


Figure 72: Set-up options „stamp“

8.1.11.3.1 Stamp file name

Here a TIFF file must be either entered with the image, which is to be inserted as a stamp, or it must be selected with the browser.
(Short instructions how to create a Tiff file with an arbitrary text by the Windows tool „Imaging“ can be found in the appendix of *14.2 Stamp creation with* „imaging“).

8.1.11.3.2 Stamp text

Here the height of sign can also be selected apart from the entry of an arbitrary text. A temporary image will then be created from this text. There a type with a constant width of sign is selected. If the resulting image is greater with its measures than the image, in which it shall be inserted as a stamp, the image created from the text will be reduced in size. Nothing will be cut off from the text. But the height of sign will then not be the same as specified before.

8.1.11.3.3 Merge mode

Here the procedure is determined, with which the stamp is inserted.
The standard procedure is „OVER“. This mode results in the fact, that the stamp replaces the stamp place completely.

Figure 73: Merge mode „OVER“

The other procedures are different depending on the fact, what bit depths the copy and the stamp have.
If the stamp is a 1 bit black/white image, there are the following effects e.g.:

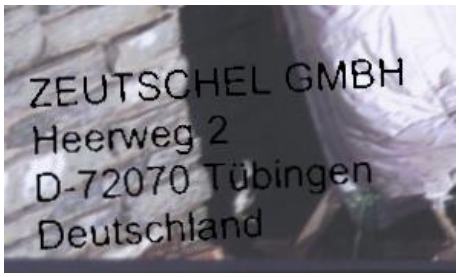


Figure 74: Merge mode „AND“

Figure 75: Merge mode „ADD SIGN CENTERED“

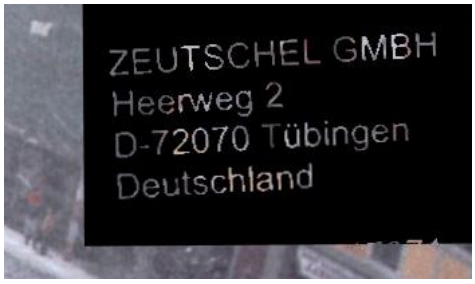


Figure 76: Merge mode „DIVIDE“

Figure 77: Merge mode „XOR“

8.1.11.3.4 Stamp position

Here the positioning of the stamp is carried out. The image borders above and below can be selected, each on the left, centered and in the middle. Also the stamp can be placed below the image. In this case a picture with the selected color and the inserted stamp will be added to the image.

8.1.12 Automatic printing

8.1.12.1 Purpose

With the automatic printing an image is printed without any other action of the user directly after the scan. With that the scanner additionally works as a „copier“.

8.1.12.2 Mode of operation

The image or the images are printed with the standard printer and its standard settings in view of the set-up options described below.

8.1.12.3 Set-up options

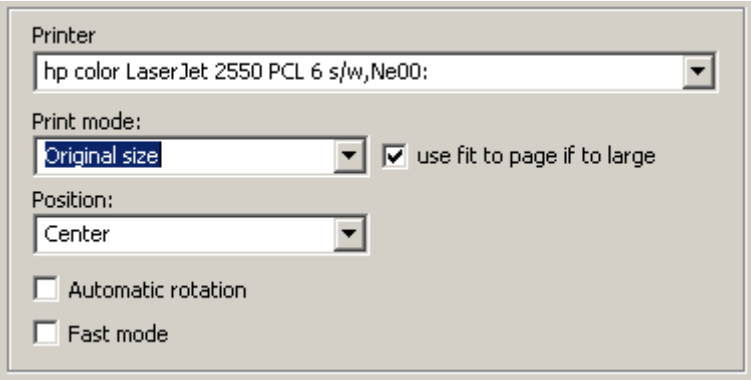


Figure 78: Set-up options „automatic print“

8.1.12.3.1 Printer

Select the desired printer:

8.1.12.3.2 Print mode

Two options can be selected, how to handle the size of the image regarding the paper size:
1. Adapt to paper size.
The image is printed as large as possible, i.a. so that it covers the most possible surface of the paper. If the option „automatic rotating“ is activated, then the alignment of the image, that is „portrait format“ or „landscape format“, is selected in such a way, that the optimal image size is used for printing. Otherwise the alignment of the image remains unchanged.
2. Original size
The image is printed with its original size. Activating of the „use fit to page if too large“ reduces the image size to the paper size if necessary. The aspect ratio isn’t changed.

8.1.12.3.3 Position

Here is selected where the image is placed on the paper.

8.1.12.3.4 Automatic rotating

If the print mode „adapt to paper size“ is selected, this option results in the fact, that for the optimization of the print size the alignment of the image, that is „portrait format“ or „landscape format“, is also selected correspondingly.

8.1.13 Binarization

8.1.13.1 Purpose

Binarized images have the least possible storage requirements.
A binary image is a black-and-white image. Each pixel is therefore black or white. For the storage of this information only one „bit“ is required. (It is 8 bit for the possible pixel values 0 to 255 with a gray scale image, and it is 8 bit for each color channel, that is altogether 24 bit per each pixel with a RGB color image).
In addition very high compression rates can be achieved with a black-and-white image.
Furthermore some originals are readable optimally as a black-and white image, since they have a maximal contrast.
The mode „black-and white“ is available alreday with the selection of the color depth for the individual clips (see *7.1.28 Colors/gray levels*).
The use as a filter is useful, if image processing shall be carried out before the binarization starts, which is not possible with a binary image.
These are: Orthoscan, unsharp masking, sharpen, smooth, median filter, cropping, deskew and the graduation curve.
The use of these filters and the following binarization can be automated with the help of the filter stacks (see *7.1.33 Image processing*))

8.1.13.2 Mode of operation

Pixel values below the threshold are set to „black“, pixel values above and equal to the threshold are set to „white“.

8.1.13.3 Set-up options

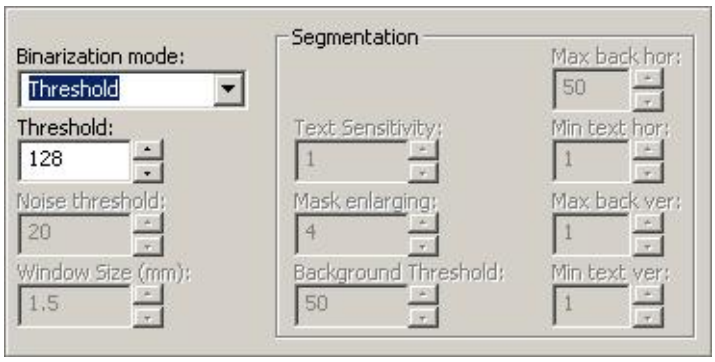


Figure 79: Set-up dialog „binarization“

8.1.13.3.1 Binarization mode

Photo mode
This is a algotithm that is optimized for dealing with pictures. For that a dithering is used, that is simulating grayscales by setting more or less black points.

Segmented
Omniscan devides the image in a picture and a text section using the contrast

between pixels. The picture is binarised using the photo mode (dithering) and the text section is binarised using optibin (dynamic thresholding).

Optibin
Here the binarisation is not done with a constant threshold, but with a threshold that Omniscan determines from the neighborhood pixels. With this you can also binarise images that are created with different brightness in different areas. Also there is no need to give a binarisation threshold, this is detected automatically. This algorithm is optimzed for use with a OCR.

Optibin+
Here like in the segmented mode the image is devided into picture and text, but the line structure of a text is used as criterium.

8.1.13.3.2 *Threshold*

Setting to determine, which pixel values will be converted to „black“ and which will be converted to „white“. If the „Ext.“ Switch is activated the the threshold given in the toolbar is used (*10.5 Symbol bar (toolbar)*).

8.1.13.3.3 Noise threshold

Every paper that is scanned has a certain structure that can be seen in the scan. This structure is more obvious the more fibered the paper is. To suppress this structure in the binarised image you can increase the noise threshold.
For normal paper a value of 20 will give good results. For recycling paper or very fibered paper the threshold should be increased.

8.1.13.3.4 Window size

Optibin checks inside a small window around the pixel for the necessary binarisation threshold. Bigger windows allow a better adaption to brightness changes, but need more time. Values in the range of 1 to 1.2 mm give best results normally.

8.1.13.3.5 Text sensitivity

This value influences the necessary contrast of a object that is detected as text. Higher values more easily declare a pixel as part of a text, lower values would lead to detecting it as part of a picture. A value of 20 is recommended.

8.1.13.3.6 Mask enlargement

This value increases the area around the pixels found to be text. Usable are values from 0 – 4. A value of 2 gives best rusults normally.

8.1.13.3.7 Background threshold

This tells about what brightness a pixel has to have to be considered as background. A value of 150 gives best results normally.

8.1.14 Graduation curve (color)

8.1.14.1 Purpose

The graduation curve is a medium to correct brightness and contrast very exactly. Since this is possible for each color channel individually, a gray balance can be carried out with the help of the graduation curve.

8.1.14.2 Mode of operation

Arbitrary target values (0 up to 255) can be assigned to all pixel values (0 up to 255) for each color channel independently from each other. The pixel values of an image, to which the graduation curve has been applied, are replaced by the target values.

8.1.14.3 Set-up options

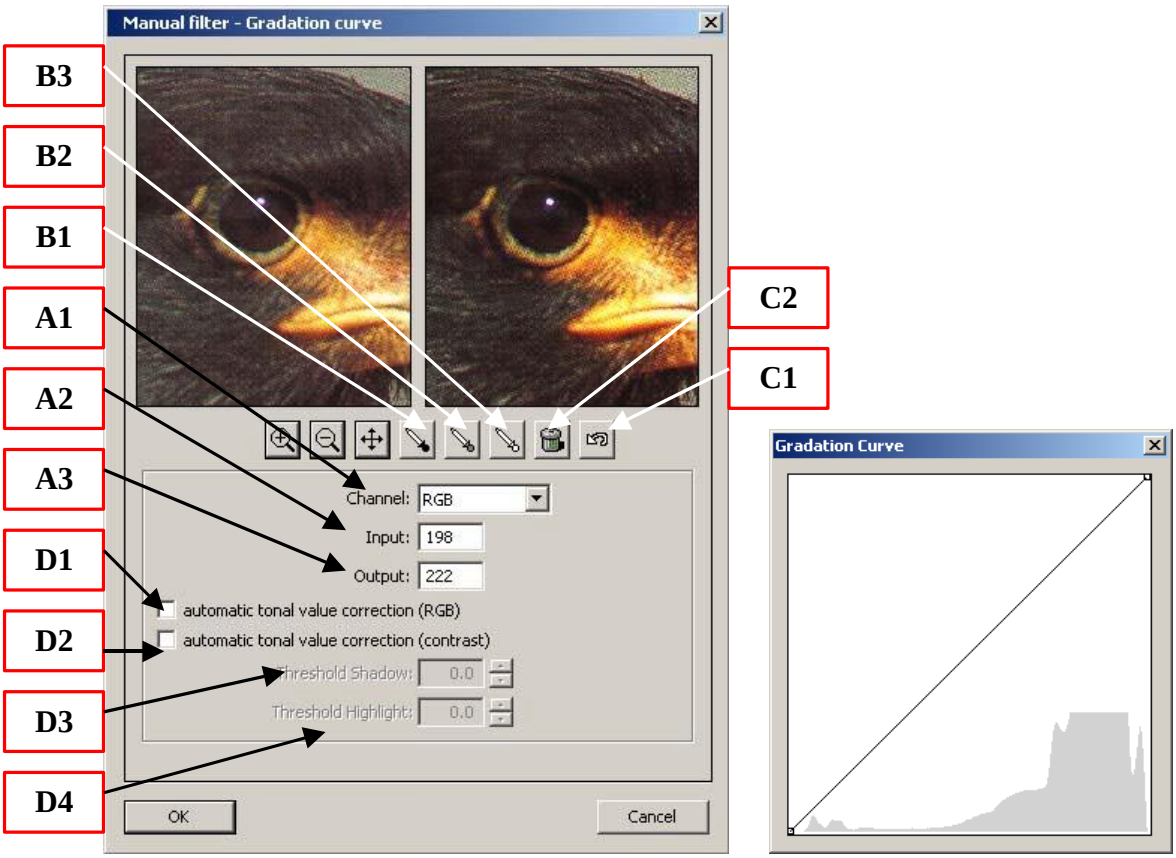


Figure 80: Set-up dialog „graduation curve“

The set-up dialog „gradation curve“ offers the possibility to determine the graduation curves with three function buttons, automatically and with an automatic system.

A) Function button

Set black point (**B1**)
Set gray point (**B2**)
Set white point (**B3**)

In detail:

1. Set black point

After the button „set black point“ (**B1**) has been clicked to, the mouse cursor turns to a pipette, as soon as it is in the original clip.
If the left mouse key is being clicked to then, the point on the top of the pipette will be the black point.
That means the following:
a) An average value is being determined from the pixel values of the selected surroundings and from those of the direct surroundings. All pixel values, which have exactly this average value or which are smaller than the value of this point, will be set to the value „0“. This will be done for each color channel individually. Therefore the adaptation of the graduation curve is only visible in the graduation curve of the individual color channels.
b) The pixel values, which are higher than that of the black point, are stretched to the complete tonal value range. Therefore gaps are produced in the new histogram.
An example:

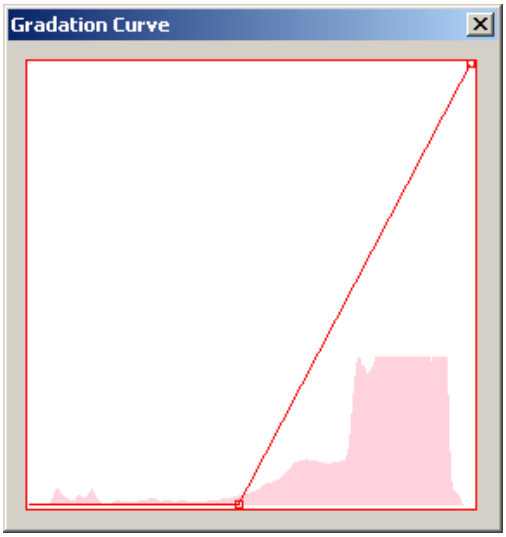


Figure 81: Graduation curve „red“ with set black point

On the x-axis (horizontal line) of the coordinate system the initial value and on the y-axis (vertical line) the necessary target value is being recorded. In addition the current histogram of the selected image can be seen. Almost all pixel values can be found in the lights, that is in the upper range.
The black point is set to the value „120“, i.e. this and all lower values will be set to the value „0“.
(The dialog fields „input“ (**A2**) and „output“ (**A3**) indicate, which exact target value is assigned to which exact initial value, when the cursor is placed appropriately).

The other target values „1“ up to „255“ are assigned then to all other values.
If this graduation curve is used and the filter „graduation curve“ is opened again then, the resulting gaps can be seen in the new histogram.

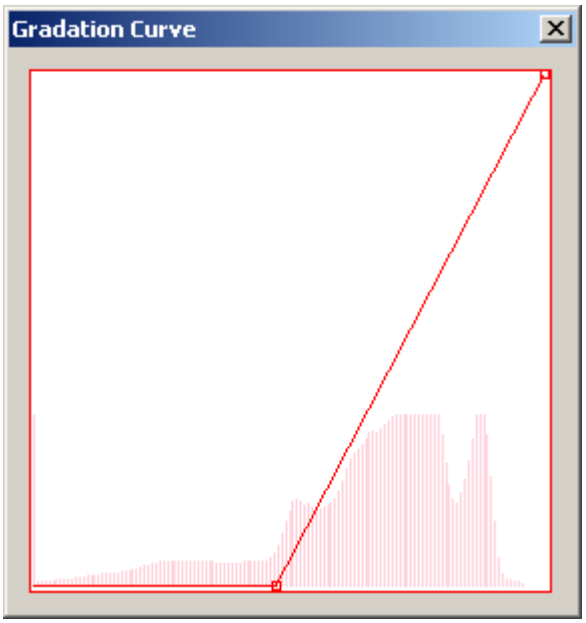


Figure 82: Graduation curve „red“ with histogram after black point has been used

2. Set gray point

After the button „set gray point“ (**B2**) has been clicked to, the mouse cursor turns to a pipette as soon as it is in the original clip.
If the right mouse key is being clicked to then, the point on the top of the pipette will be the gray point.
As many as you like gray points can be set.
The setting of a gray point means the following:
a) An average value is being determined from the pixel values of the selected point and from those of the direct surroundings. This average value is the common target value of all individual values, which the individual color channels of the selected gray point have, i.e., the selected point turns gray (= identical values for red, green and blue), independent of the color it has had before. This adaptation of the graduation curve is also only visible in the graduation curves of the individual color channels.
b) The graduation curves of the individual color channels will be adapted in such a way, that little jumps are made by the new resulting allocations of initial values and target values, if possible. The used tonal value range remains nearly constantly with that, but also here little gaps are being produced in the histogram.

An example:
A pixel with the RGB-values (140, 144, 150) is selected as gray point.
This gray point, obviously with a certain blue cast, is automatically set to the values (145, 145, 145).
The resulting graduation curves are as follows:

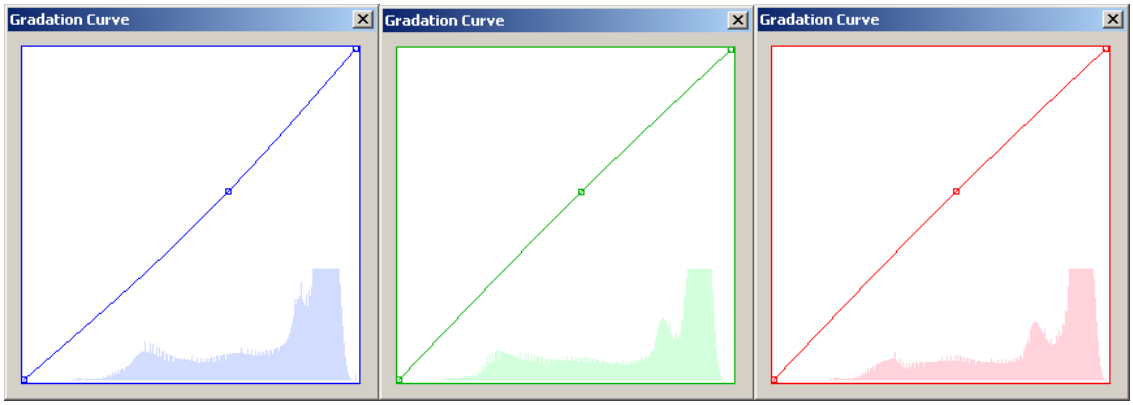


Figure 83: Graduation curves after the gray point has been set

The red value is raised slightly, correspondingly the resulting curve has a very flat loop to the left above. The green value remains nearly constantly, the curve remains nearly a straight line. The blue value is corrected downwards a little bit, the curve shows a loop downwards.
The stronger the adaptation is, the stronger the resulting gaps in the histogram will be.

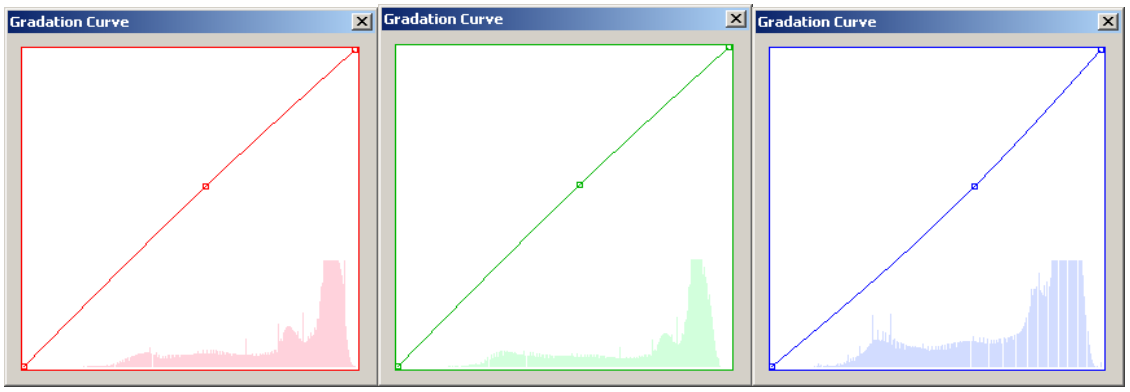


Figure 84: Graduation curves with histogram after the gray point has been used

3. Set white point

After the button „set white point“ (**B1**) has been clicked tow, the mouse cursor turns to a pipette, as soon as it is in the original clip.
If the right mouse key is being clicked to then, the point on the top of the pipette turns to the white point.
This means the following:
a) An average value is being determined from the pixel values of the selected and those of the direct surroundings. All pixel values, which have exactly this average value or which are higher as the value of this point, are set to the value „255“. This is done individually for each color channel. Therefore the adaptation of the graduation curve is also only visible in the graduation curves of the individual color channels.
b) The pixel values, which are smaller than those of the white point, are stretched to the complete tonal value range. Therefore gaps are produced in the new histogram.

An example:

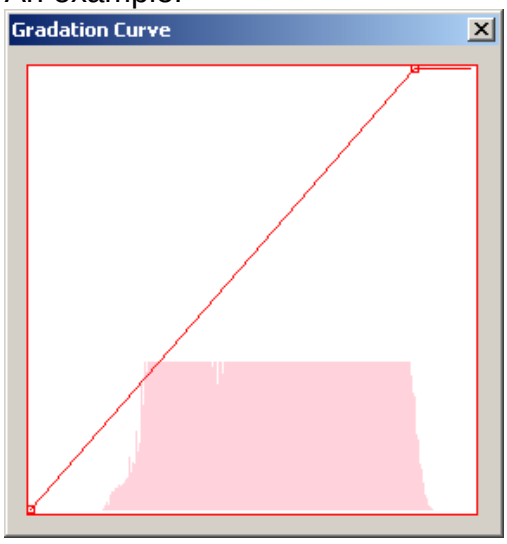


Figure 85: Graduation curve „red“ with set white point

On the x-axis (horizontal line) of the coordinate system the initial value and on the y-axis (vertical line) the necessary target value is being recorded. In addition the current histogram of the selected image can be seen. The white point is set to the value „222“, i.e. this value and all higher values are set to the value „255“.
(The dialog fields „input“ (**A2**) and „output“ (**A3**) indicate, which exact target value is assigned to which exact initial value, when the cursor is placed appropriately.)
All target values „1“ up to „255“ are then assigned to the other values.
If this graduation curve is used and then the filter „graduation curve“ is opened again, the resulting gaps can be seen in the new histogram.

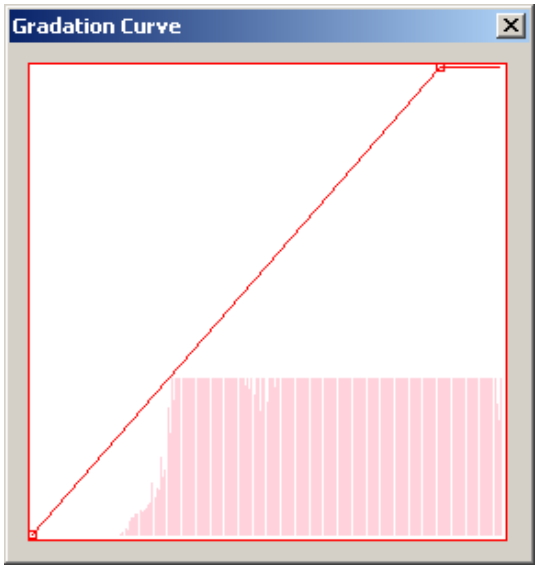


Figure 86: Graduation curve „red“ with histogram after „white point“ has been used

B) Automatic tonal value correction

The automatic tonal value correction indepedently sets a black and white point.
These points are individually determined with each color channel for the „automatic tonal value correction (RGB)“ (D1), for the “automatic tonal value correction (contrast)“ (D2) this is done with the general RGB gradation curve.

The setting of the black and white points can be influenced by the values for the shadow and the light treshold. (D3 and D4).
The starting point for the setting of the points is the tonal value which is most highly occuring in the histogram. The shadow and light treshold influence the calculation of the points in relation to this value. How the setting of the shadow and light treshold effects the points to be found can be noticed directly in the corresponding gradation curve and in the preview any time.

C) Graphical or manual correction of the graduation curve

The graduation curve can take any form desired by the user in principle, i.e. each target value (0 – 255) can be assigned to each initial value (0 – 255) in each color channel (red, green and blue).
(In practice not all extreme courses can be realized. But the courses which can not be realized are irrelevant).
Thereby the graduation curve becomes a very mighty tool, with which very complex image enhancements can be achieved. On the other hand it is slightly possible to „spoil“ an image inadvertently. As an experience some time and patience are required for the manual manipulation of the graduation curve.
To change a graduation curve, at first the graduation curve which is to be changed must be selected from the selection field (A1).
There is a RGB-graduation curve, which has an effect to all color channels, and a graduation curve for each color channel, which only has an effect to the appropriate color channel.
As an example the RGB-graduation curve is selected.

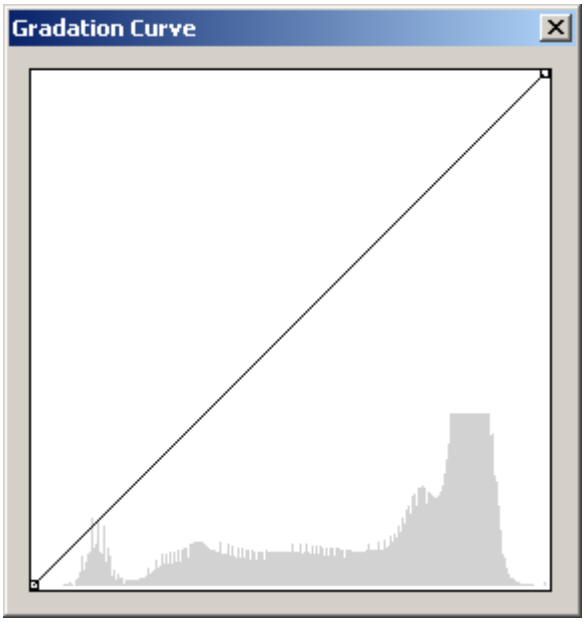


Figure 87: RGB-graduation curve

The initial value of a pixel is recorded on the x-axis (horizontal line) and the necessary target value is recorded on the y-axis (vertical line) of the coordinate system.
In the lower part of the coordinate system the histogram of the current image can be seen. It shows the frequency of appearance of pixel values. The height of a

column stands for the frequency of appearance of the pixel value the column stands upon.
The exact x- and y-values can be read by moving the mouse cursor to the desired place and the values can be read then with „input“ (**A2**) and „output“ (**A3**).
The initial form of the graduation curve is a straight line from (0,0) up to (255, 255), i.e. the own value is assigned to each value and the image remains as it is.
It is now possible to move the curve to arbitrary support points.
For this purpose it is just necessary to move the mouse cursor to the position where the support point is to be inserted, and to click to the left mouse key then.
Already available support points can be held in place and moved with the left mouse key.
Starting out from this new support point and by considerating all already available supporting points, the curve will be calculated again.

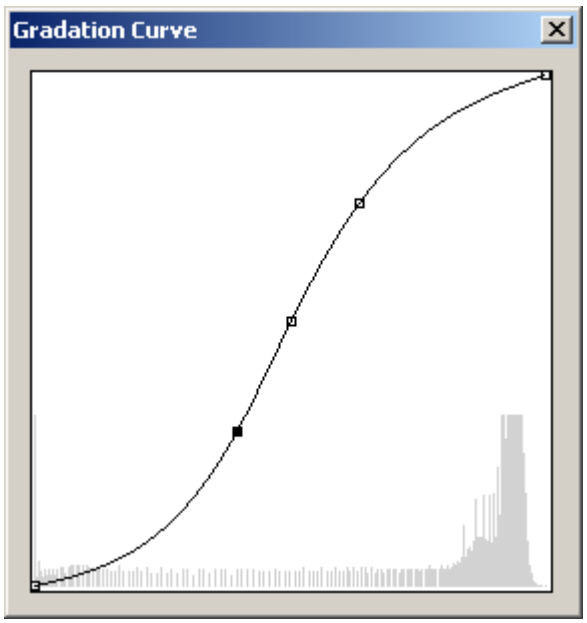


Figure 88: RGB-graduation curve with 3 supporting points

The example curve is a typical contrast-increasing gradation curve with three supporting points.
The deep tones become darker, the medium tones remain constantly and the light tones become even brighter.
The supporting points can be removed with the right mouse key.
Furthermore it is possible to bring all graduation curves to the neutral „normal position” again by using the button **(C1)**. The last change of setting can be cancelled by using the button **(C2)** respectively.

8.1.15 Graduation curve (gray level)

The graduation curve for gray level images has the same functionality as the graduation curve for the color images (see *8.1.14 Graduation curve* (color)*).* But since there are no color channels, the graduation curves for the individual color channels and the gray balance are dropped.

8.1.16 Include color correction

8.1.16.1 Purpose

OS 12 offers the option to provide images with a scanner color profile (see *6.3 Color management)*. This is called a „loose binding“ of the color profile to the image.
The filter „include color correction“ additionally offers the option to include a color profile to the scanned image. With that a „fixed binding“ between profile and image is being realized. This makes possible an approximate color-true representation of images also within applications which do not support any color management, provided that other basic conditions are met.

8.1.16.2 Mode of operation

An image is converted to a target color space using the scanner profile and a target profile. Profiles will not be attached to the image. The color space, to which the image has been converted, must be known for the application, in which such an image can be used appropriately.
In practice this will usually be „sRGB“. „sRGB“ is a relatively small standard color space, which however includes the colors to be displayed on a screen.
Therefore a color space converted to „sRGB“ can be displayed on screens with a good color fastness, in which the displayed application must not take into account a special „profile for creation“.
But colors, which can not be displayed on screens or only bad, and which could be printed easily, are lost with the conversion to sRGB.

8.1.16.3 Set-up options

Figure 89: Set-up dialog „Include color correction“

8.1.16.3.1 Scanner Profile

Here the profile of the device must be selected, with which the image has been created.

8.1.16.3.2 Target Profile

Here the profile must be selected, with which the image can be converted to the desired target color space.
The “rendering intent” can be set using the small button next to the search button. This setting should only be changed by experts.

8.1.16.4 Corresponding setting in the section color management

If the image has been converted to another color space with the help of a filter, then either the color profile of this target color space or no color profile at all must be attached to the image. The second option can only be recommended if the target color space is definite with the further processing.
To achieve this, the check mark automatic must be deleted with the setting color management and the target profile used here (or nothing) must be entered instaed of the scanner profile in the corresponding entry field.

8.1.17 Read barcode

8.1.17.1 Purpose

Automatic reading of a barcode on a scan original.

8.1.17.2 Mode of operation

All barcodes available on an image are identified and read.

8.1.17.3 Set-up options

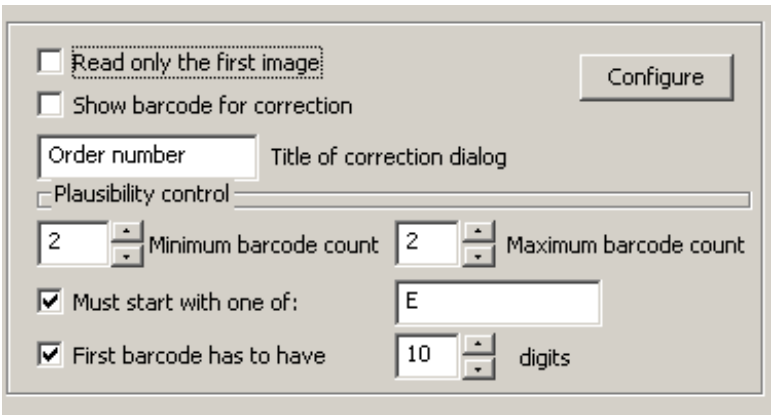


Bild 90: Set-up dialog „Read barcode“

8.1.17.3.1 Read only on the first image

The barcode will only be read from the first scan of a job.

8.1.17.3.2 Display barcode for correction

The read barcodes will be displayed after the reading and the user has the possibility to confirm it or to correct it.

8.1.17.3.3 Title of the correction dialog

Here the title of the „correction dialog“ can be determined, which allows the confirming or correcting of the read barcode.

8.1.17.3.4 Plausibility check

Here several conditions can be determined, which will be followed by error messages if they are not met.

8.1.17.3.5 Configure

Here the indications for the specification of the barcode to be read are made.

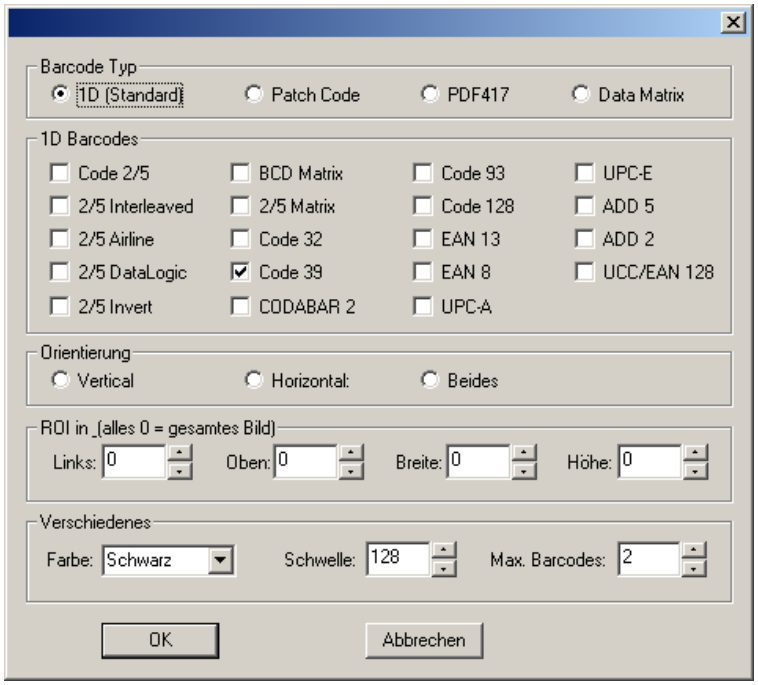


Figure 91: Configure set-up dialog „read barcode“

8.1.18 Scale

8.1.18.1 Purpose

Change of the resolution or size of an image while keeping the aspect ratio.

8.1.18.2 Mode of operation

Depending on the selected interpolation method.

8.1.18.3 Set-up options

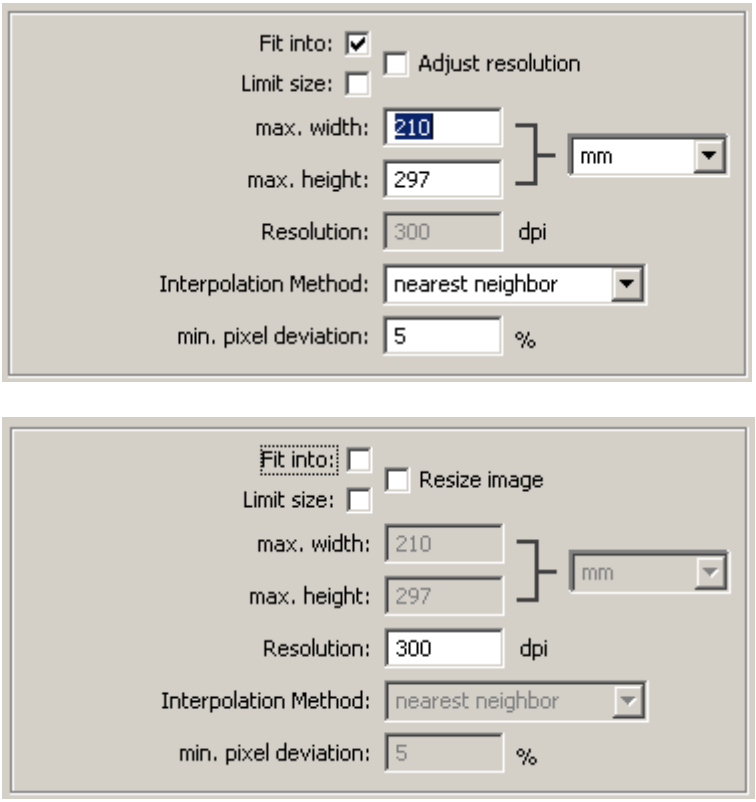


Figure 92: Set-up dialog „Scale”

8.1.18.3.1 Fit into / Limit size / adjust resolution = adjust image size

The cooperation of this three checkboxes and the result to the image is explained here on an example.
If “Limit size” is selected a change of the image occurs only if the pixelvalues of the input image are bigger than the max. width or max. height (possibly incuding resolution) values.

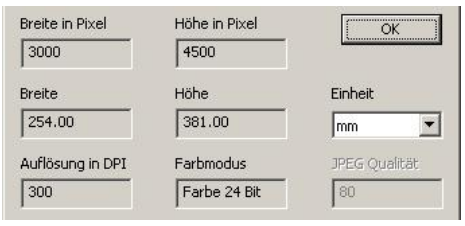


Figure 93: Input image for the example

1.

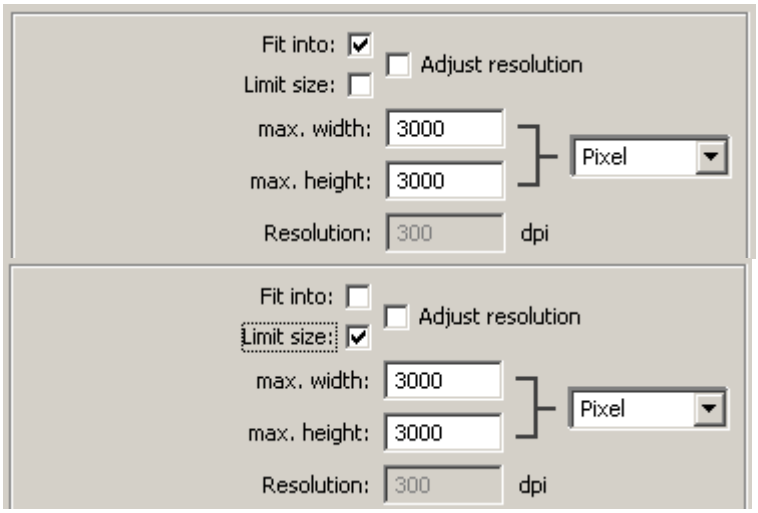


Figure 94: Settings Example - 1

The resolution of the image remains unchanged. All other values change (aspect ratio is keept).

Figure 95: Result for example – 1

2.

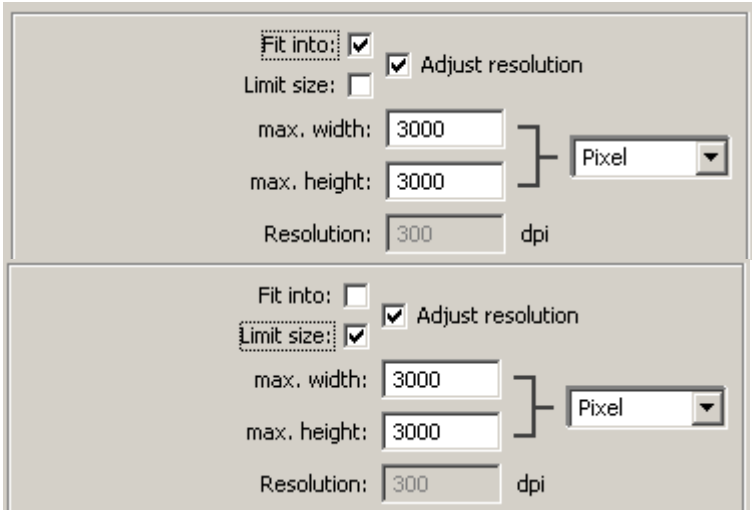


Figure 96: Settings for example - 2

The geometrical values of the image stay the same (including aspect ratio), all other values .

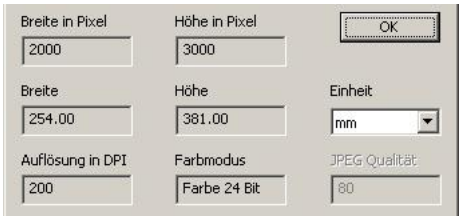


Figure 97: Result for example – 2

3.

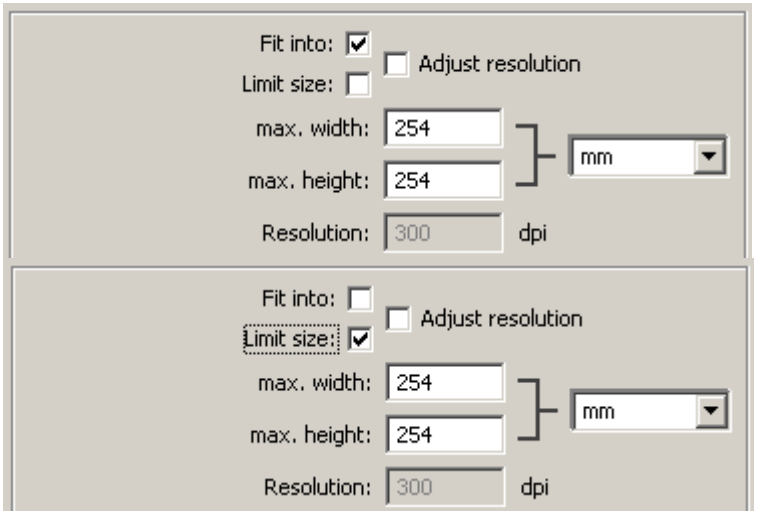


Figure 98: Settings for example - 3

The resolution and aspect ratio of the image is keept unchanged, all other values change.

Figure 99: Result for example – 3

4.

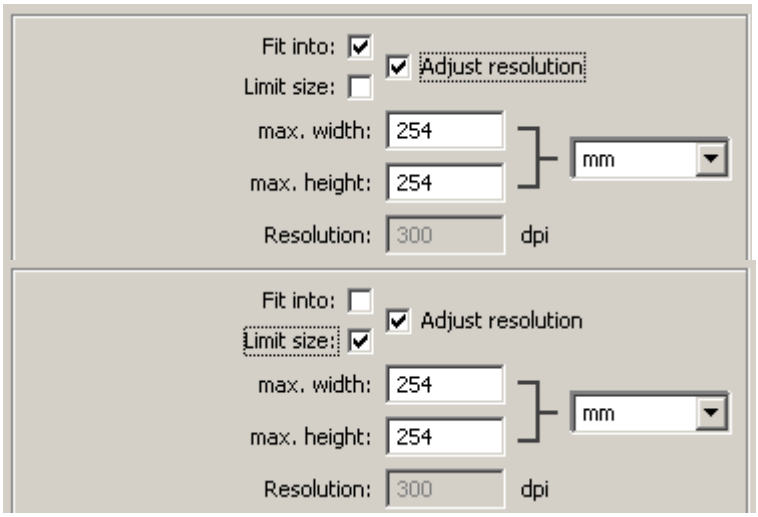


Figure 100: Settings for example - 4

The pixel values (and the aspect raio) of the image remain unchanged, all other values change.

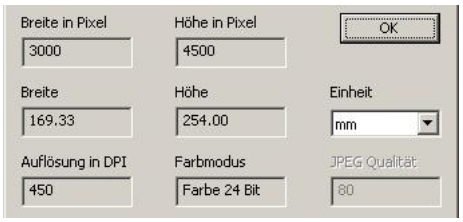


Figure 101: Result for example – 4

5.

Bild 102: Settings for example - 5

The resolution amd the pixel values of the image change, the geometrical values (including aspect ratio) stay he same.

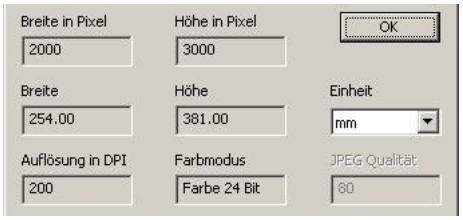


Figure 103: Result for example – 5

6.

Figure 104: Settings for example - 6

The resolution and the geometrical values are changed the pixel values and the aspect ratio remain unchanged.

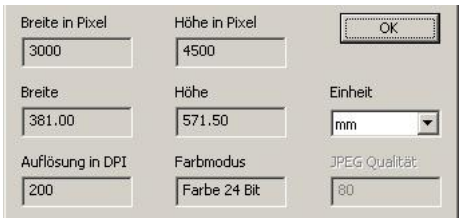


Figure 105: Result for example - 6

NOTE: The ratio between this indication and the actual geometry of the image will be lost possibly.

8.1.18.3.2 Maximum width

The width to which the image will be adapted, if necessary.

8.1.18.3.3 Maximum height

The height, to which the image will be adapted, if necessary.

8.1.18.3.4 Resolution

The resolution of the image after the filter has been used. If the image is not „adapted“, i.e. if “Fit into” ist not checked, the geometry of the image will be kept.

8.1.18.3.5 Interpolation method

The method according to which the interpolation will be carried out.

8.1.18.3.6 Minimum pixel deviation

If the given value of the deviation between the initial image and the target image is not reached, the scaling won`t be applied.

8.1.19 Cut/add border

8.1.19.1 Purpose

Adaptation to required target sizes, e.g. for printing.

8.1.19.2 Mode of operation

According to the specification a corresponding big frame is added to the image or a corresponding big area will be cut off.

8.1.19.3 Set-up options

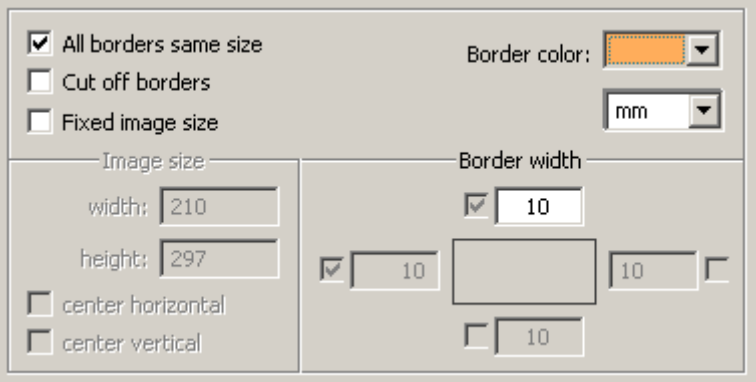


Figure 106: Set-up dialog „Cut/Add border"

8.1.19.3.1 All borders same size

If a check mark has been set here, all borders of the image will be treated in the same way. I.a., a border of the same width is added to the image at the top, at the bottom, left and right or an area with the same width will be cut off from the image at the top, at the bottom, left and right.

8.1.19.3.2 Cut off border

If a check mark has been set here, a corresponding area will be cut off from the image. Otherwise a corresponding area will be added to the image.

8.1.19.3.3 Fixed image size

If this is checked a fixed size can be choosen as result according to the selected unit. Borders will be added according to all the other selections. If the image is too big to fit into the selected size it will be clipped.

8.1.19.3.4 Border color

Here a color may be allocated to the border, which shall be added to the image.

8.1.19.3.5 Image size

8.1.19.3.5.1 Width

Fixed width according to the selected unit.

8.1.19.3.5.2 Height

Fixed height according to the selected unit.

8.1.19.3.5.3 Horizontal centered

Is this checked the left and right borders added will be of the same size. If the source image is too big it is clipped left and right the same.

8.1.19.3.5.4 Vertikal centered

Is this checked the upper and lower borders added will be of the same size. If the source image is too big it is clipped on top and bottom the same.

8.1.19.3.6 Border size

8.1.19.3.6.1 top

Width of the upper border corresponding to the selected unit. If „all borders same size“ (*s. 8.1.19.3.1* All borders same size) has been set, the width is valid for all borders. If a fixed size is selected (s. *8.1.19.3.3 Fixed image* size) and vertical centerd (s. *8.1.19.3.5.4 Vertikal centered*) is not selected the lower border will be computed (may be negative) to achive the selected height (s. *8.1.19.3.5.2 Height)*.

8.1.19.3.6.2 left

Width of the left border corresponding to the selected unit, when „all borders same size“ (*s. 8.1.19.3.1* All borders same size) has not been set.
If fixed image size (s. *8.1.19.3.3 Fixed image* size) is selected and horizontal centered (s. *8.1.19.3.5.3 Horizontal centered*) is not selected the right border will be computed (may be negative) to achive the selected fixed (s. *8.1.19.3.5.1 Width*) erzielt wird.

8.1.19.3.6.3 right

Width of the right border corresponding to the selected unit, when, „all borders same size“ (*s. 8.1.19.3.1* All borders same size) has not been set.
If fixed image size (s. *8.1.19.3.3 Fixed image* size) is selcted and horizontal centered (s. *8.1.19.3.5.3 Horizontal centered*) is not selected the border size is computed (may be negative) to achive the fixed width (s. *8.1.19.3.5.1 Width*).

8.1.19.3.6.4 bottom

Width of the border below corresponding to the selected unit, when „all borders same size“ (*s. 8.1.19.3.1* All borders same size) has not been set.
If fixed image size (s. *8.1.19.3.3 Fixed image* size) is selcted and vertical centered (s. *8.1.19.3.5.4 Vertikal centered*) is not selected the border size is computed (may be negative) to achive the fixed height (s. *8.1.19.3.5.2 Height*)

8.1.20 Add ruler

8.1.20.1 Purpose

The ruler offers the option to display graphically the original size of a clip.

8.1.20.2 Mode of operation

A scale will be added to the image according to the specification at the edge below and/or at the edge on the right side.

8.1.20.3 Set-up options

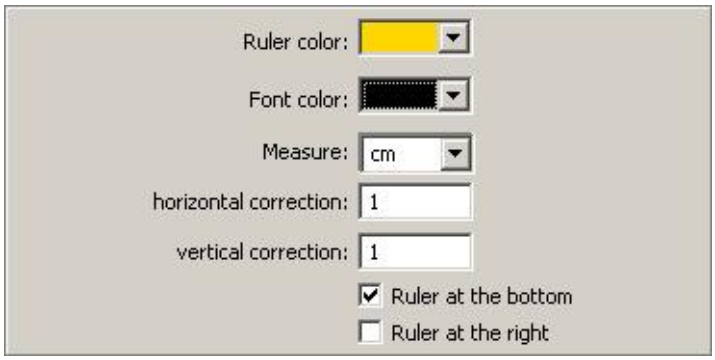


Figure 107: Set-up dialog „Add scale"

8.1.20.3.1 Ruler color

Here a color can be assigned to the scale, which is to be added to the image.

8.1.20.3.2 Sign color

Here a color can be assigned to the type on the scale.

8.1.20.3.3 Scale

Here it can be selected whether the scale shall be displayed in cm or inch.

8.1.20.3.4 Horizontal correction factor

If the displayed horizontal resolution and the actual resolution of the image do not comply, a correction factor can be entered here.

8.1.20.3.5 Vertical correction factor

If the displayed vertical resolution and the actual resolution of the image do not comply, a correction factor can be entered here.

8.1.20.3.6 Ruler on the bottom edge

If a check mark has been set here, a scale will be added on the bottom edge of the image.

8.1.20.3.7 Ruler on the right side

If a check mark has been set here, a scale will be added on the right edge of the image.

8.1.21 Command

8.1.21.1 Purpose

The possibilities of Omniscan are limited. To make it possible to use arbitrary applications for the processing of an image the image processing tool “command” is available.

8.1.21.2 Mode of operation

The desired application is invoked with the image as a parameter.

8.1.21.3 Set-up options

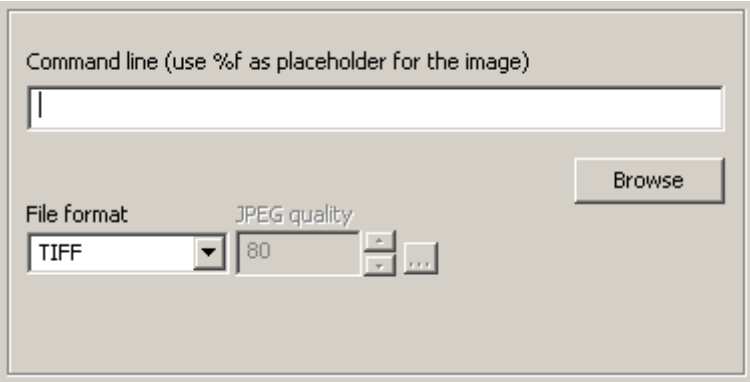


Figure 108: Set-up dialog „Command”

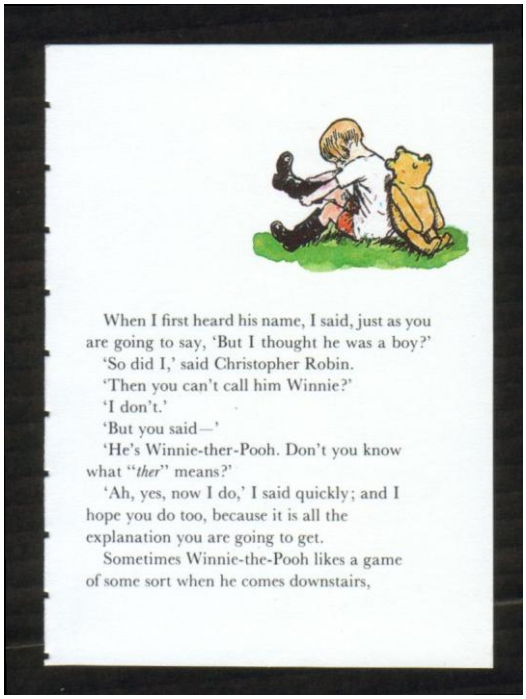
8.1.21.3.1 Command line

Here the name and the path of the application will be named. If the image shall be processed by the application, this may be achieved by the dummy ’%f’. The file path may either be entered or be selected by the “browser” using the button “search”.
An example:
"C:\Programs\example program\example program.exe" %f
Is the command containing a meta data placeholder in the form %m<name>% this placeholder will be replaced by the current value of this meta data entry.
The file format of the temporäry file can be selected with the drop down file format. If a lossy compression is selected the quality value (JPEG) or compression factor (JPEG 2000) can be selected like in the clip settings (s. 7.1.30Compression factor).

8.1.22 Trim to print space

8.1.22.1 Purpose

The type area (print space) is often limited by type area edges (bars) with a scanned image. These edges may be removed by using this image processing tools.



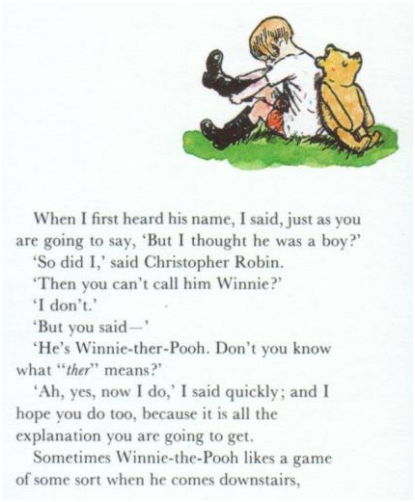


Figure 109: Image before the type area is being cut or after it is being cut

8.1.22.2 Mode of operation

At first the black edge is removed from the initial image as described under. The white (bright) edge is then cut off from the received image to cut off the real content of the image. It may also be set here that a part of the edge may remain as it is with the image processing tool *Cut*.

8.1.22.3 Set-up options

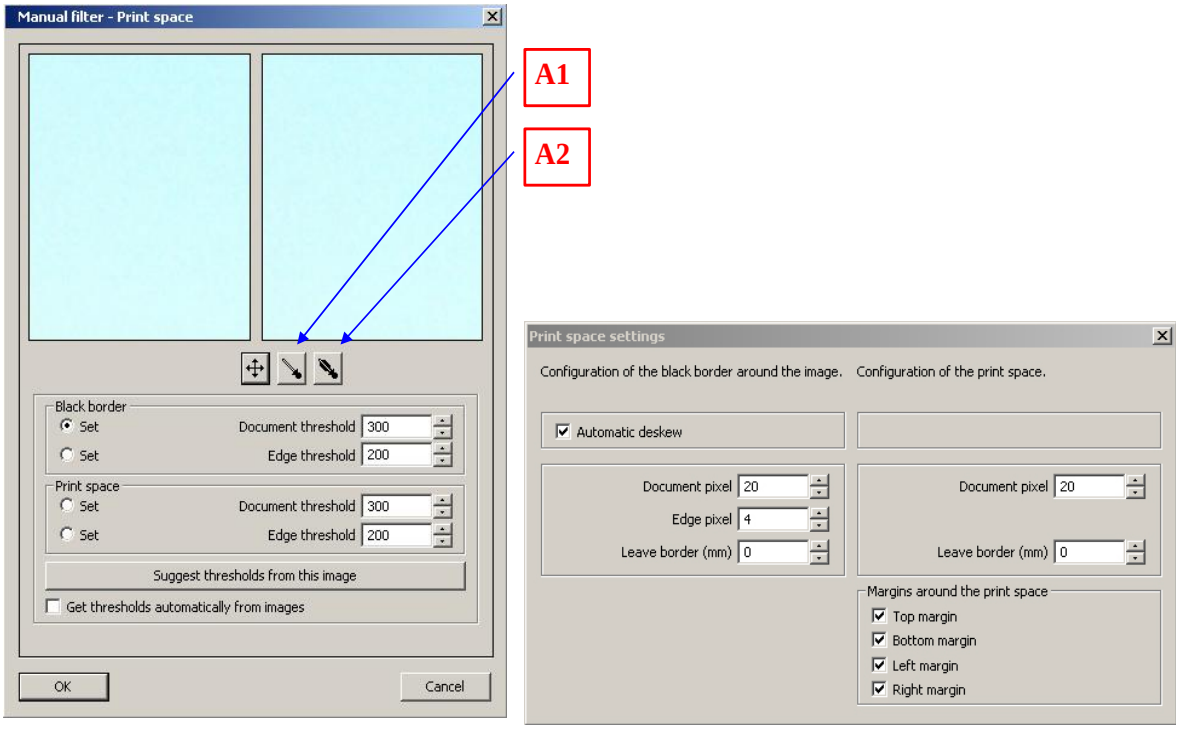


Figure 110: Set-up dialog „Cut type area"

The set-up dialog offers the option to set the individual thresholds with two different pipettes (function buttons) besides the direct entry of thresholds.

A) Function button

Small pipette (A1)
Big pipette (A2)

In detail

1. **Set threshold with small pipette**

After the button “small pipette” (A1) has been clicked to, the mouse cursor changes to a pipette with a small square selection area, as soon as it is in the original image clip.
If there is a click to the left mouse key, the pixels within the selection area are used for the determination of the threshold then.

2. **Set threshold with big pipette**

After the button “big pipette” has been clicked to, the mouse cursor changes to a pipette with a big square selection area, as soon as it is in the original image clip.
If there is a click to the left mouse key, the pixels within the selection area are used for the determination of the threshold then.

Determination of the threshold means the following:

a) Document threshold for the black edge:

From the pixel values of the selected selection area the pixel with the highest level of brightness will be used for the threshold, and it will be typed in the dialog after having been converted to a one-per-thousand value (in relation to the level of brightness 255).

b) Edge threshold for the black edge:

From the pixel values of the selected selection area the pixel with the lowest level of brightness will be used for the threshold, and it will be typed in the dialog after having been converted to a one-per-thousand value (in relation to the level of brightness 255).

c) Document threshold for the type area:

From the pixel values of the selected selection area the pixel with the lowest level of brightness will be used for the threshold, and it will be typed in the dialog after having been converted to a one-per-thousand value (in relation to the level of brightness 255).

d) Edge threshold for the type area:

From the pixel values of the selected selection area the pixel with the highest level of brightness will be used for the threshold, and it will be typed in the dialog after having been converted to a one-per-thousand value (in relation to the level of brightness 255).

8.1.22.3.1 Black edge

The image processing tool type area starts from the assumption that the scanned original is surrounded by a black edge. This black edge can be defined here together with “configuration of the black edge around the image”.

8.1.22.3.1.1 Automatic deskew

To deskew the document one edge is searched for and the image is rotated so that this edge is horizontal. You can choose whether you want to use the top or bottom of the page.

8.1.22.3.1.2 Document threshold

Threshold which determines when a pixel is considered as a possible part of the document. The threshold is indicated in one per thousand in relation to the level of brightness *white*. Therefore the image is divided into 256 levels of brightness (0 corresponds with black; 255 corresponds with white).
Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 300. This value corresponds with the level of brightness of 76 (300 $^{0}/_{00}$ of the level of brightness of white = 255).
If “set document threshold” has been activated, there is the possibility to determine a threshold above one of the two pipettes.

8.1.22.3.1.3 Edge threshold

Threshold which determines when a pixel is considered as a possible part of the edge. The threshold is indicated in one per thousand in relation to the level of brightness *white*. Therefore the image is divided into 256 levels of brightness (0 corresponds with black; 255 corresponds with white).
Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 200. This value corresponds with the level of brightness of 51 (200 $^{0}/_{00}$ of the level of brightness of white = 255).
If “set document threshold” has been activated, there is the possibility to determine a threshold above one of the two pipettes.
This dialog entry is only activated when the option “automatic deskew” (see) has been selected.

8.1.22.3.1.4 Document pixel

Number of pixels within a line or column, which must meet the threshold indicated above (brightness of the pixel must be greater than or be equivalent to the document threshold), so that the line or column is considered as the start of the original.
Can be set from 1 to 100. If an ideal value is searched for, it is recommended to start with a value of 20.

8.1.22.3.1.5 Edge pixel

Number of pixels within a column, which, laying directly among each other, must meet the threshold indicated above (brightness of the pixel must be greater than or be equivalent to the edge threshold), so that an edge is considered as the start of the original.
Can be set from 1 to 100. If an ideal value is searched for, it is recommended to start with a value of 4.
This dialog entry is only activated, if the option “automatic deskew” (see 8.1.22.3.1.7 Automatic deskew) has been selected.

8.1.22.3.1.6 Leave edge (mm)

Leave edge as with the image processing tool (see 8.1.6 Cut).
If a negative number is indicated here, more will be removed as determined by the edge finding. So dark spots on the edge caused by book covers, book cut or edge printing, which are not part of the type area, can be removed.

8.1.22.3.1.7 Automatic deskew

If a check mark has been set here, the image processing tool “deskew” (see 8.1.7 Deskew) will be carried out with the values “document threshold”, “document pixel”, “edge threshold” and “edge pixel”.

8.1.22.3.2 Type area

The image processing tool type area starts from the assumption that the scanned document original has a white (bright) edge around the used area. This white edge may be defined here altogether with “configuration of the type area”.

8.1.22.3.2.1 Document threshold

Threshold which determines when a pixel is considered as a possible part of the white (bright) edge of the document. The threshold is indicated in one per thousand in relation to the level of brightness *white*. Therefore the image is divided into 256 levels of brightness (0 corresponds with black; 255 corresponds with white).
Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 550. This value corresponds with the level of brightness of 114 (550 $^{0}/_{00}$ of the level of brightness of white = 255).
If “set document threshold” has been activated, there is the possibility to determine a threshold above one of the two pipettes.

8.1.22.3.2.2 Edge threshold

Threshold which determines when a pixel is considered as a possible part of an edge of the used area of the document. The threshold is indicated in one per thousand in relation to the level of brightness *white*. Therefore the image is divided into 256 levels of brightness (0 corresponds with black; 255 corresponds with white).
Can be set from 100 to 1000. If an ideal value is searched for, it is recommended to start with a value of 450. This value corresponds with the level of brightness of 114 (450 $^{0}/_{00}$ of the level of brightness of white = 255).
If “set document threshold” has been activated, there is the possibility to determine a threshold above one of the two pipettes.

8.1.22.3.2.3 Document pixel

Number of pixels within a line or column, which must meet the threshold indicated above (brightness of the pixel must be greater than or be equivalent to the document threshold), so that the line or column is considered as the start of the used area.
Can be set from 1 to 100. If an ideal value is searched for, it is recommended to start with a value of 10.

8.1.22.3.2.4 Leave edge (mm)

Similar to the image processing tool it is defined here how much of the white (bright) edge around the content shall still be left.

8.1.22.3.2.5 Upper edge, lower edge, left edge, right edge

If the check mark has been set here, the image processing tool “type area” starts from the assumption that a white (bright) edge exists on the corresponding side of the document. Only in this case it is searched for an edge on this side of the document. If a side is selected to crop a white border, but this border doesn’t exist then the result for this side and the flanking sides may not be satisfactory.

8.1.22.3.3 Suggest thresholds from this image

By pressing the button thresholds for the displayed image will be suggested. These values may be manually corrected any time.

8.1.22.3.4 Extract thresholds automatically from the images

If this image processing tool is used in the filterstack, it can be reached that the thresholds will be determined and used again for each scanned document by setting of this check mark.

8.1.22.3.5 Split pages

If Omniscan recognizes a vertical white (bright) middle bar it separates the image into two halfes and processes them further as two images.

8.1.22.3.6 Page split only if landscape

If this is activated the page splitting only occurs if the source is wider than tall.

8.1.22.3.7 Deskew text

If this box is checked Omnscan tries to deskew the image from the text. Otherwise the image is deskewed from the top or bottom border (see section *8.1.7.3.1 Use top/bottom of the page)*.

8.1.23 Add clip

8.1.23.1 Purpose

If two or more clips are defined, the clips with a smaller number can be assembled to the current clip.

8.1.23.2 Method of operation

A clip with number 2 or higher will be added to the current clip. The number of the clip to be added always has to be smaler as the number of the current clip. Colordepth and resolution is addapted as necessary.

8.1.23.3 Possible settings

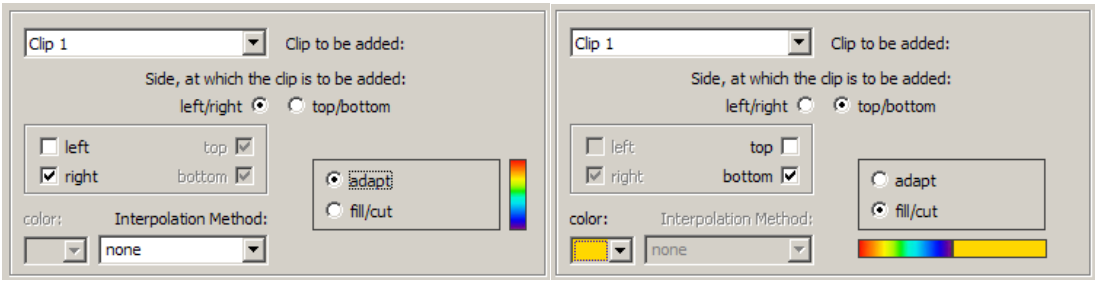


Bild 111: Settings dialog „Add clip“

8.1.23.3.1 Clip to be added

Here you can select from all the clips having a smaller number than the current clip. (s. *5.6 Clips.*)

8.1.23.3.2 Side at which the clip is to be added

8.1.23.3.2.1 Left/right respectively top/bottom

Here you can choose wether the clip is added horizontaly (left/right) or vertically (top/bottom).

8.1.23.3.2.2 Left, right

If „left/right“ is active you can check left and/or right. The selected clip will be added than at the left and/or right side of the current clip.

8.1.23.3.2.3 Top, bottom

If „top/bottom“ is active you can check top and/or bottom. The selected clip will be added than at the top and/or bottom side of the current clip.

8.1.23.3.3 adapt

If „adapt“ is selected the clip to be added is stretched or compressed to fit the size of the current clip.

8.1.23.3.4 Fill/cut

If fill/cut is selected the clip to be added is cut or filled with the selected color to meet the size of the current clip.

8.1.23.3.5 Interpolation method

If adapt is selected and the clip to be added needs to be streched or compressed this is the method with which this is done.

8.1.24 Paper white

8.1.24.1 Purpose

Paper white is like the gradation curve (*8.1.14 Graduation curve (color)* bzw. *8.1.15 Graduation curve (gray level)*) a means to correct brightness and contrast. It aims to change a brightgray background into a white one.

8.1.24.2 Method of operation

Depending on the settings for the shadow and highlight threshold this filter detects two points for a gradationcurve. This gradation is then applied to the image.

8.1.24.3 Possible settings

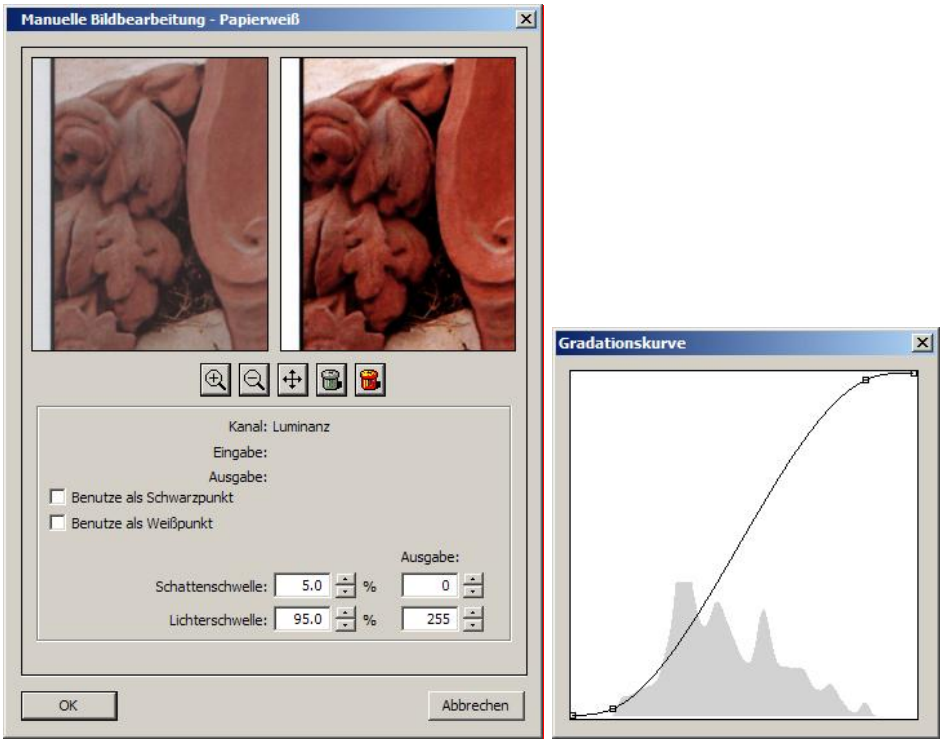


Figure 112: Dialog „Paper white“

8.1.24.3.1 Buttons

The buttons having the same meaning for all filters are allready described in (*see section 5.7.5 Set-up dialog for image processing tools*). Here only the buttons with additional functionality are described.

Waste paper basket (Color): To scan color images this button switches to a basic setting optimized for that.

8.1.24.3.2 Channel

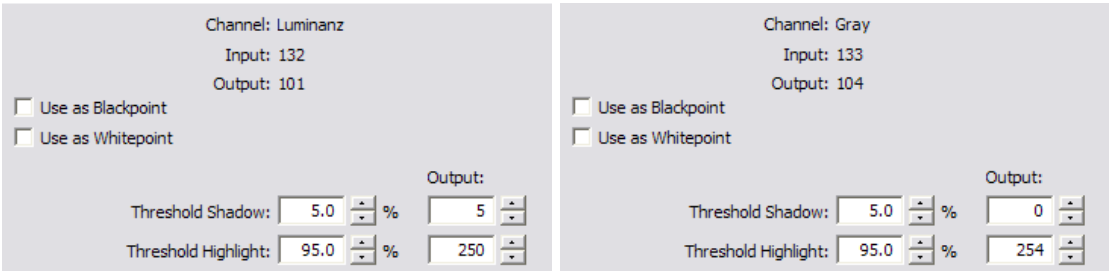


Figure 113: Differences between the dialog for a color or gray scale image

„Channel“ is for displaying information only. If the main window contains a color image „Luminanz“ and otherwise „Gray“ will be displayed.

8.1.24.3.3 Input

„Input“ is for displaying information only. It shows the current value of the coordinates of the mouse cursor in the gradation curve. This can be used to determine the exact value of a point shown in the gradation curve.

8.1.24.3.4 Output

„Output“ is for displaying information only. It shows the current value of the coordinates of the mouse cursor in the gradation curve. This can be used to determine the exact value of a point shown in the gradation curve.

8.1.24.3.5 Use as black point

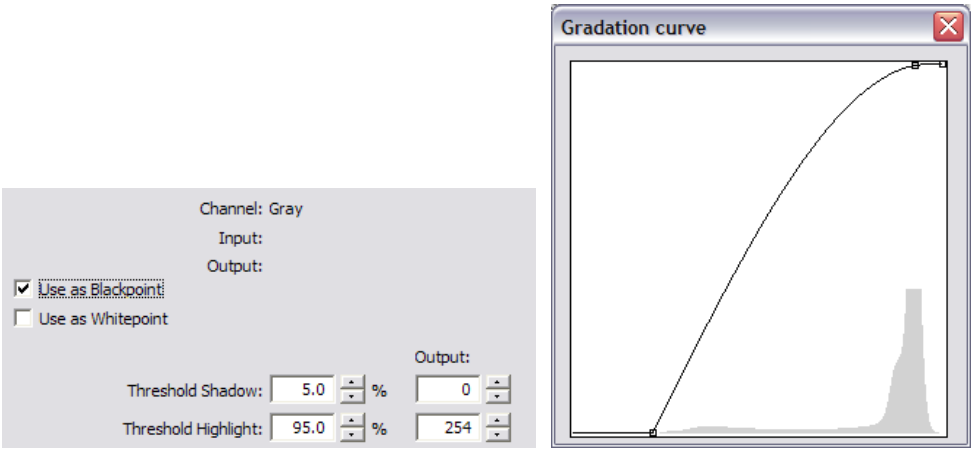


Figure 114: Use the point determined by the shadow threshold as blackpoint.

The point determined from the shadow threshold is used as blackpoint (*8.1.14.3 Set-up options*).

8.1.24.3.6 Use as white point

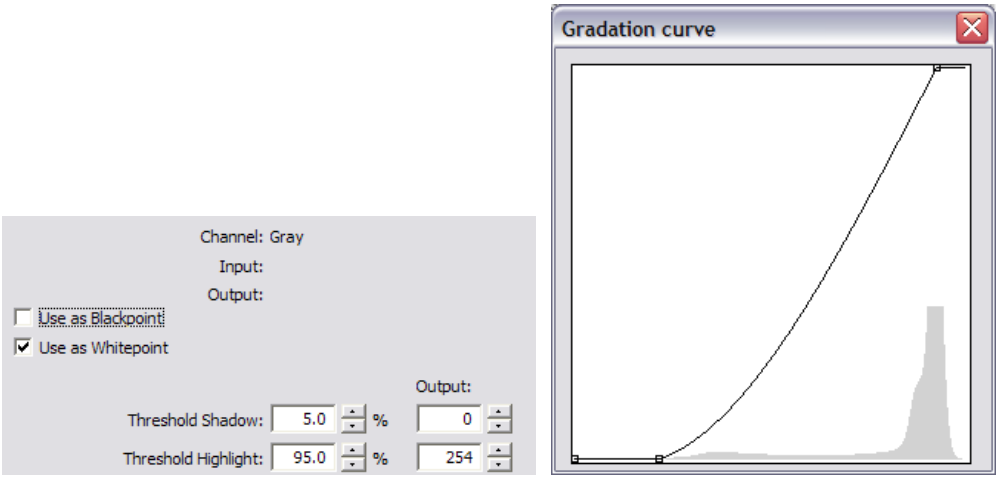


Figure 115: Use the point determined from the highlight threshold as white point.

The point determined from the highlight threshold is used as whitepoint (*8.1.14.3 Set-up options*).

8.1.24.3.7 Shadow threshold

The shadow threshold influences the determination of the points in the darker area. This point is located near the first “bump” in the shadow area, that is in the left side of the histogram.
To see what the shadow threshold does have a look at the gradation curve of the preview.

8.1.24.3.8 Highlight threshold

The highlight threshold influences the determination of the points in the brighter area. This point is located near the first “bump” in the brighter area, that is in the right side of the histogram.
To see what the highlight threshold does have a look at the gradation curve of the preview.

8.1.24.3.9 Output shadow threshold

The output value of the point determined by the shadow threshold can be modified in the range of [0, Input value of the point]. A bigger value doesn’t lead to any more changes of the gradation curve.

8.1.24.3.10 Ausgabe highlight threshold

The output value of the point determined by the highlight threshold can be modified in the range of [0, Input value of the point]. A bigger value doesn’t lead to any more changes of the gradation curve.

8.1.25 Saturation

8.1.25.1 Purpose

This filter can change the color intensity of a image.

8.1.25.2 Mode of operation

The image is converted from RGB into another colorspace consisting of brightness, color value and color saturation. Then the color saturation is changed according to the given factor and then the image is converted back to RGB.

8.1.25.3 Possible settings

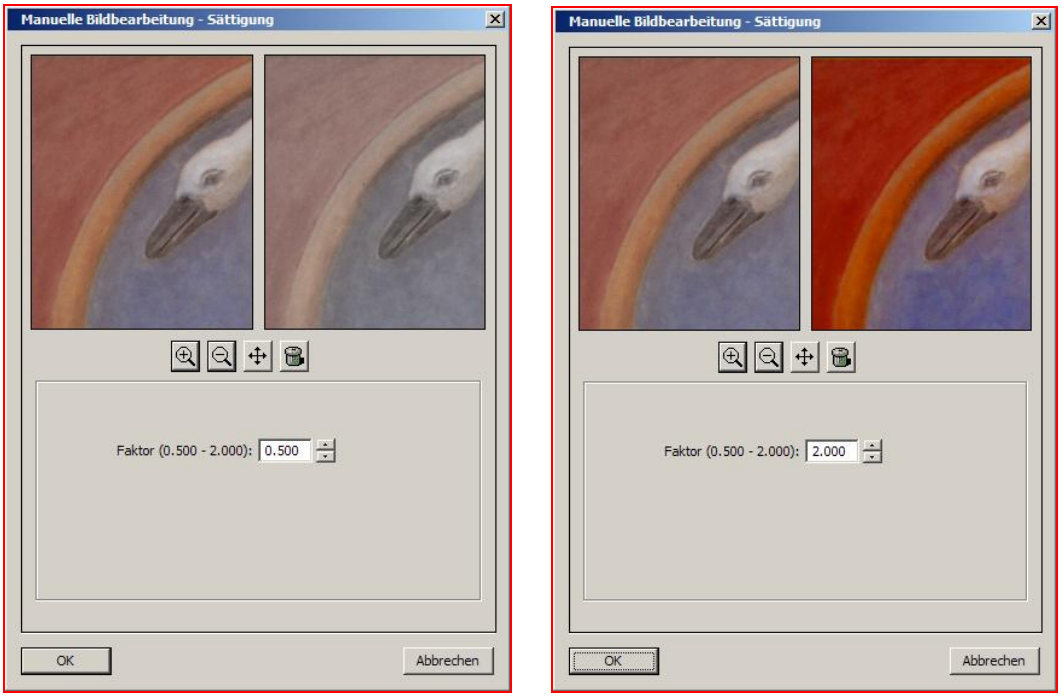


Figure 116: Dialog „Saturation“ with a factor of 0,5 (left) and 2,0 (right)

The factor for the color saturation change can be modified in a range from 0.5 to 2.0 in 1/1000 steps. A factor smaller than 1.0 makes the colors more pale (left), a factor bigger than 1.0 makes the colors more strong (right).

8.2 Optional image processing modules

8.2.1 Orthoscan

8.2.1.1 Purpose

Orthoscan is a function for the automatic book fold equalization.
If a book is not scanned lying under the glass plate or it is pressed flatly in another way, the book pages are scanned bent. The distortion of the writing resulting from that makes reading and the use of a OCR software for the automatic text recognition more difficult.
Orthoscan glazes the copy, so that the resulting image appears as if it would have been scanned flatly.
Additionally the image is centered automatically, deskewed and the black border is cut off.
Both book pages can be separated automatically and they can be saved in one own file each. It could happen that caused by the booksides these two sides are not equally sized. Orthoscan uses the smaller side in this case as size for both pages.
Should the book be held at its borders with the thumbs and they are also scanned, the images of the thumbs can be removed automatically.
CAUTION: Orthoscan is not available for OS12000 Scanners and above. Instead that you can use Perfect Book (see section *11.1.8 Perfect Book*).

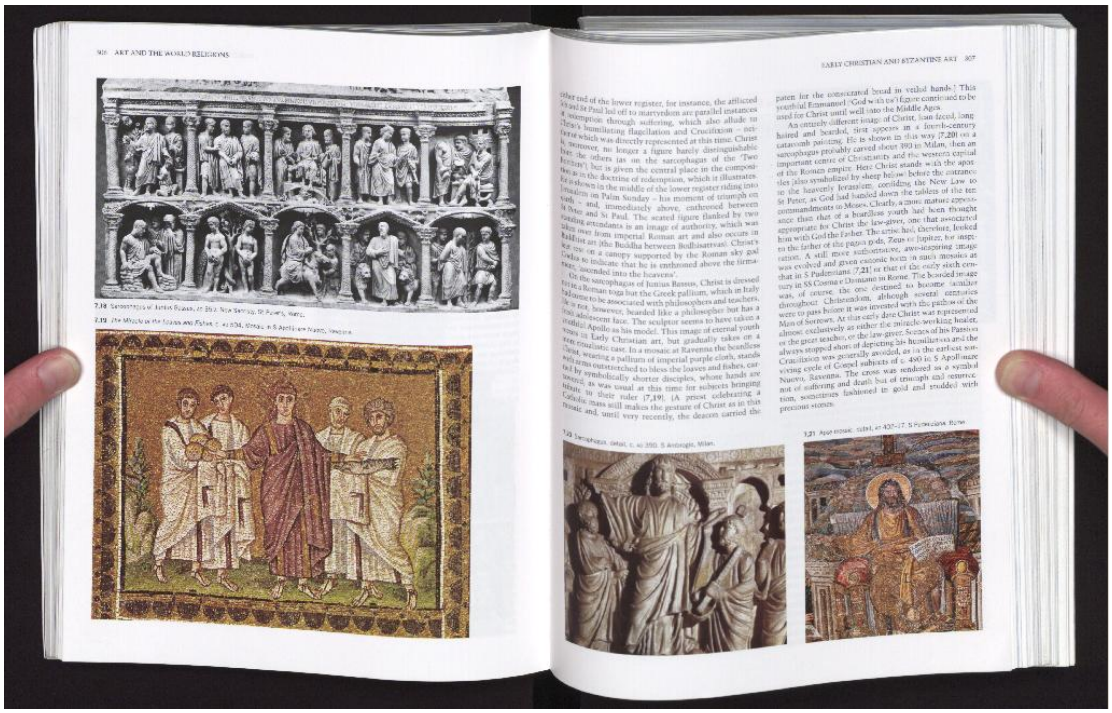


Figure 117: Picture before the use of „orthoscan“

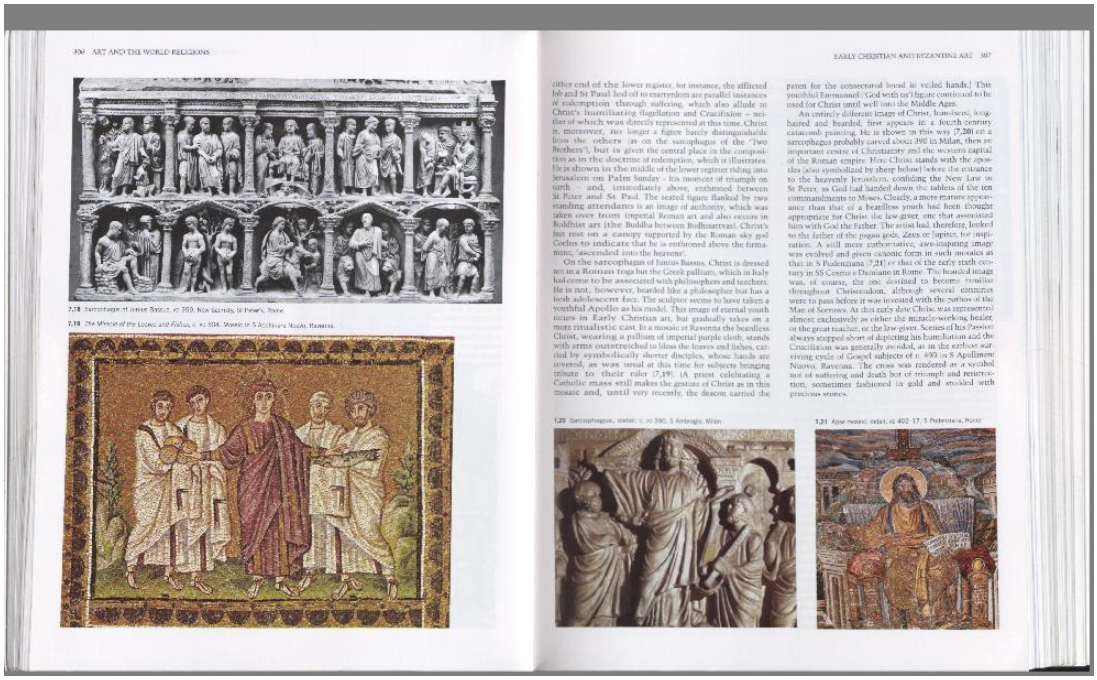


Figure 118: Picture after the use of „orthoscan“ with automatic thumb removing. (The gray background is the background of the screen. The borders of the picture are the white limitations.)

8.2.1.2 Boundary conditions

1. 8 bit gray level and 24 bit color images are possible.
   (If an image shall be saved as a 1 bit black/white image, the most effective prodedure will be to scan the image with 8 bit gray level at first, and then carry out automatically „orthoscan“ and the conversion to 1 bit color depth. For the automatic use of image processing tools see *7.1 Clip settings)*
2. The image must be taken in front of a black background
   (black means here, that the pixel values do not exceed the value of 50.)
3. The black border must be visible around the book. I.a. the book must not touch the border of the image. The border must have a minimum of 2 pixels.

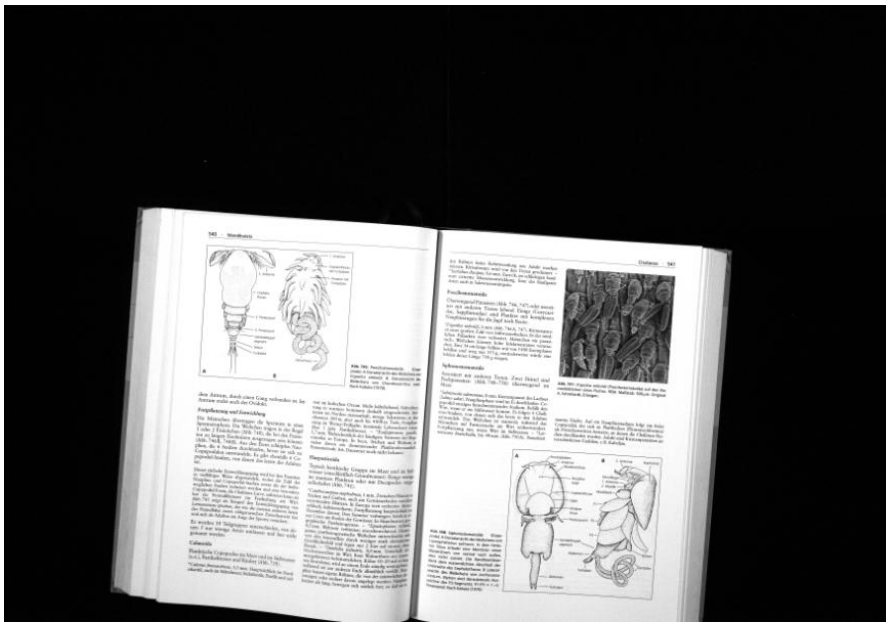


Figure 119: WRONG! The black border around the book must be continuous

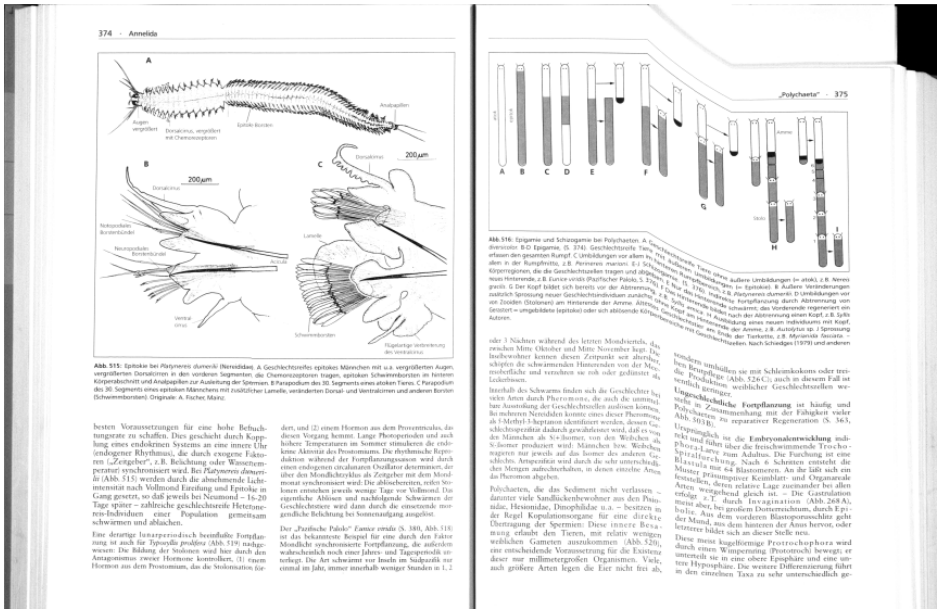


Figure 120: An inserted piece of paper, which interferes with the contour of the book, may result in such an error

4. The brightness of the side borders of the book must be at least 50% of the maximal brightness. I.a. the pixel values must be at least 128.

Figure 121: Dark/black copies can not be recognized by Orthoscan

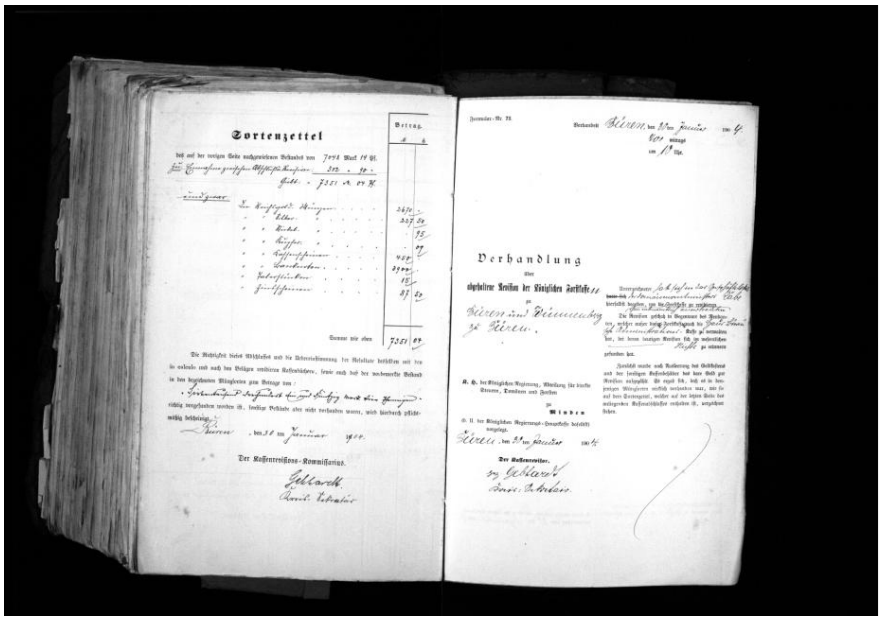


Figure 122: Tattered and fringed borders without a clear contrast can not be recognized by Orthoscan

5. The upper border of the book must be completely in the upper part of the image, the border of the book below must be completely in the part of the image below.

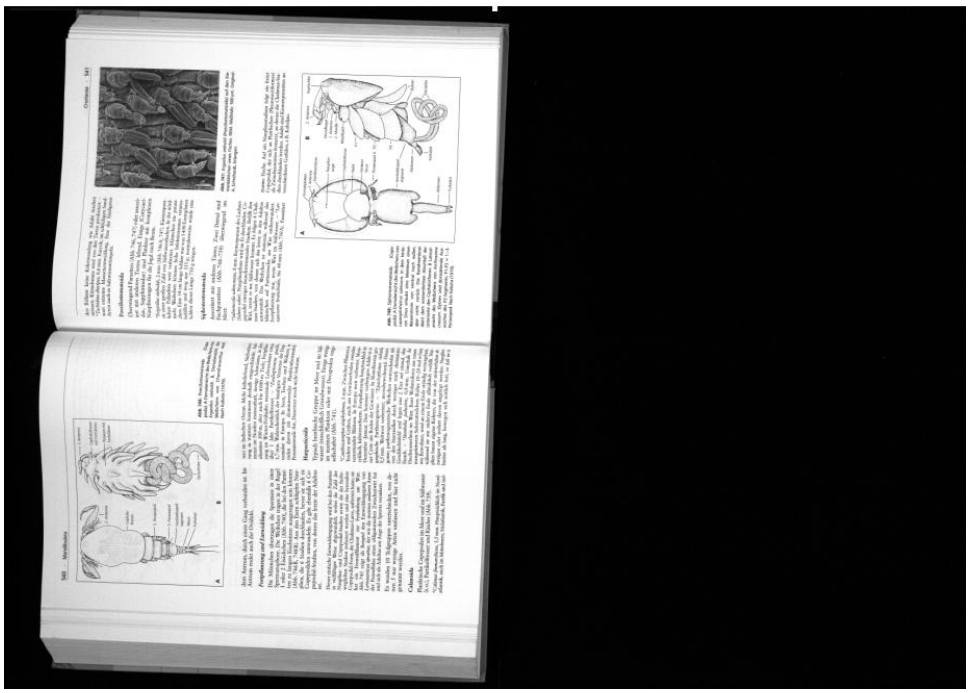


Figure 123: WRONG! The book is put in the wrong way round

(The book must not have been scanned „standing on the side“.)

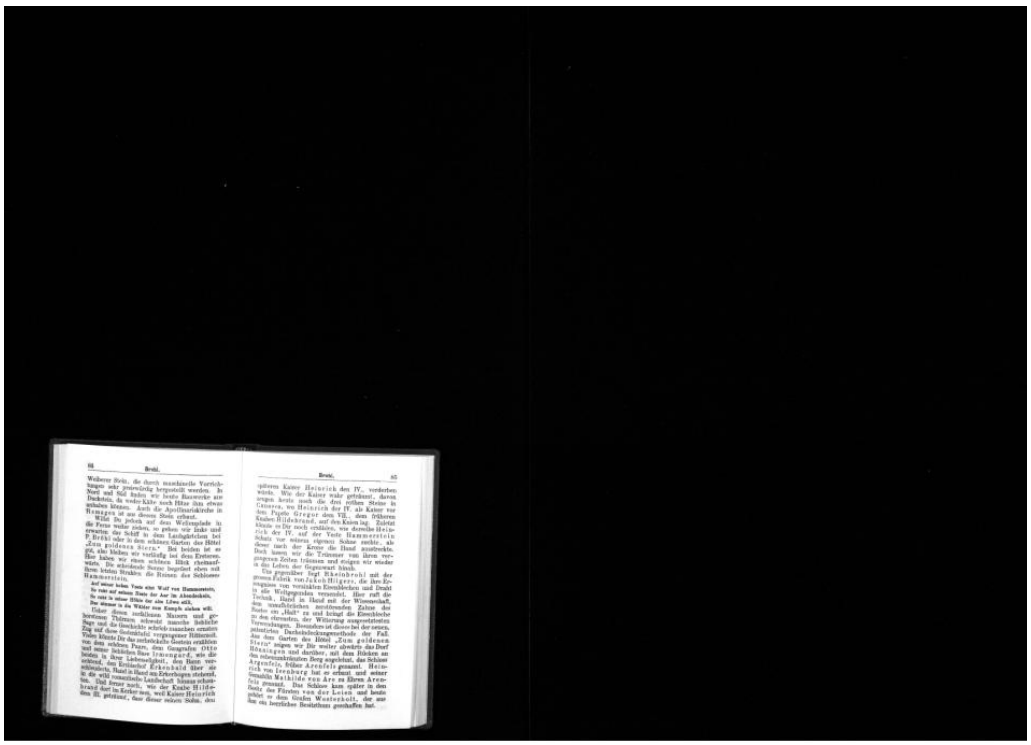


Figure 124: WRONG! A little book put in outside the center

6. The book should be scanned in line if possible, i.a. the book fold should be vertically in the picture, if possible. Deviations up to 20 degrees to both directions are normally tolerated.

7. The borders of the book should not be interrupted by other contents of the image. There is a certain tolerance for the right and the left book page, so that it is possible to hold the book.

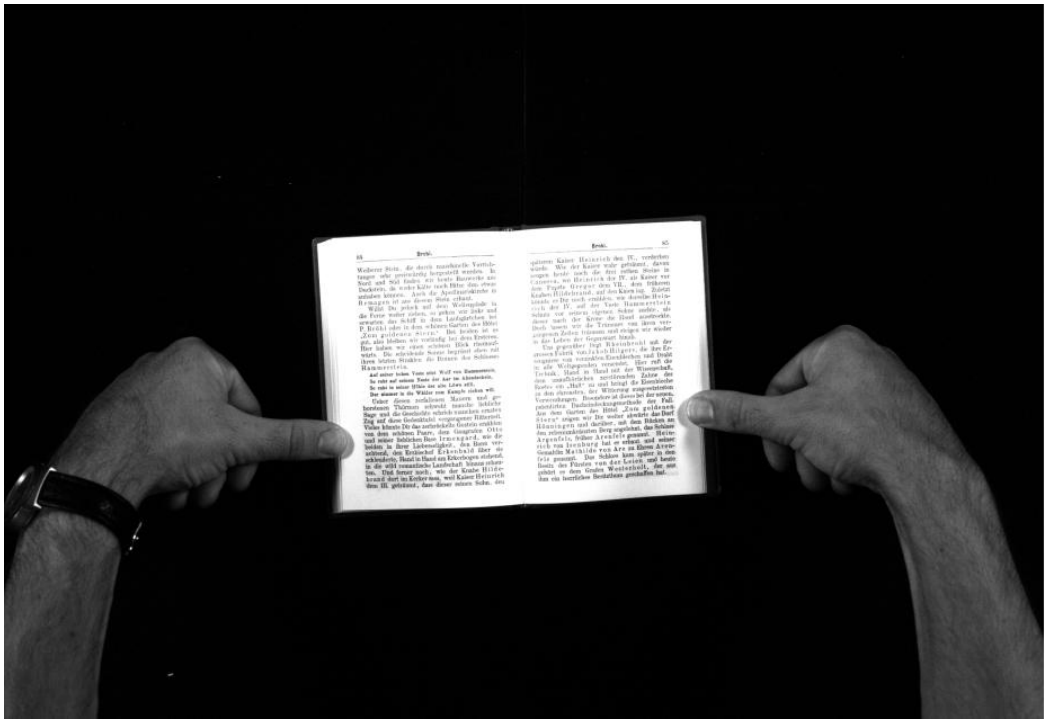


Figure 125: It is allowed to hold the book during the scanning operation

(particularly sensitive are the areas on the left and right side of the book fold at the edge of book above and below up nearly to the middle of the book pages. In this area the black area between the border of the book and the border of the image must also absolutely remain free.)

8.2.1.3 Set-up options

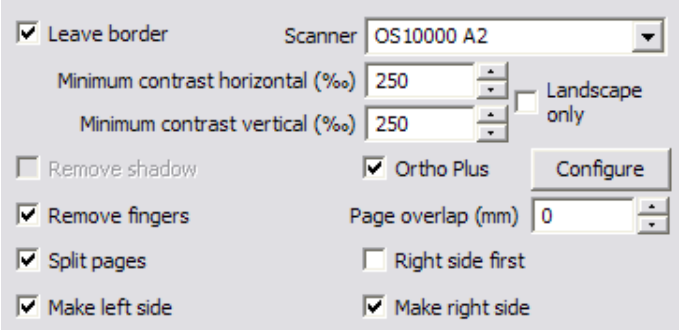


Figure 126: Set-up options „orthoscan“

8.2.1.3.1 Scanner

Orthoscan requires an indication about the scanner geometry. For selecting the correct value here, it is necessary to indicate the scanner that has scanned the image.

8.2.1.3.2 Minimal contrast

Sensitivity of the edge recognition for the determination of the edge of book above and below. Can be selected between 5 and 100.
The best results can be achieved normally with values between 20 and 30.

8.2.1.3.3 Minimal contrast vertically

Sensitivity of the edge recognition for the determination of the left and right edge of the book. Can be selected between 5 and 100.
The best results can be achieved normally with values between 20 and 30.

8.2.1.3.4 Remove shadow

Removes the shadow of the book fold.

8.2.1.3.5 Remove finger

Removes possibly scanned fingers on the border of the book and replaces them with the image background.

8.2.1.3.6 Split pages

The image is divided into two halves at the book fold and it is saved with two files.

8.2.1.3.7 Page overlap

If the option “split pages” has been selected, it is possible to set here for how much millimeters both halves of the image shall be overlapped to each other respectively.

8.2.1.3.8 Landscape only

If this is checked the page separation only happens if the original image is wider than high.

8.2.1.3.9 Right side first

For instance arabic and chinese is written from right to left. For such material check this box to get the correct order.

8.2.1.3.10 Leave border

If a positive value is entered here, a part of the black edge around the object will be left similar to the image processing function 8.1.6 Cut.

8.2.1.4 Ortho plus

If Orthoscan is not able to evaluate the book edge, a deskew or removing of the black edge may be carried out instead. To activate this emergency run check this box and run the configuration if required.

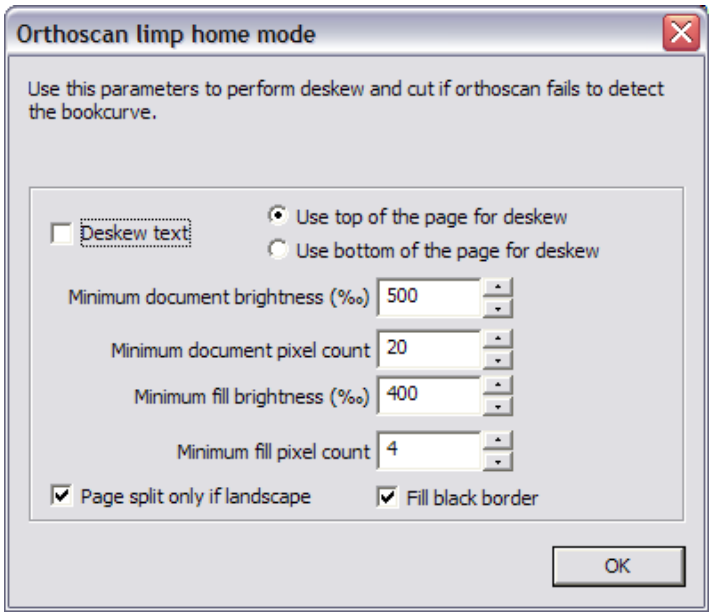


Figure 127: Set-up options „orthoscan limp home“

8.2.1.4.1 Ortho plus

By setting this check mark the function will be activated.
If the book fold equalization does not find a book, at first a deskew and then a cutting of the black edge will be carried out.
In addition, the resulting image (of Orthoscan or deskew/cut) will be cut in the geometrical center, if Orthoscan is not able to find a center of page. This may be reduced using the button “separation only with landscape format”, so that this will only happen if the image is wider than high.

8.2.1.4.2 Document threshold

Starting from this brightness value it is assumed that it is the document to be cut/aligned. For more details see chapter 8.1.6 Cut.

8.2.1.4.3 Document pixel

Starting from this number of pixels it is assumed that it is the document to be cut/aligned. For more details see chapter 8.1.6 Cut.

8.2.1.4.4 Edge threshold

Starting from this brightness value it is assumed that it is the document to be cut/aligned. For more details see chapter 8.1.6 Cut.

8.2.1.4.5 Edge pixel

Starting from this number of pixels it is assumed that it is the document to be cut/aligned. For more details see chapter 8.1.6 Cut.

8.2.1.4.6 Fill black edge

If this is activated possible rests of the black book seesaw, which are left after the cutting, will be painted over white.

8.2.1.4.7 Separation only with landscape format

If this is activated, the page separation will only be carried out if the result of the cutting procedure is a rectangle, which is wider than high. So it will be avoided that individual pages are cut, which are scanned on end.

8.2.1.4.8 Deskew text

If this box is checked Omnican tries to deskew the text. Otherwise the top or bottom border is used for that (see section *8.1.7.3.1 Use top/bottom of the page)*

9 Job Terminations

9.1 Hermes digital

Hermes digital is a Zeutschel document delivery service system.
The first scanned image is the order sheet. From this sheet Omniscan reads a barcode and uses it as a order number. A multipage PDF will be created from all scanned images and it is uploaded to a web server (per ftp). In addition, an e-mail is sent to the customer and the order will be marked as finished at hermes.

9.2 E-mail

With this job termination it is possible to send images as an e-mail.
Therefore you may use either MAPI and send the e-mail with a program or use a SMPT server directly.
If MAPI is used, the images can be attached as an annex. There is the possibility in any case to load the images on a web server and the e-mail may include links to the images for an easy access. In addition, a HTML file can be created with links to the images. Then a link to this HTML file will be included in the e-mail, which is also be loaded.

9.3 Flyers

The purpose of this job is to read handbills of different companies to make them available over Internet.
The images are offered as small thumbnails for a quick view and a high-quality web image for download. In addition, the images can be saved as a PDF and in each format defined by Omniscan.
To make the upload to the server easier each handbill gets a sticker with a barcode before the scanning. Omniscan reads this barcode and creates the path name of the images from it together with a provided start directory. All selected images will then be saved in the job termination there.
The upload to the web server will then be carried out in a separate step after a check of plausibility.

9.4 HAriel

HAriel is the document delivery system of the University of Halle. The images are loaded to a web server either as individual JPEGs or multipage PDF. For the individual JPEGs a HTML file with links to the images can be created which is also uploaded. In addition, an e-mail with links to the images is created and sent to the customer.

9.5 LEA

LEA is a german document delivery system.
The first scanned image is the order sheet. Omniscan reads the barcode on this sheet and creates a subdirectory, in which all images will be saved in the job termination.

9.6 Subito

Subito is a german document delivery system. The images are scanned there black-and-white and they are saved as TIFF G4. The images are moved to a special directory in the job termination, and they are named according to the barcode on the first sheet, the order sheet. Instead of a file extension the images will be numbered, and a control file with the information read from the order sheet will be created additionally. This file has no extension and it is created as the last file, so that a scheduler, which imports the data into the delivery system, may start out from the assumption that all images are available.

9.7 Create multi image file

It is possible to save several images in one file. The individual image files, from which the multi image file is gained, remain unchanged even after the creation of the multi image file.
After the button „configure“ has been clicked to, the following dialog is displayed to carry out the settings, which images shall be saved in which format and in which file.
Then the current job name can be added to the file name, or Omniscan can be instructed to ask for a file name explicitly with the job termination (with file selection dialog).

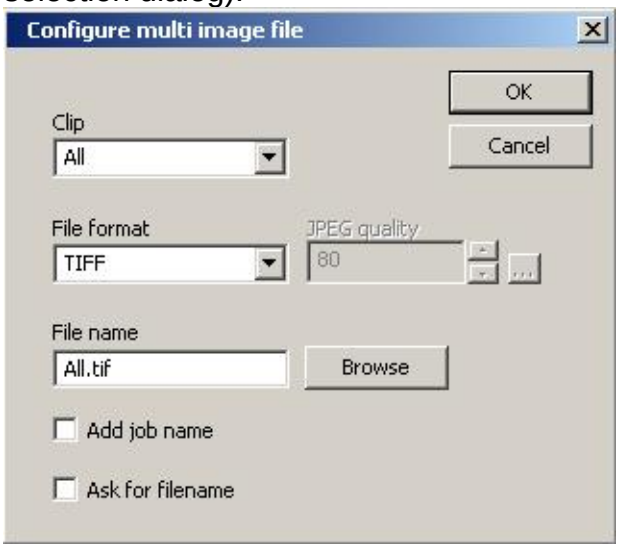


Figure 128: Dialog „configure multi image file“

9.7.1 Clip

Here the clips or images are selected that shall be saved in a file.
The selection is always valid for all clips or images with the corresponding numbering, which have been created in a job.
Here it is possible to select whether all images of a job, only a particular clip or all clips, which are allovcated to a particular group, will be included in the output. Only available clips may be selected there. Groups will only be offered if several groups are available.

9.7.2 File format

Here all formats are offered, which are available for all selected clips.
Different formats are available for different „color depths“.

Color depth	Black/white 1 bit	Gray level 4 bit/8bit and color 24 bit
File formats	TIFF TIFF G3 D2 TIFF G3 TIFF G4 TIFF Huffmann TIFF packed TIFF LZW[7] PDF (With PDF G4 compression is used)	TIFF TIFF JPEG TIFF packed TIFF LZW[8] PDF (JPEG) PDF (JPEG 2000) (With PDF a JPEG (or JPEG 2000) compression is used, if the format is not gray level 4 bit. Gray level 4 bit is not compressed within a PDF)

Table 2: Multi page formats

If clips with different color depths are selected, then those formats are offered, which are available for all formats.

9.7.3 JPEG quality/compression factor

For saving in a multi page PDF the data are compressed with JPEG, provided that gray level 4 bit has not been selected.
JPEG is a lossy compression procedure with which the rate of compression and the image quality can be adapted to the corresponding requirements. It must be observed there that each increasing of the rate of compression and therefore the reduction of the file size results in a deterioration of the image quality.
It is possible here to set the JPEG quality from 0 – 100 when JPEG has been selected as file format. Higher values result in a better image quality, lower values on the other hand result in a higher rate of compression.
With JPEG the compression factor predefines the factor for which the amount of data will be deteriorated. The indication of the factor “0” results in a loss-free compression.
(Depending of the image content this results in a deterioration of the amount of data with factor 2). Generally the settings between 10 and 20 have been proven.
In addition, the filters for the discrete wave transformation and the wavelet level can be selected. For this purpose the following dialog must be opened with the small button right beneath the window for the setting of the compression rate.

[7] Only with option LZW
[8] Only with option LZW

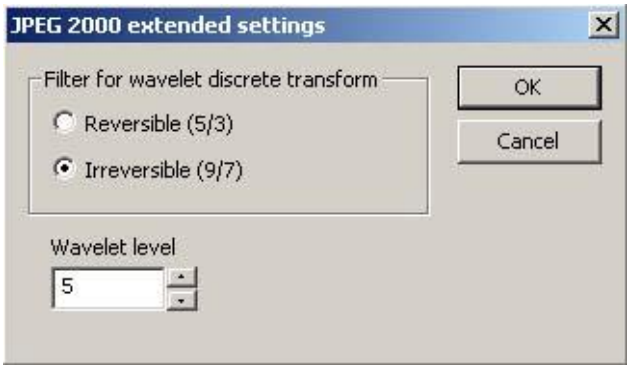


Figure 129: Extended settings „JPEG 2000“

9.7.4 File name

Here the file name is entered, with which the multi image file will be saved. If only one file name is entered, the file is saved in the job directory.
The file can be saved at an arbitrary place using a complete path indication, which is directly entered or can be selected after having clicked to the button „search“.
By integrating a meta datum in the file name the multipage file can be split up into parts. If e.g. a chapter-specific meta datum is used there, each chapter will be typed into a new file then.
Example:
A chapter-specific meta datum “chapter” exists. With the first 20 images it is set to “a boy survives”, with the next 15 images to “a window disappears”, with the next 16 images to “letters from nobody” etc. The file name is: “The stone of the wise men_%mchapter%”.
File names:
For the first 20 images the name will be: The stone of the wise men_a boy survives
For the next 15 images: The stone of the wise men_a window disappears
For the next 16 images: The stone of the wise men_letters from nobody
Etc.

9.8 Print all images

Here the printing of the images can be carried out according to the settings in the “config dialog”.

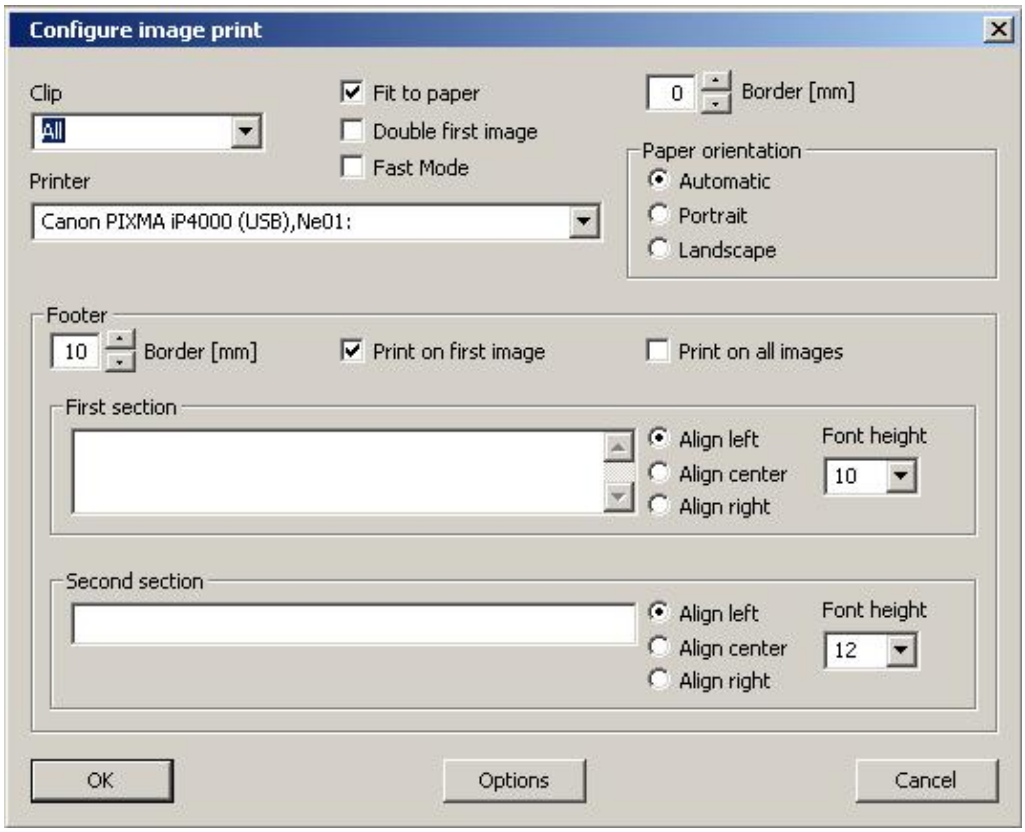


Figure 130: Dialog „print settings for images“ (“Fit to paper” activated)

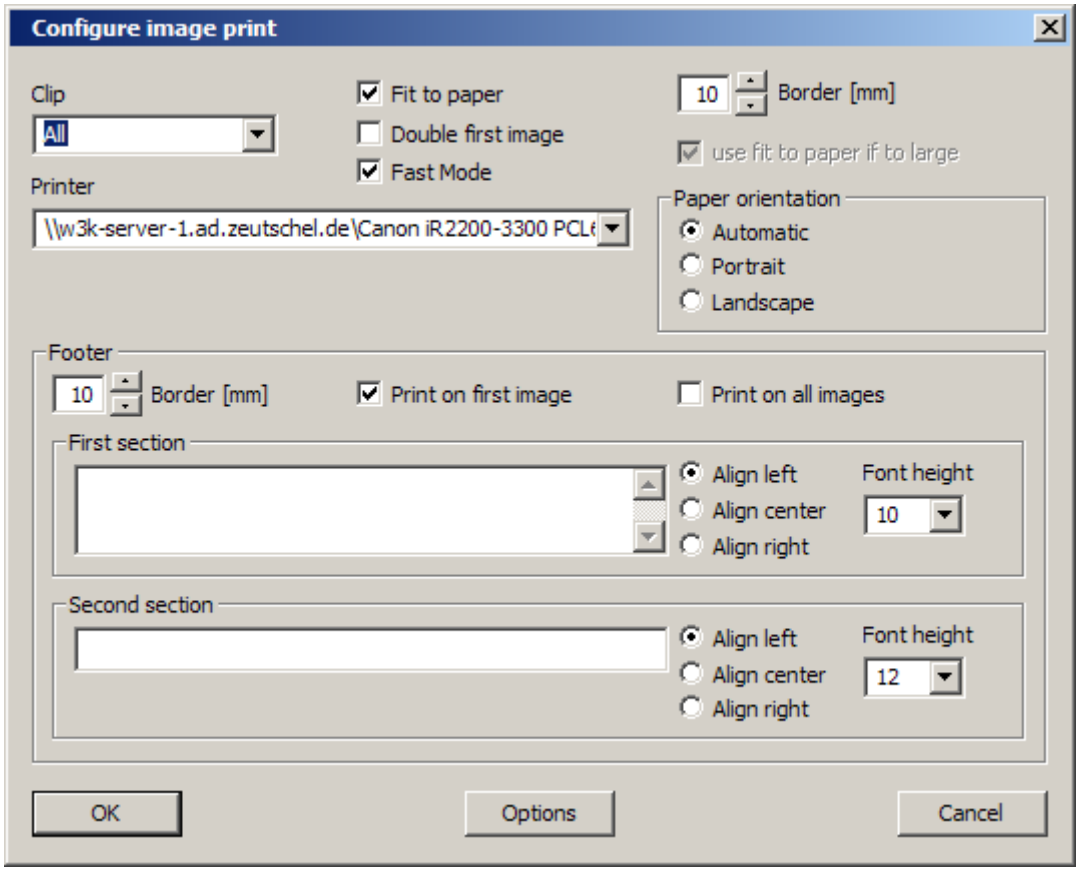


Figure 131: Dialog „print settings for images“ (“Fit to paper” deactivated)

9.8.1 Clip

A selection is possible here, whether all images of a job, only a particular clip or all clips which are allocated to a particular group shall be printed. Only available clips may be selected there. Groups will only be offered if several groups are available.

9.8.2 Printer

Selection of the printer.

9.8.3 Fit to paper

The images will be printed with maximum size by keeping the aspect ratio and with consideration of the selected edge. If no check mark has been set here the desired zoom factor can be selected freely. Activating “use fit to paper if to large” limits the size of the printed image to the paper size. The aspect ratio remains unchanged.
This function may be switched on or off with a control which is displayed with the activation of “print all images”.

Figure 132: Controller for switched on function „adapt to paper“ with an edge of 10 mm.

Figure 133: Controller for switched off function „adapt to paper“.

9.8.4 Double first image

The first image is printed twice.

9.8.5 Quick mode

If no check mark has been set here the images will be rescaled, dithered, etc., before they are passed on to the printer driver/printer. If the check mark has been set, this will be left to the corresponding printer driver/printer.

9.8.6 Footer line

It is possible to add a text on the lower edge of the printout.
This text can be configured in two sections.
The first section may contain an arbitrary number of lines, the second one only one line.

9.8.7 Paper alignment

Here the alignment of the paper can be set. This setting will be taken over with a replacing of the printer. If the own configuration dialog belonging to the printer is displayed (see 9.8.8 Options), the setting or alignment entered there will be taken over.

Automatic
The alignment will be adapted to the image to be printed. If the image is wider than its height, then landscape format will be set; otherwise portrait format will be selected.

Portrait format
All images will be printed with portrait format.

Landscape format
All images will be printed with landscape format.

9.8.8 Options

By pressing the button “options” the own configuration dialog belonging to the selected printer will be displayed. The settings entered here will be saved with the job, so that they must not be entered again each time when the job is opened. But only those parameters will be used there which can be used with all printers.
If another printer is selected from the list of the available printers after the settings of the printer have been made, then the printer settings entered before will not be taken over.
Only the parameters of a printer will be saved with a job (the parameters of the printer whose setting dialog has lately been finished with “OK”).

9.9 Copy files to

The scanned images are copied to the chosen directory. It is possible to set with „configure“, in which file format the images will be saved. (The file format „Omniscan“ means that the current file format will be kept).
Further it can be selected whether all images of a job, only a particular clip or all clips, which are allocated to a particular group will be copied. Only available clips can be selected there. Groups will only be offered if several groups are available.
The numbering is done with an attached number, whose number of digits, start value and increment can be set in the same way as the renaming. If the number shall not be attached, but be inserted, this can be done with a dummy %n.
If the option „add job name“ has been selected, a folder with the name of the job will be created. The job files are copied to this folder then.
If the option “ask for directory” has been selected, then during the job termination the target directory will be queried and the user has the option to select another target directory at this moment without having to open the job settings.

Meta data
With the copying of the scanned images the meta data may be used as a part of the file name. For this purpose the token %m<Metaname>% must be included to the file name. There <Metaname> stands for the name of the meta datum. The complete token will be replaced then by the value of this meta datum which is belonging to the corresponding image. It is possible to also insert „\“ symbols. This results in the creation of new directories. In this way it is possible to distribute the corresponding files also to different (sub) directories.
If the automatic numbering shall be switched off completely, this may be done by using the digit value 0. Then this value must be entered into the entry filed. It must be made sure by entering the meta datum, which is used for the naming, that the same file name will not be created twice.

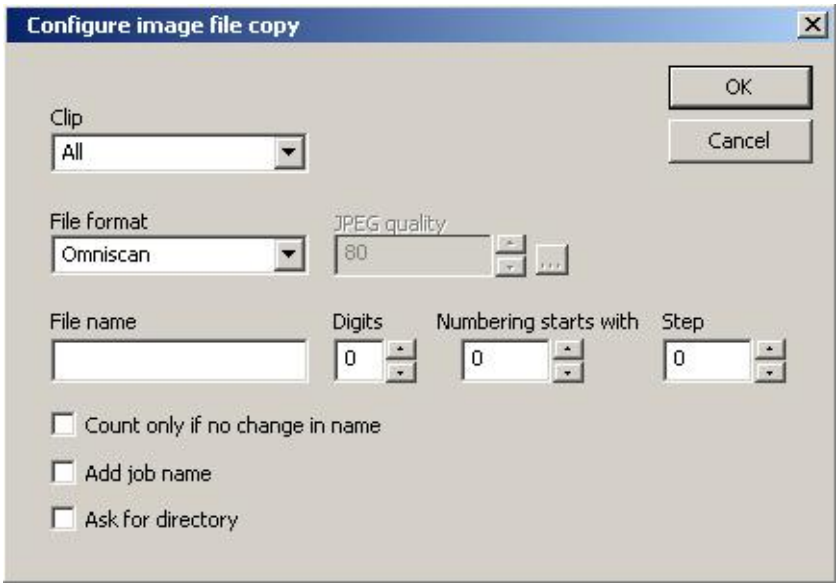


Figure 134: Dialog „copy settings for images“

In the example above the dummy %mchapter%is replaced by the chapter name respectively.

9.10 FTP transmission

The images will be transmitted to a ftp server after an URL, i.e. an Internet address (the protocol information „ftp“ is automatically preceded), a user name and a password have been entered.

9.11 User-defined command

The images scanned and processed with Omniscan can be brought to a further processing with a number of job terminations. The job termination “user-defined command” is available to allow the use of arbitrary applications for the post-processing. Here a command for the command line is generated and carried out.

9.11.1 Settings

Token

To carry out the command once the token %d will be inserted to the command. Then the name of the job directory is inserted at this place and the command is started once.

To carry out the command once for each file the token %f will be inserted. Then the name of an image file is inserted at this place and the command is started once for each file.

If a meta data entry in the form %m<Name>% is supplied within the command this placeholder will be replaced with the data of the respective image.

Pre-command

Particularly with the execution of such a command for each file individually (token %f) it may be necessary to carry out a particular command before the beginning of these work, which possibly requires some preparation. This command is then be entered to the main command and it is separated from the main command with the separator #=#. There is no replacement done with the pre-command.

Post-command
As it is with the pre-command it may be necessary to initiate something after the termination of the processing. This will be done with the post-command. The post-command is then defined to the pre-command and it is also separated with the token #=#.

9.11.2 Special cases

8. No %f in the main command, but pre- and post-command are defined: Omniscan starts out from the assumption that a pre- and/or post-command is only useful if the main command is carried out individually for each file. Otherwise this can be carried out by a simple batch file (.cmd). To simplify the application the file name of each image file (separated with a blank) is attached to the available main command and the main command is carried out once repectively. Naturally the defined pre-command and then the defined post-command will be carried out before.
9. No %d, no %f and neither pre-command nor post-command defined: The main command will be carried out once, the name of the job directory (separated with a blank) is attached to the command there.

9.12 XML

The XML job completion creates a special XML-file that can configured here.

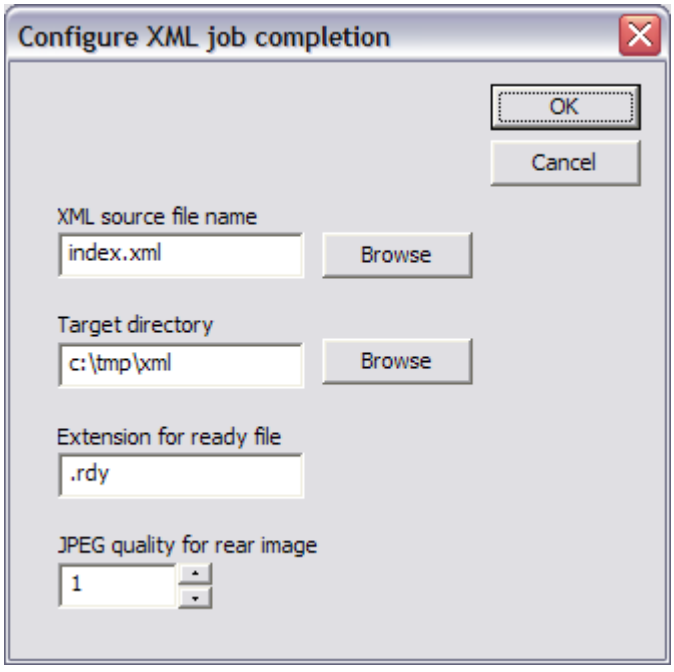


Figure 135: Dialog „XML“

9.12.1 XML source file name

Here you should enter the same value as in the index export if the index export should be used as input (see section *7.3.14.9 Create XML Output*). Relative path are always created in the job directory.

9.12.2 Target directory

The target directory is the directory where the image manger expects the files. There the images are copied to (subdirectory), the XML file and the ready file is created there. The file extension for this ready file is specified in the last entry field. Please also enter the point so that by completely leaving this field empty a ready file without any extension can be created.

9.13 OCR

This job completion processes all the images with an OCR and writes the result into a file according to the settings.

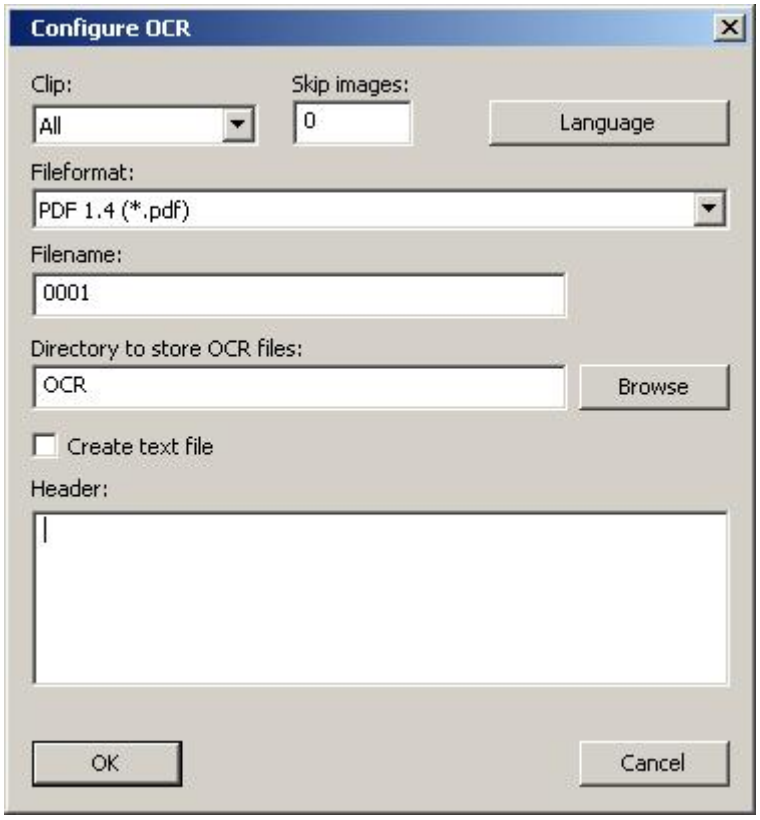


Bild 136: Dialog „OCR“

9.13.1 Clip

Here you can choose which clips are processed with OCR. Default is „All“.

9.13.2 Skip images

Here you can select how many images at the beginning of the job will not be processed with OCR. This can be used for instance to not process the title of a scanned book.

9.13.3 Language

This opens up a dialog in which the language(s) of the document can be choosen (enabled). Not all combinations of languages are possible. If at least one language is enabled the offered languages in the “disabled” window are reduced to the languages possible to be combined with the already selected.

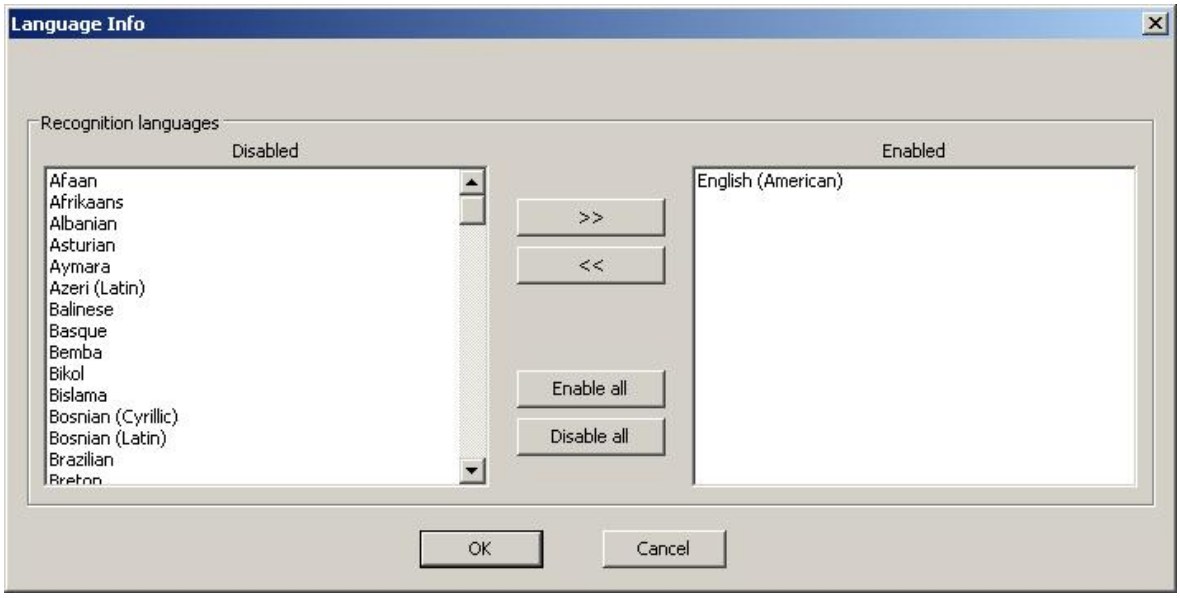


Bild 137: Dialog „Language Info“

9.13.4 Fileformat

This pulldown menu holds all supported output file formats to choose from. One of these file formats has to be selected.

9.13.5 Filename

This is the filename for the result of the OCR.

9.13.6 Directory to store OCR files

Here you can enter (or select) the name of the (sub) directory that holds the result files of the optical character recognition. The default setting is “OCR”, so a subdirectory with the name OCR is created in the current job directory. To store the OCR results outside of the job directory use an absolute path.

9.13.7 Create test file

If this option is selected, a text file will be created in addition to the selected file format. (Only if no text format (*. txt) is selected as file format.)

9.13.8 Header

This field contains text that is added to the output before the text from the OCR. Here you can use meta data too (see *7.3 Meta data*).

10 User Interface

10.1 Menu commands

10.1.1 Menu file

10.1.1.1 New...

Creating of a new job *(see paragraph 5.2 Create new job)*

10.1.1.2 Open...

Opening of an existing job *(see paragraph 5.3 Open job)*

10.1.1.3 Close

Terminates the job without having carried out the job termination *(see paragraph 7.4 Job)*.

10.1.1.4 Delete last clip

Deletes the last clip respectively on demand.

10.1.1.5 Delete selected image(s)

Deletes all selected images on demand.

10.1.1.6 Save job settings with

Saves the job parameters of the current job in a file, which makes it possible to take over the parameters once set for other jobs *(see paragraph 5.2.3 Job* parameter*).*

10.1.1.7 Save as default job

Saves the job parameters of the current job *(see paragraph 5.2.3 Job* parameter*)* as default parameters. These default parameters are offered as a „default“ each time when a new job has been created *(see 5.2 Create new job).*

10.1.1.8 Save as express mode job

Saves the job parameters of the current job *(see paragraph 5.2.3 Job* parameter*)* as express mode parameters. The settings of this job appear in the express mode dialog as possible selection. There a new job with this parameters can be created with one click.

10.1.1.9 Factory settings

Resets the default parameters to the factory settings. Then a restart of OMNISCAN 12 will be necessary.

10.1.1.10 Terminate

Terminates a job. The index card „job termination“ is automatically opened *(see paragraph 7.4 Job).*

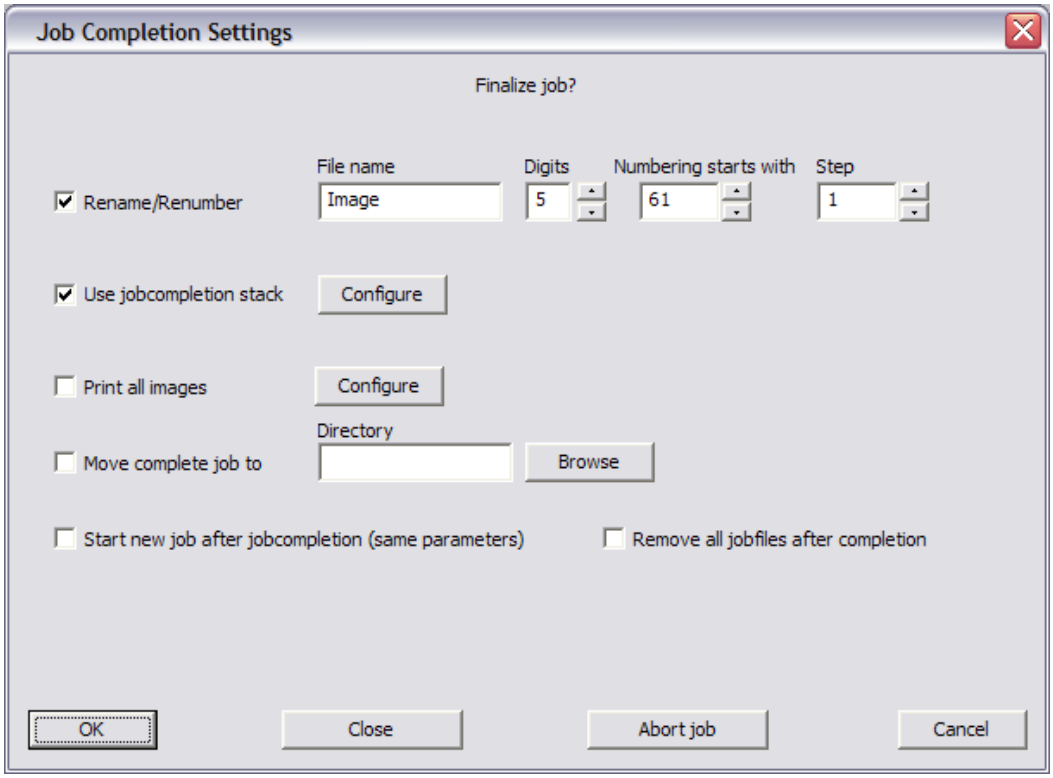


Figure 138: Dialog "Job completion settings"

This dialog is identically to the „job completion settings“ (*see section 7.4 Job completion*) except for the buttons „OK“, „Close“, „Abort job“ and „Cancel“.

10.1.1.10.1 Button „OK“

This button starts the job completion with the current settings.

10.1.1.10.2 Button „Close“

This button closes the current job. The job together with all the data and settings stays stored on disk.

10.1.1.10.3 Button „Abort job“

This completely deltes the job together with all data and settings. If there are already images in the job you wil be warned.

10.1.1.10.4 Button „Cancel“

This cancels the job completion. This means only this dialog is closed, the job stays loaded.

10.1.1.11 Print...

Opens the print dialog.

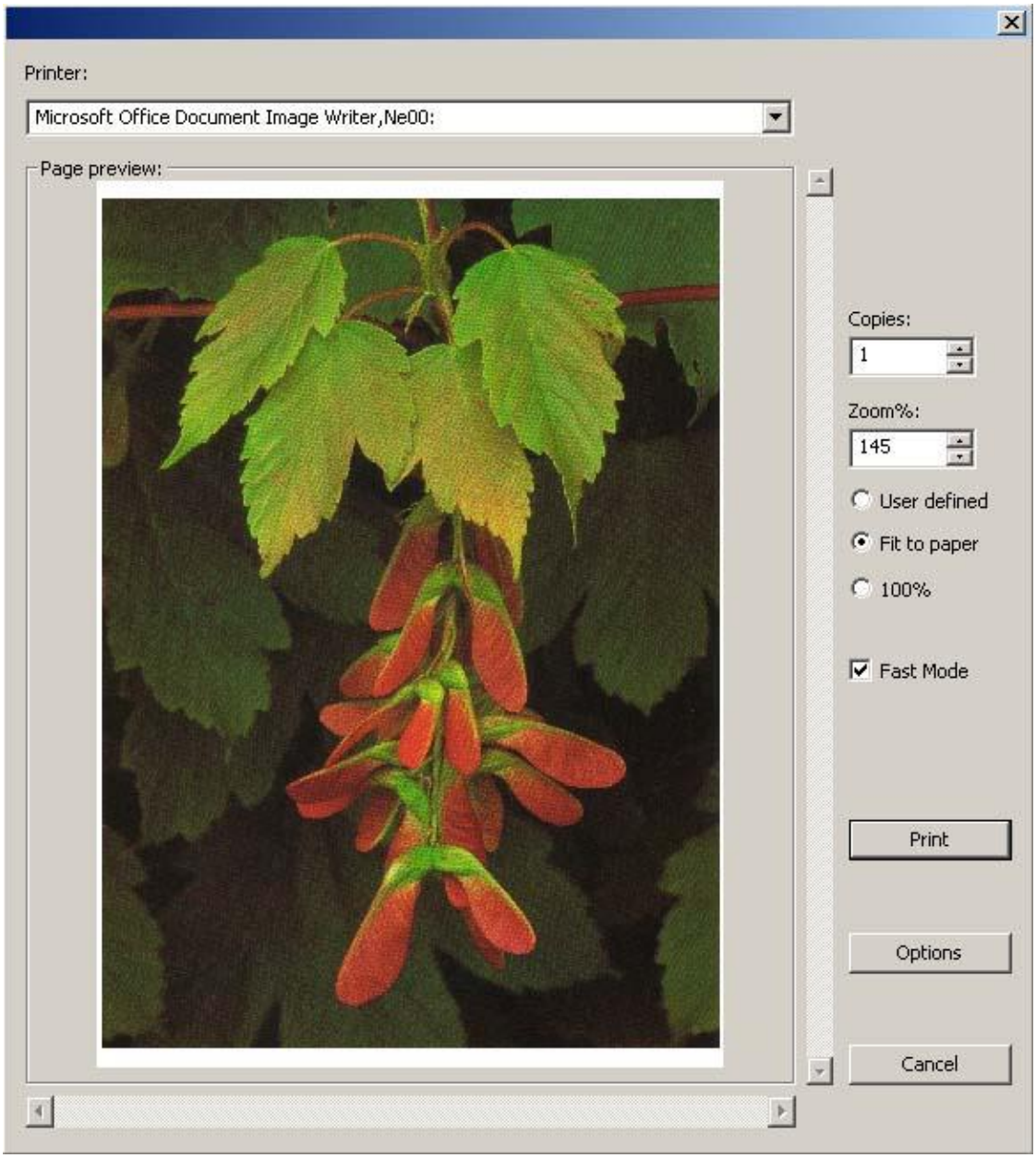


Figure 139: Print dialog

10.1.1.11.1 Print selected image(s)

Prints all selected images.

10.1.1.11.2 Side view

Here the image is displayed as it will be printed with the current settings.
If due to the „zoom factor“ the complete image can not be displayed or printed, it is possible to move the image with the scroll bars being displayed then.

10.1.1.11.3 Printer

Display of the printer, which has currently been selected, and whose settings can be changed after having clicked to the button „adapt“.

10.1.1.11.4 Zoom %

The zoom factor indicates, how the size of the printed image performs in relation to its original size. Three set-up variants are available.

User-defined
The zoom factor can be entered directly to the field „zoom %“ or it can be changed using the small cursor keys.

Fit to paper size
The image is printed with the maximal size, in which it completely fits to the printout.

100 %
The image is printed with the original size.

10.1.1.11.5 Fast mode

If no check mark has been set here, the images will be rescaled, dithered, etc., before they will be passed on to the printer driver/printer. If the check mark has been set, this will be left to the corresponding printer driver/printer.

10.1.1.11.6 Print

Starts the printing operation.

10.1.1.11.7 Options

Opens the set-up dialog for the currently selected printer.
For more details see in the printer manual.

10.1.1.11.8 Cancel

Finishes the operation without printing.

10.1.1.12 Exit

Exits the program. A job, which was opened with the exit, can be opened again and it is always in the same state, in which he has been at the time of exit.

10.1.2 Menu image processing function

10.1.2.1 Use the image processing dialog

If the check mark of this menu entry has been set, the set-up dialog of this tool is displayed at first with the selection of an image processing tool in this menu *(see paragraph 5.7.5 Set-up dialog for* image processing tools *)*. The filter is used only after the dialog has been left with „OK“.
If the check mark has not been set, the selected image processing tool is immediately used with the parameters lately set *(also see paragraph 5.7.1...individually and manually after the scanning).*
The check mark is set and removed by clicking to the menu entry.

10.1.2.2 Back

Cancels the last image processing operation.

10.1.2.3 Deskew manually

Deskew means the moving in line of images. That means, that the borders of a scan copy are being parallelized with the borders of the image.
This can be done automatically (see *8.1.7 Deskew*) or manually.
With the manual variant the user provides, which straight line shall be parallelized with the edge of the image.
After having clicked to „deskew manually“ the mouse cursor changes to a magnifying glass with cross-lines , as soon as it is being moved over the image.
By clicking the left mouse key a copy of this symbol is fixed to the current position. This is the first point of the straight line, which is parallelized with the border of the image.
If a second point is determined on the image in the same way, the image is moved in line due to the straight line between the two points.
The recognition whether it is a horizontal line, which shall be parallellized with the upper side of the image, or it is a vertical line, which shall be parallelized with the border of the picture, is done automatically.

10.1.2.4 Erase

„Erase“ offers the possibilities to replace an arbitrary rectangle in the scan or image by „white“. After this menu item has been clicked to and the mouse cursor has been moved over the image, the mouse cursors takes the form of an eraser with an arrow. The rectangle can then be formed by continuous pressing of the left mouse key, which after letting off the left mouse key is replaced by a white rectangle.

10.1.2.5 Erase once

Like „erase“, but the functionality is only maintained for a one-time execution.

10.1.2.6 Cut

Enables the cutting of the image by drawing a rectangle with the target size using the mouse cursor.

10.1.2.7 Cut once

Like „cut“, but the functionality is only maintained for a one-time execution.

10.1.2.8 Rotate left

This rotates the current image 90 degrees clockwise.

10.1.2.9 Rotate right

This rotates the current image 90 degrees clockwise.

10.1.2.10 Upside down

This rotates the current image 180 degrees and puts it so upside down.

10.1.2.11 Sharpen

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter see *paragraph 8.1.2* Sharpen*.*

10.1.2.12 Smooth

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.3* Smooth*.*

10.1.2.13 Median filter

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.1 Median filter*.

10.1.2.14 Rotation

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.4 Rotation.*

10.1.2.15 Orthoscan

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph* 8.2.1 *Orthoscan.*

10.1.2.16 Unsharp masking

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“*(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.5* Unsharp masking.

10.1.2.17 Cut

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“*(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.6 Cut.*

10.1.2.18 Deskew

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter see *paragraph 8.1.7 Deskew.*

10.1.2.19 Despeckle

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.8 Despeckle.*

10.1.2.20 Flip

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.9 Flip.*

10.1.2.21 Inverting

By clicking to this menu entry the image processing tool is applied to the current image, that is the picture that is just displayed in the main window either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.10 Inverting.*

10.1.2.22 Stamp

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.11 Stamp.*

10.1.2.23 Automatic print

By clicking to this menu entry the image processing tool is applied to the current image, that is the image that is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1 Use the image* processing dialog*).*
For a description of the filter *see paragraph 8.1.12 Automatic print.*
(The filter „automatic print“ is also mentioned with the menu only for the sake of completeness. If an individual image shall be printed, the normal print dialog (see *10.1.1.11 Print...)* is the right choice. „Automatic print“ is favorably used if it is taken to the choice of image processing tools for a clip (see *7.1.33 Image* processing). The OMNISCAN 12 works as a „copier“).

10.1.2.24 Binarization

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ *(see 10.1.2.1* Use the image processing dialog).
For a description of the filter see 8.1.13 Binarization.

10.1.2.25 Graduation curve

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ (*see 10.1.2.1* Use the image processing dialog).
For a description of the filter see 8.1.14 Graduation curve (color).

10.1.2.26 Include color correction

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ (*see 10.1.2.1* Use the image processing dialog).
For a description of the filter see 8.1.16 Include color correction.

10.1.2.27 Read barcode

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ (*see 10.1.2.1* Use the image processing dialog).
For a description of the filter see 8.1.17 Read barcode.

10.1.2.28 Scale

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ (*see 10.1.2.1* Use the image processing dialog).
For a description of the filter see 8.1.18 Scale.

10.1.2.29 Add/cut border

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ (*see 10.1.2.1* Use the image processing dialog).
For a description of the filter see *8.1.19 Cut/add border*.

Command
By clicking to this menu entry the image processing tool is applied to the current image, i.e. the image, which is just displayed in the main window. Either immediately or after the set-up dialog has been left with “OK” (see 10.1.2.1 Use the image processing dialog).
For a description of the filter see chapter

Add scale
By clicking to this menu entry the image processing tool is applied to the current image, i.e. the image, which is just displayed in th main window. Either immediately or after the set-up dialog has been left with “OK” (see 10.1.2.1 Use the image processing dialog).
For a description of the filter see chapter

Optical character recognition (OCR)
By clicking to this menu entry the image processing tool is applied to the current image, i.e. the image, which is just displayed in th main window. Either immediately or after the set-up dialog has been left with “OK” (see 10.1.2.1 Use the image processing dialog).
For a description of the filter see chapter

Cut type area
By clicking to this menu entry the image processing tool is applied to the current image, i.e. the image, which is just displayed in th main window. Either immediately or after the set-up dialog has been left with “OK” (see 10.1.2.1 Use the image processing dialog).
For a description of the filter see chapter

10.1.2.30 Paper white

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ (*see 10.1.2.1 Use the image processing dialog*).
For a description of the filter see section *8.1.24 Paper* white*.*

10.1.2.31 Saturation

By clicking to the menu entry the image processing tool will be applied to the current image, i.e. the image which is just displayed in the main window, either immediately or after the set-up dialog has been left with „OK“ (*see 10.1.2.1* Use the image processing dialog).
For a description of the filter see section *8.1.25 Saturation*.

10.1.3 Menu overview

10.1.3.1 Current scan

The current scan with the clip frames is displayed in the main window.

10.1.3.2 First image

The first image of the thumbnail bar is displayed in the main window.

10.1.3.3 Last image

The last image of the thumbnail bar is displayed in the main window.

10.1.3.4 All

The image displayed in the main window is displayed completely.

10.1.3.5 Maximize

The image displayed in the main window is displayed larger step by step.
If the image does not fit completely to the main window, then automatically scroll bars are displayed on the border of the image for the movement of the clip.

10.1.3.6 Minimize

The image displayed in the main window is displayed smaller step by step.

10.1.3.7 1 to 1

The image displayed in the main window is displayed in the size, in which a pixel of the image complies exactly with one pixel of the screen mode.
If the image does not fit completely to the main window, then automatically scroll bars are displayed on the border of the image for the movement of the clip.

10.1.3.8 Maximize rectangle

Makes possible the display of a particular clip of an image in the main window by drawing a rectangle with the target size using the mouse cursor.

10.1.3.9 Symbol bar

Makes appear and disappear the symbol bar (toolbar).

10.1.3.10 Status bar

Makes appear and disapperar the status bar.

10.1.3.11 Navigator

Makes appear and disappear the navigator.
The navigator is a minimized display of the image displayed completely in the main window. If the image in the main window cannot be displayed completely due to the selected maximizing, then the displayed clip is highlighted invertedly in the navigator.

Figure 140: Navigator

This inverted clip can be moved with the left mouse key kept pressed. The clip displayed in the main window changes correpondingly.
The navigator can be switched on and off with the menue entry “View, Navigator” or with the navigator button in the toolbar.

10.1.3.12 Clip settings

Opens the index card „clip settings“ in the dialog „settings“.
For more details see paragraph *7.1 Clip* settings.

10.1.3.13 Express mode dialog

Opens the express mode dialog. With that it is possible to select a set of settings with one click.
For more details see chapter 5.1 Express mode.

10.1.3.14 Image processing settings

Opens the dialog “filter settings”.

For more details see chapter 7.1.33 Image processing.

10.1.3.15 Omniscan settings

Opens the index card „omniscan“ in the dialog „settings“.
For more details see paragraph *6.1 Omniscan.*

10.1.3.16 Meta data settings

Opens the index card „meta data“ in the dialog „settings“.
For more details see paragraph *7.3* Meta data.

10.1.3.17 Job Settings

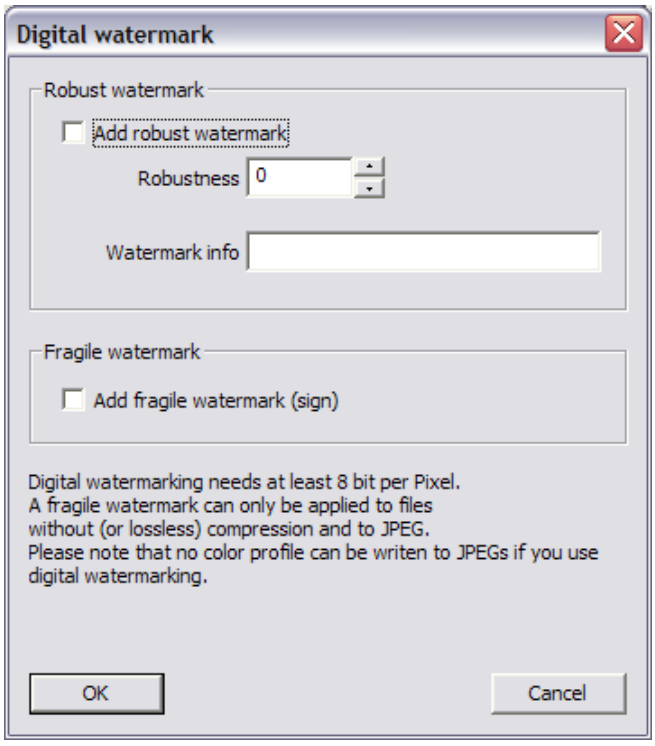
Opens the index card „Job Settings“ “ in the dialog „settings“.
For more details see paragraph *7.5 Job Settings.*

10.1.3.18 Job termination settings

Opens the index card „job termination“ in the dialog „settings“.
For more details see paragraph *7.4 Job* .

10.1.3.19 Digital watermark settings

Omniscan can apply a digital watermark to a scaned image. This changes the pixel just in a slight (invisible) way to add a encrypted code to the image. The key to this code is located in the dongle.
There are two different kind of digital watermarks, a robust and a fragile watermark. A image can contain both kinds.



10.1.3.19.1 Robust watermark

If this is checked every image that omniscan saves is applied a watermark to. This watermark can survive changes to the image without getting lost.

The robustness of this mark is influnced with the corresponding value of this dialog. The higher this value is the more insensitive is the image against manipulation. If the robustness is too high the watermark leads to visual artefacts int the image.
Also a arbitrarily text can be added to the watermark as „watermark info“.

10.1.3.19.2 Fragile watermark

If this is checked a fragile watermark is added to each image Omnsican saves. A fragile watermark detects any manipulation to the image.

10.1.3.19.3 Add on program: VerifyWatermark

Detection of the invisible watermark is done by the program VerifyWatermark belonging to Omnsican. This program also uses the dongle to get the key for the watermark. Checking a image has to be done with the same dongle as the saving (or with a dongle with the same key).

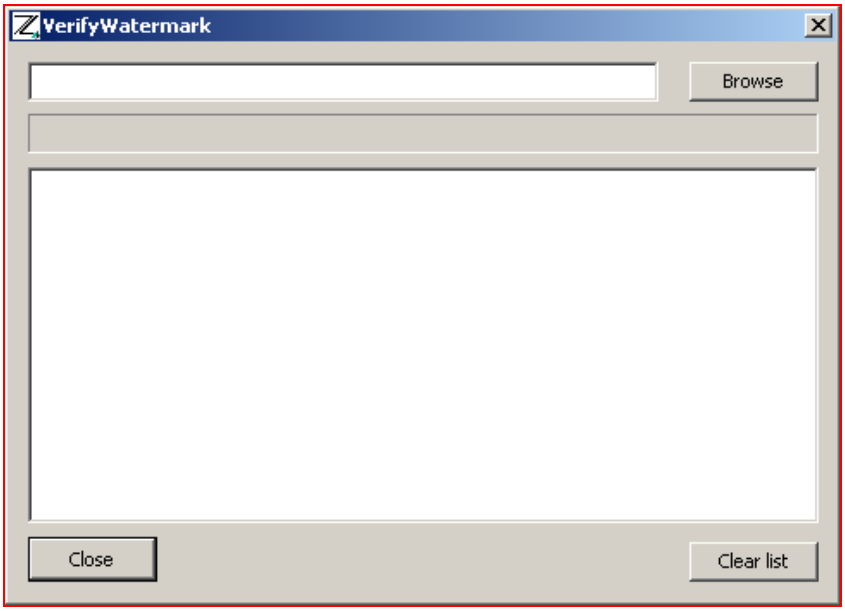


Figure 141: Add on program "VerifyWatermark"

Choose the image to check with the browse button. The result is displayed in the list box below the filename. This list can be cleared with the “Clear list” button, the close button closes the program.

10.1.3.20 Color management settings

Opens the index card „color management“ in the dialog „settings“.
For more details see paragraph *6.3 Color* management.

10.1.3.21 Correct colors

Deactivation and activation of the color management for the screen display.
Corresponds with the settings of the index card „color management“
(see 6.3.6 Color management active*).*

10.1.4 Menu scanner

10.1.4.1 Scan

Initiates a scan operation.

10.1.4.2 Rescan

Initiates a rescan operation. A rescan is a scanning operation, with which the last scan is typed over.

10.1.4.3 Continuous scan

Initiates a series of scans without any other user action being necessary in the meantime. The continuous scanning is stopped by pressing the escape key or the option between the scanning operations is deactivated again.
It is possible to enter a period of time in the Omniscan settings, for which the starting of the next scan operation will be delayed (see *6.1.16* Scan delay).

10.1.4.4 Zeutschel Scanner

Switchover to a Zeutschel Scanner if one is available.

10.1.4.5 TWAIN scanner

Switchover to a scanner connected with TWAIN (*s.11.3 TWAIN scanner*).

10.1.4.6 Virtual scanner

Switchover to the virtual scanner (*s. 11.4* Virtual scan).

10.1.4.7 Empty book seesaw

Results in the display of the empty book seesaw in the main window again at the starting of a new job. Changes of the clip settings will be only applied with the next scan then.

10.1.4.8 „Linked together scan“ („interleave mode")

If for example the left pages of a book are being scanned at first and then the right pages, it is useful to save them correspondingly to their page counting and not to the sequence of scanning.
This is made possible with the mode „linked together scan“.
In the thumbnail bar (*see 5.8 Thumbnail* bar) the position can be determined, to which the next images are being inserted (see *5.8.1 Placing of the* thumbnails*).*
The option „linked together scan“ results in the fact, that starting out from the placing of the new scan selected lately with all further scans one scan is always skipped.
If e.g. the left pages of a book of 256 pages have been scanned one after the other, they now appear in the thumbnail bar numbered from 1 to 128. If now the position for the next scan is set to the beginning of the thumbnail bar, the next scan, that is the first right page (page 1) is set to the beginning of the scanning job. With activated „linked together scan“ one scan is skipped for the next positioning. The second right page (page 3) is correspondingly inserted to the third place,

since the first left page (book page 2) has been skipped. If the right book pages are scanned in this way one after the other, all pages of the book are displayed then in order of their page counting.

10.1.4.9 Glass plate

Makes possible the setting to scan with or without glass plate.

10.1.4.10 Settings

Opens the dialog „settings“, which includes all the index cards for the program settings as well as for the job settings (see paragraphs *6 Program* Options and *7 Job* Options).

10.1.5 Select

10.1.5.1 New chapter

Makes possible the “opening” of a new chapter for chapter-specific meta data. For more details to meta data s. *7.3 Meta* data.

10.1.5.2 Left page/right page

Makes possible the specific activation of a color mode separately for the left and the right page of a book. For more details see 7.1.3 Page.

10.1.5.3 Group A – E

The clips, which belong to the corresponding clip group, will be activated. All others will be deactivated. For more details of the clip groups see 7.1.2 Clip group. With the selection “activate all clips” all defined clips may be activated with one keystroke (shortcut = “0”).

10.1.5.4 Adjust trackers

In all clips where the „automatic adaption“ (*7.1.8 Automatic Adaption*) is activated jump to the size and position Omnsican has detected by using Perfect Book, Orthoscan or Cut. Also these clips are reactivated for automatic adaption which was switched of after moving the frames with the mouse.

10.1.5.5 Color, gray, Photo, black/white

Switches all clips to the corresponding color mode.

10.1.5.6 Renew all clips

All clips are created a new and stored to disk.

10.1.5.7 Increase/reduce numerator

Enables the entry of a difference for the images which are really in the job. Can be applied for purposes of accounting, if not all scans are with costs.

10.1.5.8 Brighter, darker

Here the brightness of the main scan can be set (s. 7.2.6 Brightness).

10.1.5.9 Increase/decrease threshold

Leads to a increas or decrese of the binarisation threshold. Changes are visible at the Threshold slider in the toolbar (if enabled).

10.1.5.10 Set Threshold and brightness

This opens a dialog to modify binarisation threshold, brightness and contrast. This is intended to use together with a programmable keyboard.

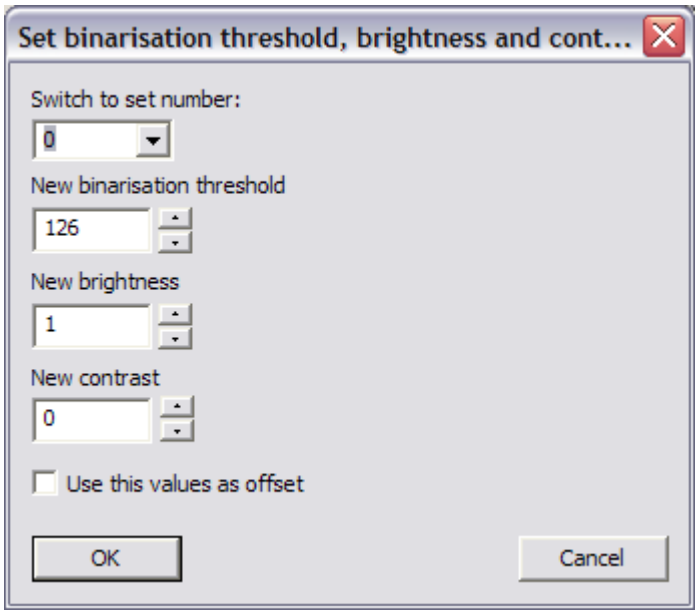


Figure 142: Dialog " Set Threshold and brightness "

10.1.5.10.1 Switch to set number:

You can save up to five different sets of values. They are stored and activated with OK.

10.1.5.10.2 New binarisation threshold, brightness and contrast

This is the same as using the sliders in the toolbar (see section *10.5 Symbol bar (toolbar)*).

10.1.5.10.3 Use this values as offset

If this is checked the values in the dialog are not used as new values, but as offset to the current value. To leave the settings unchanged a value of 0 has to be entered. For instance to increase the value for the brightness from 2 to 6 enter the value 4 into the corresponding entry field and enter 0 for all others.

10.1.5.11 Couple clips

The coupling of the clips 1 and 2 is switched on or off.

10.1.5.12 Flip clips

There is the option for the clips 1 and 2 to flip the geometry of one clip on the other one. The geometry of the active clip is always flipped onto the other one there.

10.1.5.13 Previous image, next image

The previous or next image in the thumbnail bar is selected and it is displayed in the main window.

10.1.5.14 Add next scan behind

The position on which newly scanned images will be inserted is laid to the lower end of the thumbnail bar.

10.1.5.15 Add next scan before the current

The next scan will be inserted bofore the image currently visible in the main window. This can be used if the mouse should not (or can not) be used. This may be interesting using a programmable keyboard.

10.1.5.16 Adapt printout to the size of the page

If print has been activated in the job termination, then the adaptation of the printout to the size of the page can be switched on or off here (s. 9.8 Print all images).

10.1.5.17 Maximize print edge, minimize print edge

If print has been activated in the job termination and the adaptation of the printout to the size of the page has been switched on, then the edge to be considered can be maximized or minimized with the printing here (s. 9.8 Print all images).

10.1.5.18 Activate/deactivate clip

To activate some clips there is an affiliated number key on the keyboard available as a shortcut. For deactivation this key must be combined with „Strg“. The key „2“ activates clip 2, the key „Strg-2“ deactivates clip 2.
There is a special option to respond clips, which number is bigger than 9, for the use with a programmable keyboard. Using the shortcut „Strg-E“ activates an arbitrary clip. Only its number must be entered in the following dialog, then „Enter“ must be pressed. The same is valid for the shortcut „Strg-D“ for deactivation.

10.1.5.19 Select filterstack

Here the filterstack of a clip that shall be used can be selected. This is the same as using the drop down „Use filter from“ of the „clip settings“ (see section *7.2.5 Use filter of)*. This is intended to use with a programmable keyboard.

10.1.5.20 New clip

This creates a new clip and opens the „clip settings“ afterwards.

10.1.6 Menue Book Mode

This menue point is only activ if Omniscan is in the book mode which can be switched on in the Omnsican settings (see section *6.1.15.1 Mod*). Also another toolbar is visible with which you can quickly switch the most important settings while scanning a book (*10.5 Symbol bar (toolbar)*).

10.1.6.1 Orthoscan

This switches the use of the book curve correction filter „Orthoscan“ (see section *8.2.1 Orthoscan*). This filter is applied directly to the scan before the clip specific filters.

10.1.6.2 Configure Orthoscan

Opens the „filter settings“ dialog (see section *7.1.33 Image processing*).

10.1.6.3 Cut

This switches the use of the „cut“ filter (see section *7.1.33 Image processing*). This filter is applied directly to the scan before the clip specific filters.

10.1.6.4 Configure cut

Opens the „filter settings“ dialog (see section *7.1.33 Image processing*).

10.1.6.5 Configure none

If neither „Orthoscan“ nor „Cut“ should be applied to the scan, so you can define here which filters will be applied (see section *7.1.33 Image processing*).

10.1.6.6 Left Side

Deactivates the clip for the right side and enables the clip for the left side.

10.1.6.7 Right Seite

Deactivates the clip for the left side side and enables the clip for the right side.

10.1.6.8 Both Sides

Activates both

10.1.6.9 Full

Creates a clip embracing both clips and activates this clip.

10.1.7 Menu “?”

10.1.7.1 Help

Opens the OMNISCAN 12 manual with the PDF format
(provided that Acrobat Reader is installed on the PC.)

10.1.7.2 Start remote maintenance

After selecting this menue entry a mesage box appears saying: “This function is intended to get help from the Zeutschel customer support. Please call Zeutschel by phone first.“ Please take that serious and click on “Cancel” until you are not directed from a Zeutschel employe to press “OK”.
To use this function a working internet connection is necessary.
After clicking to „OK“ the DeskShare Client opens and asks you for a one time PIN you can get from the Zeutschel employe by phone.

10.1.7.3 Information about Ominscan ...

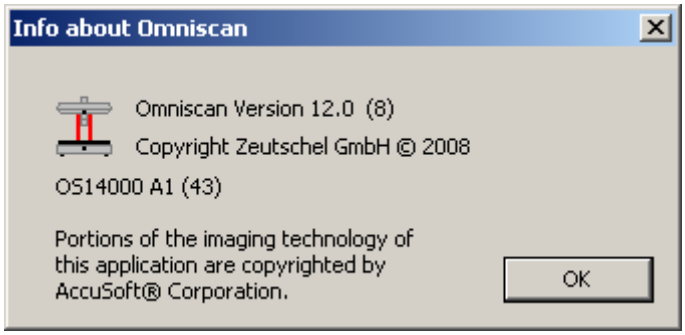


Figure 143: „Information omniscan“

Displays the version of OMNISCAN 12.

10.1.7.4 Dongle information

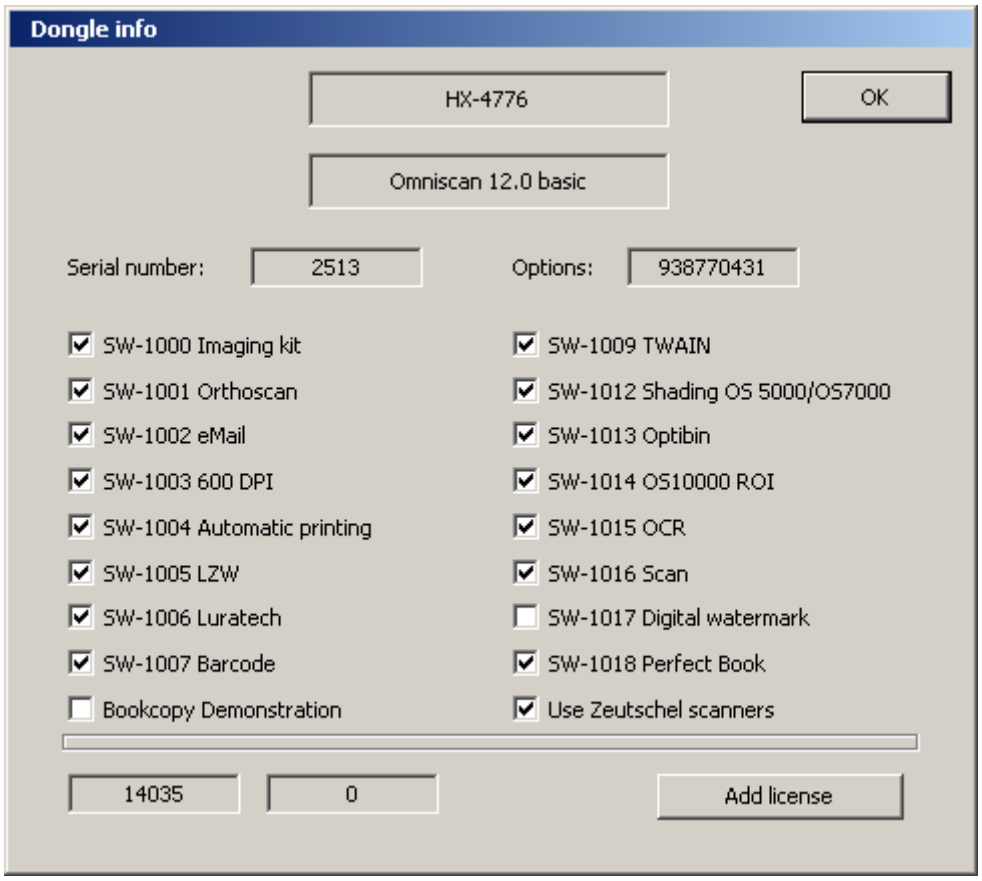


Figure 144: „Dongle information“

Displays the options which are released by the dongle and which are therefore available currently with OMNISCAN 12.
In addition it is possible with this dialog to extend the quantity of the released options by a license file.

This must be done as follows:

1. The dialog “licence input” will be opened after the button “add license” has been clicked to.

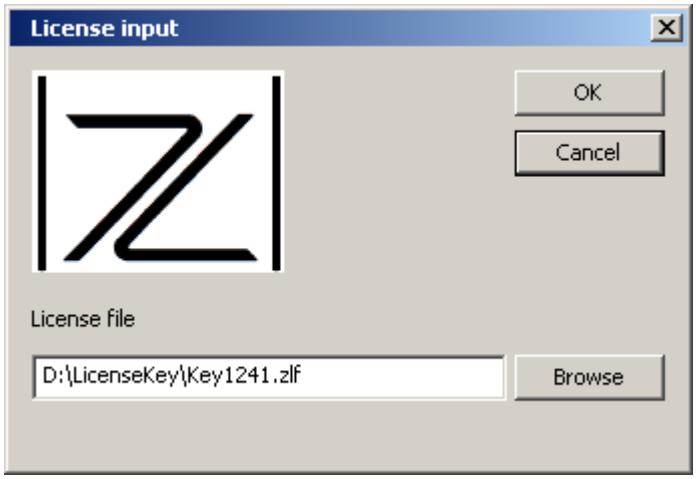


Figure 145: Dialog „License input"

2. Select the license file with the ending ".zlf" with the "browser" button. This must be a license file, which has been generated exactly for the dongle, which shall be "extended".
3. Click to "OK".
4. The new options will be available and will be displayed in the "dongle information" after a restart of OMNISCAN 12.

10.1.7.5 Create diagnostic info

This is for diagnostic purposes from the software development. Omniscan creates a zip file containing all settings of the current job, the current installation and the log files. This file is saved as OS12Diag_<YYYYMMTT>_<HHMMSS>.zip in c:\. This file can be sent to the Zeutschel customer support together with a description of the failure and a description what was done as the failure occurred. If c:\ is not writable Omniscan tries to save the file in the Omniscan installation directory. If that is not possible, too, Omnsican uses the directory where the jobs are created.

10.2 Image view in the main window / mouse usage

The image displayed in the main window can be zoomed with the scroll wheel of the mouse. "Pulling" the wheel will enlarge the view, pushing will diminish the view. Is the view to large to fit into the window it can be moved around with the middle mouse button (normaly the scroll wheel). Is the view (nearly) small enough to be completely visible the middle mouse button activates a magnifier glas at the position of the mouse cursor. In this area the image is displayed 1:1. If the mouse is moved the new area under the mouse cursor will be displayed, similar to a real magnifier glas. In oposite to a screen magnifier not the screen contents is enlarged, but the corresponding part of the image is shown in original size.

If you click with the right mouse button a context menue appears with more functions. The content of this menue depends on wheter a scan or a clip is displayed. (*s. 10.3* Context menu main window*)*

Is the scan displayed in the main window the clip frames are displayed too. The appearance is changed depending on where the cursor is located. Is the cursor over a frame a four way arrow symbolizes that the complete clip can be moved (with holded left mouse button). Is the cursor above a tracker handle this can be

moved. The cursor symbolizes the respective size change. If more than one frame is visible there is always one of them with a solid line. This is the active tracker. In doubt (overlapping frames) all mouse actions are with respect to this frame. Clicking into a frame activates it. If a frame is on top of another selection changes. Normally there is a region where just one frame is, clicking there instantly shows the desired result.
If the mouse cursor is above the thumbnail window the scroll wheel moves the thumbnails up and down if there are more thumbnails than the window can hold. The thumbnail window has a contexct menue too. (*s. 10.4* Context menu thumbnail bar).

If the mouse is over the navigator the image displayed can be moved with a pressed left mouse button. (*s. 10.1.3.11 Navigator*).

10.3 Context menu main window

By clicking to the main window with the right mouse key a context menu is displayed.

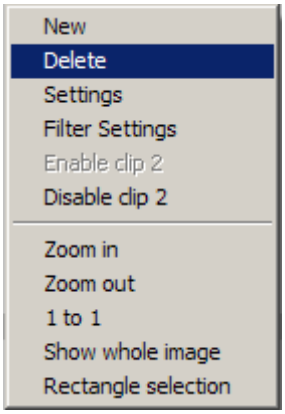


Figure 146: Contextmenu „Scan in main window“

Here a new clip can be defined (see 5.6.1 Insert clips), an available clip definition can be deleted (see *5.6.2 Delete clips*) or the settings of the clips can be changed (see 7.1 Clip settings). After a click to the image processing settings the set-up dialog of the active clip at the moment will be displayed (see 7.1.33 Image processing).
The currently active clip can be switched of and on directly (s. 7.1.4 Create clip).
In addition, the display of the image can be changed in the main window, as it is the same with the corresponding commands of the main menu (see 10.1.3.4 up to 10.1.3.8).

Figure 147: Contextmenu „Clip in main window“

Here the current clip in the main window can be saved in a file (see 5.8.3.5 Save this image), and the current image can be deleted from the job (see 5.8.3.3 Delete this image).
In addition, there are the same options to have an influence on the display as there are in the scan (see above).

10.4 Context menu thumbnail bar

By clicking to a thumbnail with the right mouse key a context menu will be displayed.

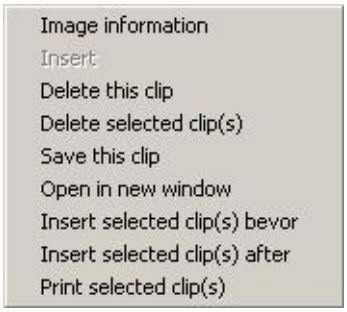


Figure 148: Context menu „Thumbnail“

Here information as file name, size... of the corresponding image can be retrieved. Delete one image (or several) from the job. Save an image to a file or display it in an own window. Furthermore it is possible to move several images or to print them (see 5.8.3 Context menu).

10.4.1 Image information

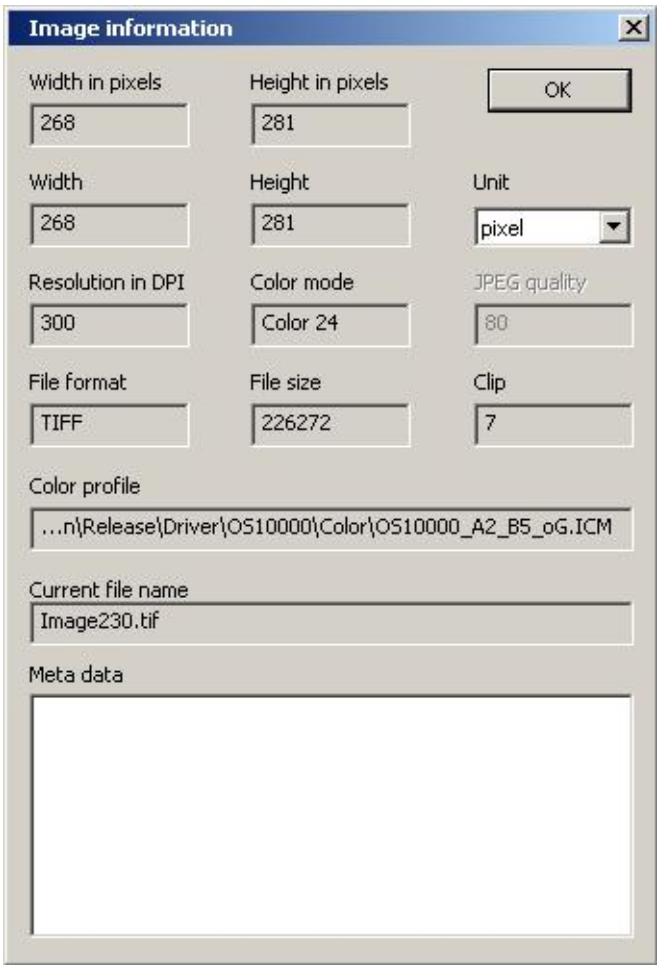
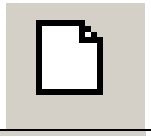
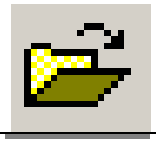
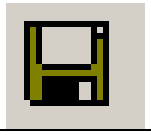
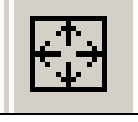


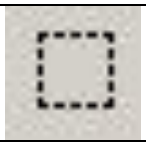
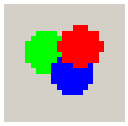
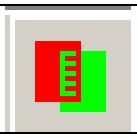
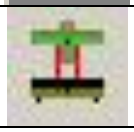
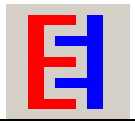
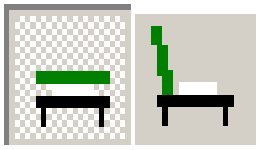
Figure 121: Bild information

Here information of the corresponding image will be displayed. In addition to the technical meta data as width, height, file name... the meta data entered by the user will be displayed. The meta data above the line are saved with each individual image and they can be edited with a double click to the corresponding line. The indications below the line are part of the complete job and they can be changed in the meta data set-up dialog (view, meta data settings...).
This dialog also appears if the middle mouse button is pressed on a thumbnail. It is immediately dismissed if the middle mouse button is released.

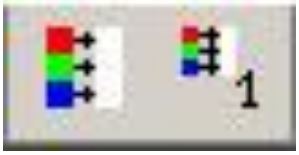
10.5 Symbol bar (toolbar)

The symbol bar can be made appear or disappear in the menu “view ->symbol bar“.

Job functions	
	Creates a new job *(see paragraph 5.2 Create new job)*
	Opens a new job *(see paragraph 5.3 Open job)*
	Opens the index card „job termination“. After the OK button has been pressed the job will be terminated (see paragraph *7.4 Job*)
Image display functions	
	Show or hide the navigator.
	The image displayed in the main window is displayed maximized step by step. If the image does not longer fit completely to the main window, then scroll bars are automatically displayed on the border of the image for the movement of the displayed clip.
	The image displayed in the main window is displayed minimized step by step.
	The image displayed in the main window is displayed in the size, in which one pixel of the image corresponds exactly to one pixel of the screen display. If the image does not completely fit to the main window, then scroll bars are automatically displayed on the border of the picture for the movement of the displayed clip.
	The image displayed in the main window is completely displayed.

	Makes possible the display of a particular image clip in the main window by drawing a rectangle with the target size using the mouse cursor.
	The empty book seesaw is displayed in the main window, and the changes of the settings carried out then are only used with the next scanning. The current main scan will be deleted.
Color management	
	Deactivation and activation of the color management for the screen display. Corresponds with the setting of the index card „color management“ *(see 6.3.6 Color management* active*)*
Clip settings	
	Opens the set-up dialog of the current clip
	Opens the set-up dialog for the image processing tools of the current scan
	Opens the dialog for the specific setting options of the currently connected scanner or for the virtual scanner or the TWAIN scanner.
Scan mode	
	If this function is activated, the scans are inserted „linked together“ to the job (see paragraph *10.1.4.8„Linked together* scan“)
Scanner settings	
	Displays the setting to scan with or without glass plate.
Controller	
	Threshold value for the creating of 1 bit black/white images.
	Setting of the brightness (is only displayed, if this setting is supported from the respective scanner)

	Setting of the contrast (is only displayed, if this setting is supported from the respective scanner)
	Switched off function „adapt to paper“ (Will only be displayed if the „printing of all images“ is activated in the job termination.)
	Switched on function „adapt to paper“ including the indication of the print edge. (Will only be displayed if the „printing of all images“ is activated in the job termination.)



Switch on/off the white reference. If the white reference is switched on clicking on the right button a new white reference can be forced at the next scan.

This is only visible using a scanner that supports this function (OS10000, OS12000).

Image proessing toolbars

Undo last manual image change
(like in the filter menue)

Rotate image 90 degrees counter clockwise

Rotate image 90 degrees clockwise

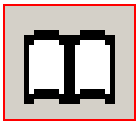
Rotate image 180 degrees to turn it upside down

Start manual deskew
(like in the filter menue)

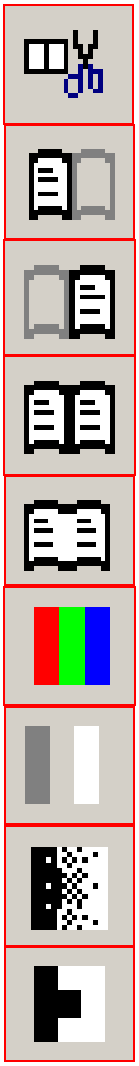
Start erase
(like in the filter menue)

Start cut
(like in the filter menue)

Buch Modus



Switch „Orthoscan“ on/off
(like in the book scan menue)



Switch „Cut“ on/off
(like in the book scan menue)

Deactivates the right clip
(like in the book scan menue)

Deactivates the left clip
(like in the book scan menue)

Activates both clips
(like in the book scan menue)

Creates a clip embracing both and activates it
(like in the book scan menue)

Switches to 24 Bit Color

Switches to 8 Bit Grayscale

Switches to B/W Photomode

Switches to B/W

10.6 Status bar

On the right side of the status bar some information about the current clip and the pixel the cursor is pointing to can be found:

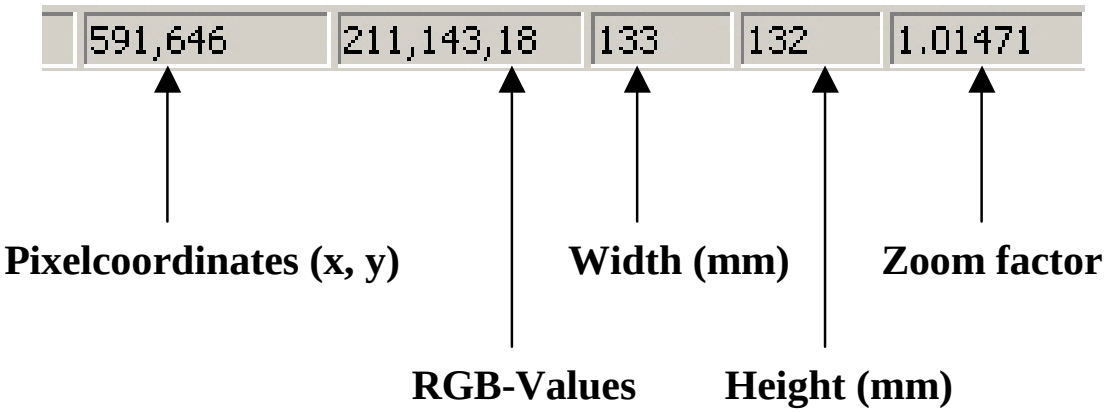


Bild 149: Clip status bar

11 Scanner-specific Options

After the button „extended“ (*see 7.2.4* Extended) has been clicked to, the specific setting options for the currently connected scanner are displayed.

11.1 OS10000-R2/OS12000

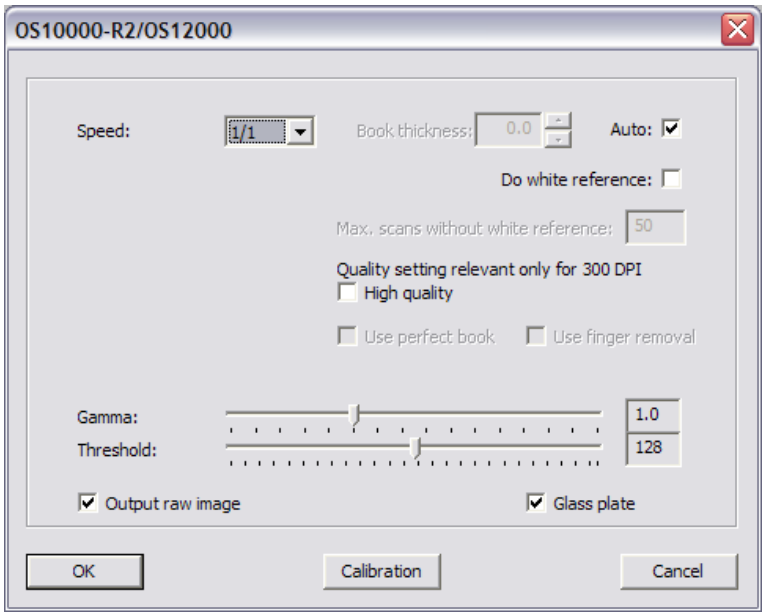


Figure 150: Adjustments Dialog "OS10000-R2/OS12000"

11.1.1 Speed

The OS12000 and OS10000 is optimzed for the best relation between quality and speed. If it is ok to reduce the scan speed to improve the quality you can decrease the scan speed here. The decreased speed is used to scan each pixel many times and use an average value. This reduces noise and improves image quality.
You can choose between four speed settings 1/1, 1/2, 1/4 and 1/8.

11.1.2 Book thickness (OS12000 only)

Here you can enter the book thickness in mm. If the automatic is checked the integrated laser sensor does that. This is used to adjust the level of focus to the material on the book cradle.

11.1.3 Mode

Here you can choose the color mode used for scanning.

11.1.4 White reference

If the automatic white reference should be used check this.
(At the upper edge of the scan area there is a white reference object. With that an automatic brightness correction is done.)
CAUTION: The automaic white reference can be used only if you scan **under** or **without** glass plate. Scanning **on** the glass plate leads to undesired results.

11.1.5 Max. scans without white reference

The white reference is located above the scan area. So it is necessary to position the scan line to this position if doing a white reference. If you do a fullscreen scan this is done automatically. If you scan with a region of interest (ROI, see *7.2.1.2 Circumscribing rectangle / ROI frame*) this option limits the amount of scans done without positioning to the top of the scan area.
The bigger this value is the more time you save while doing ROI scans.

11.1.6 Resolution

This sets the resolution used for scanning.

11.1.7 Scan bidirektional

If this is checked the scanline doesn't position back to the top of the scan area, but stays in the end position. The next scan is then done in the other direction. This can increase the scan speed.

11.1.8 Perfect Book

Perfekt Book is a technologie aiming at the same target like the filter „Orthoscan", but in a totally different way. With a built in matrix camera that scans the book while the main scan is running a 3D Modell of the book is created. With this model it is possible to unwrinkled the book in a high quality way. Using the 3D model instead of the contour (like Orthoscan) this approach has no problems with notes sticking in the book. To use the full functionality at least two clips have to be defined. One for the left side and one for the right side. Both should have the automatic tracker adaption active (see *7.1.8 Automatic Adaption*). This automatic is valid until the trackers are adpted with the mouse. User input has highr priority than automatic. To reactivate the automatic the menue item "Adjust trackers" (s. *10.1.5.4 Adjust trackers*) can be used. In the job settings it is possible to tune the border that is used additionally to the edges that Perfect Book finds. Perfect Book can only be applied to the scan, so it can only be switched here.
CAUTION: Perfekt Book is only available for the OS12000 at the moment and replaces the Orthoscan there.

11.1.9 Use finger removal

If checked the image of the fingers holding a page at the edge is removed.

11.1.10 Brightness/Gamma/Threshold

The settings for Brightness, Gamma and Threshold used while scanning can be modified here.

11.1.11 Output raw image

If checked the image is output without any manipulations increasing the image quality to the Omniscan.

11.1.12 Glass plate

If scanning a object under the glass plate this has to be checked. If you use a OS12000 book cradle with USB connection this is done automatically.

11.2 OS14000

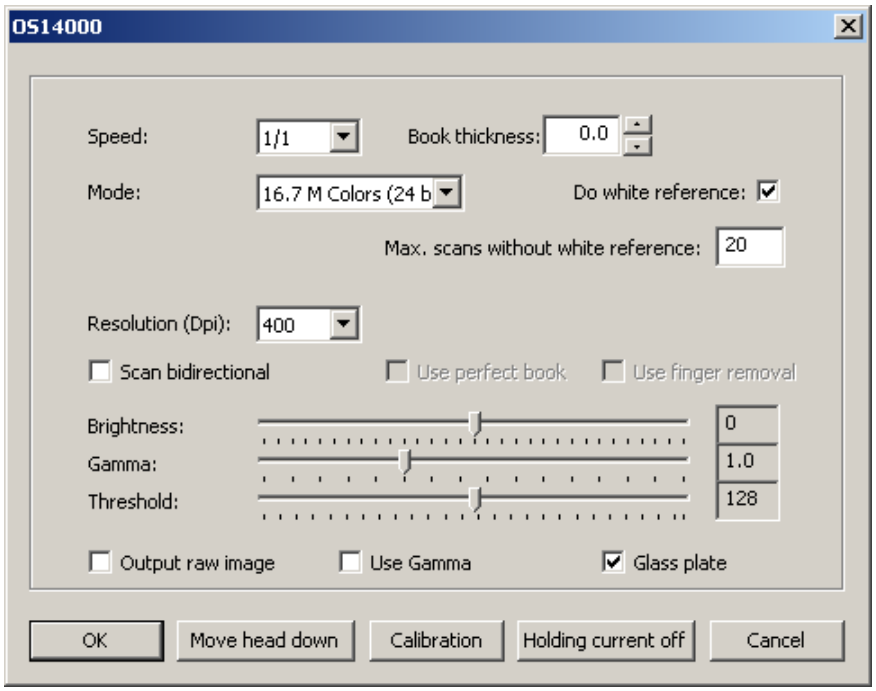


Figure 151: Adjustments Dialog "OS14000"

11.2.1 Speed

The OS14000 is optimzed for the best relation between quality and speed. If it is ok to reduce the scan speed to improve the quality you can decrease the scan speed here. The decreased speed is used to scan each pixel many times and use an average value. This reduces noise and improves image quality.
You can choose between four speed settings 1/1, 1/2, 1/4 and 1/8.

11.2.2 Book thickness

Here you can enter the book thickness in mm. If the automatic is checked the integrated laser sensor does that. This is used to adjust the level of focus to the material on the book cradle.

11.2.3 Mode

Here you can choose the color mode used for scanning.

11.2.4 Do white reference

If the automatic white reference should be used check this.
(At the upper edge of the scan area there is a white reference object. With that an automatic brightness correction is done.)
CAUTION: The automaic white reference can be used only if you scan **under** or **without** glass plate. Scanning **on** the glass plate leads to undesired results.

11.2.5 Max. scans without white reference

The white reference is located above the scan area. So it is necessary to position the scan line to this position if doing a white reference. If you do a fullscreen scan

this is done automatically. If you scan with a region of interest (ROI, see *7.2.1.2 Circumscribing rectangle / ROI frame*) this option limits the amount of scans done without positioning to the top of the scan area.
The bigger this value is the more time you save while doing ROI scans.

11.2.6 Resolution

This sets the resolution used for scanning.

11.2.7 Scan bidirektional

If this is checked the scanline doesn't position back to the top of the scan area, but stays in the end position. The next scan is then done in the other direction. This can increase the scan speed.

11.2.8 Brightness/Gamma/Threshold

The settings for Brightness, Gamma and Threshold used while scanning can be modified here.

11.2.9 Output raw image

If checked the image is output without any manipulations increasing the image quality to the Omniscan.

11.2.10 Use Gamma

If this option is checked, the adjusted Gamma (11.2.8 Brightness/Gamma/Threshold) value will be applied to the image. If this option is not checked an specific 10-bit linearization will be applied to each scan. The linearization table is stored in the scanner and can be adjusted (11.2.12 Calibration).

11.2.11 Glass plate

If scanning an object under the glass plate this has to be checked. If you use an OS14000 book cradle with USB connection this is done automatically.

11.2.12 Calibration

By clicking to the button „calibration“ the service area is reached.
It should only be used by specialist staff and it is protected by a password.
After having clicked to the button the mask for the entry of the password is displayed.

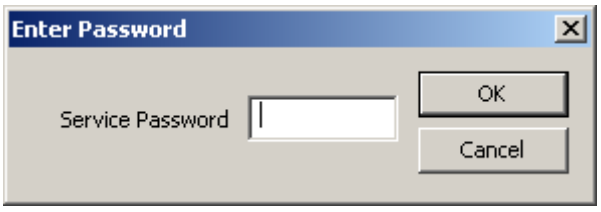


Figure 152: Entry password

After the service password has been enetered, the calibration dialog is opened, in which the calibration data are being created.

11.3 TWAIN scanner

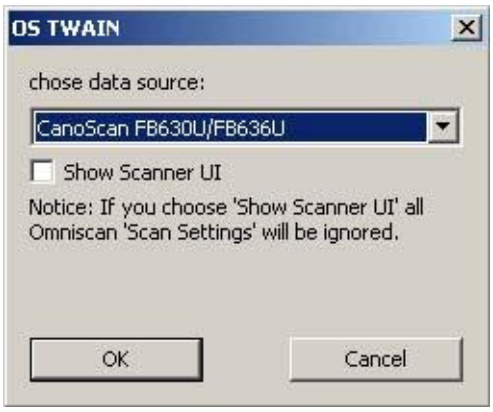


Figure 153: Set-up dialog „TWAIN Scanner“

11.3.1 Select data source

All available TWAIN-conforming data sources are displayed in this pulldown menu. One of these data sources can be selected.

11.3.2 Display user interface

Each TWAIN-conforming data source makes one user interface available. If the check mark has been set here, the user interface of the selected TWAIN-conforming data source will be displayed after the scan operation has been started. In this case all Omniscan settings will be ignored for the actual scan.

11.4 Virtual scan

It is possible to insert an arbitrary number of available image files to a job with the virtual scanner.

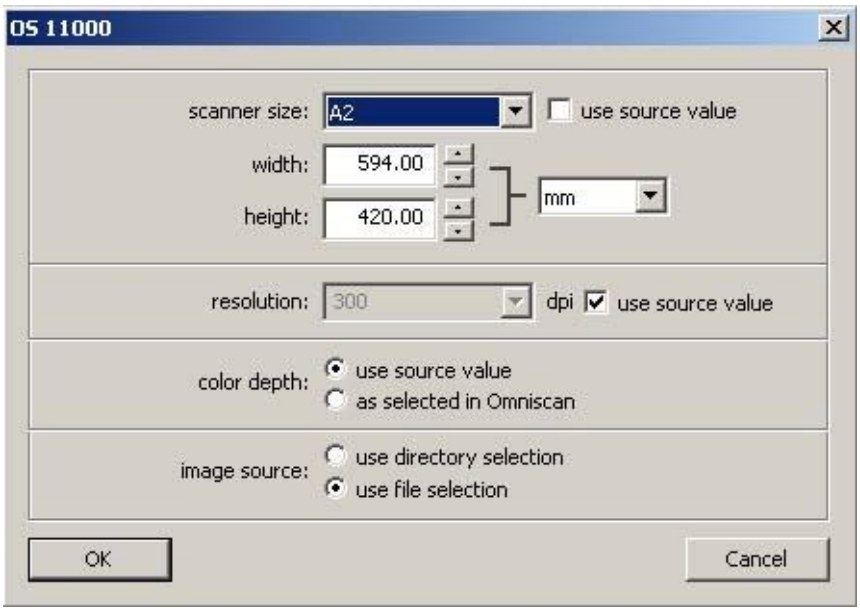


Figure 154: Set-up dialog „virtual scanner“

11.4.1 Scanner size, width, height, use original size

It is possible to determine the size of the image (dimensions) with this parameters, which is passed on from the virtual scanner to the Omniscan application.
If the original image has smaller dimensions than the selected size of the scanner, it will be maximized with a black edge to the size of the scanner. If the original image has bigger dimensions than the selected size of the scanner, an image with the selected size of the scanner will be cut off from the center of the original image.
If the check mark for „use original size“ has been set, the dimensions of the original image will not be changed.

11.4.2 Resolution, use original value

With these parameters the resolution of the image can be determined, which is passed on from the virtual scanner to the Omniscan application.
If the check mark for “use original value” has been set, the resolution of the original image will not be changed.

11.4.3 Color depth

Color depth of the image, which is passed on from the virtual scanner to the Omniscan application. If “selected as in Omniscan” is selected, the color depth of the original image will be adapted, if necessary.

11.4.4 Image source

With “image source” there is a distinction made whether all images of a directory or only individual images of a directory shall be scanned.
If directory selection is activated you can decide about the order the images are fetched. You can sort the images depending on the time of creation (chronolocical order) or alphabetical order (case sensitive or case insensitive). The oldest or first in the alphabet respectively comes first.

12 Copy Protection

OMNISCAN 12 is supplied with a copy protection plug (dongle). At present there are two types used, a USB version (new) and a parallel version for the connection to the printer port. The parallel dongle must be connected to the parallel interface of the computer. The used interface can furthermore be used for other purposes, e.g. the connection of a printer. The cable can easily be connected to the port of the dongle. The USB dongle may simply be plugged to an USB connection of the PC.
To recognize the dongle the installation of a driver is necessary. The installation file of this driver is on the product CD. For more details see in the document „IA_OS12.x_software installation_.pdf, which can also be found on the OS 12 software CD. This will be usually done automatically with the installation of Omniscan.

Which functions are currently be released by the dongle can be seen in the „dongle information“ (see menu entry *10.1.7.4 Dongle information*).

Furthermore it is possible to use all functions of OMNISCAN 12 for 1000 scans or 30 days with any dongle, regardless of which function are released by the current dongle. This trial period starts when a function is used, that is not released.

Without dongle OMNISCAN 12 is started with the demonstration mode. Saving and printing are then not possible.

13 Manufacturer and Service

13.1 Manufacturer

ZEUTSCHEL GMBH
Heerweg 2
D-72070 Tübingen

Tel: + 49 – (0)7071 – 9706 0
Fax: + 49 – (0)7071 – 9706 44
e-mail: info@zeutschel.de
http: www.zeutschel.com

13.2 Service

Of course it is possible to get help from us, if there is a handling problem with one of our products or other problems occur. Please also contact us with general questions any time.

Please contact your local ZEUTSCHEL dealer or the ZEUTSCHEL customer service in such cases by indicating the **device number** (see nameplate) or, in the case of a software, by indicating the **software version** (see figure below).

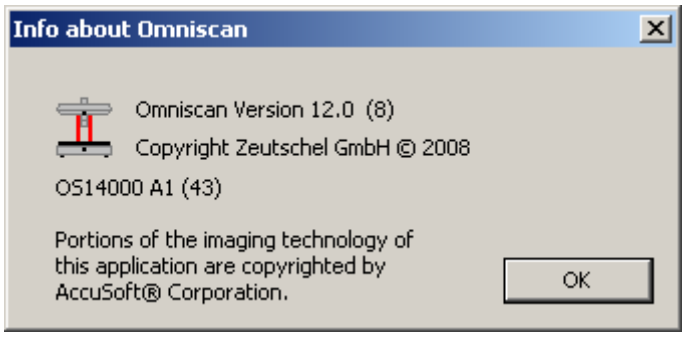


Figure 155: Information window

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14 Appendix

14.1 Shortcuts

Taste	Befehl
F1	Get help
F2, „S“	Start a scan.
F3, Alt-R	Start a rescan.
F4	Show the current scan in the main window
F5	Open the clip settings dialog
F6	Open the filter settings dialog for the current active clip
F7	Empty book cradle
Spacebar	Show the complete image in the main view.
Key „*“ , Home	Show the image in the main view so that one pixel in the image is one pixel on the screen.
Key „+	Zoom in (enlarge)
Key „-	Zoom out (reduce)
Arrowkey ↑	Scroll up
Arrowkey ↓	Scroll down
Arrowkey →	Scroll right
Arrowkey ←	Scroll left
F4	Show the current scan with the clipmarks.
F5	Open the clip settings for the active clip.
F6	Open the Filterstack for the active clip.
F7	Delete the scan.
F8	Deletes (after confirm) the last image in the thumbnailbar.
1 to 9	Aktivates the respective clip. That’s the same as setting „make clip“ in the clip settings. (s. *6.1.2 Make clip*)
0	Activates all defined clips.
Strg-1 bis Strg-9	Deaktivates the respective clip. Thats the same as resetting „make clip“ in the clip settings. (s. *6.1.2 Make clip*)
Alt-1 bis Alt-9 Alt-0	Use the filter stack of the respective clip for filtering the scan. Use the filter stack of the scan.
A, B, C, D, oder E	Aktivate all clips belonging to the respective group and deactivate all others.
M	Manual deskew

Shift-Q	Cut
Q	Cut once
Shift-W	Erase
W	Erase once
L	Rotate left
R	Rotate right
U	Upside down
Z	Undo last manual filter
Alt-+	Increase threshold
Alt--	Decrease threshold
Alt-A	Adjust trackers
Alt-S	Select filter stack
Alt-W	New clip
Alt-F	Switch off the coupling of trackers 1 and 2.
Alt-N	Switch on the coupling of trackers 1 and 2.
Alt-M	Mirror the geometrie of tracker 1 to tracker 2 or vice versa.
Alt-B	Do nothing. (Break barcode reading)
Alt-C	Select a new chapter for chapter-specific meta data.
Entf	Delete the current image.
Ende	Start the job finalisation
Alt-Ende	Silent (Subito-) jobfinalisation.
ESC	Stop the continous scan. or stop as soon as posible.
Shift-+	One step brighter
Shift--	One step darker
Shift-B	Switch (all clips) to black & white.
Shift-P	Switch (all clips) to b/w photo mode
Shift-G	Switch (all clips) to gray.
Shift-C	Switch (all clips) to color.
Shift-D	Reduce print edge for printing in the job termination.
Shift-F	Adapt printout to the page size (Fit2Page) for printing in the job termination.
Shift-I	Increase print edge for printing in the job termination.

Shift-R	Renew all clips
Shift-F1	Help
Shift-F2	Page up after scan
Shift-F3	Page up after rescan
Strg-+	Increase counter (Subito, amount of none payed images).
Strg--	Decrease counter (Subito, amount of none payed images).
Strg- A	Position insert marker at the end of the job.
Strg-C	Carry out job termination.
Strg-D	Deactivate clip.
Strg-E	Activate clip.
Strg- F	Show first image.
Strg-I	Insert next scan before current image
Strg- L	Show last image.
Strg-N	New job
Strg-O	Opens an available job
Strg-P	Prints the image in the main window
Strg-T	Set threshold and brightness
Bild ↓	Show next image (go down in the thumbnailbar).
Bild ↑	Show previous image (go up in the thumbnailbar).

14.2 Stamp creation with „imaging“

OMNISCAN 12 offers the possibility to insert a TIFF file to an image as a stamp (*see 8.1.11 Stamp*).
For this purpose it is possible e.g. to create a TIFF file with an arbitrary text using the tool „imaging“, which is part of the Windows operating system.

14.2.1 How to create a text file in the TIFF format?

Image processing programs are suitable in principle to create texts in the TIFF format. The dimensions must be selected in such a way that the stamp fits into the image.

14.2.2 Create example file with imaging

- Start imaging with „start/programs/accessories/imaging“.
- Open new document with “file -> new“.

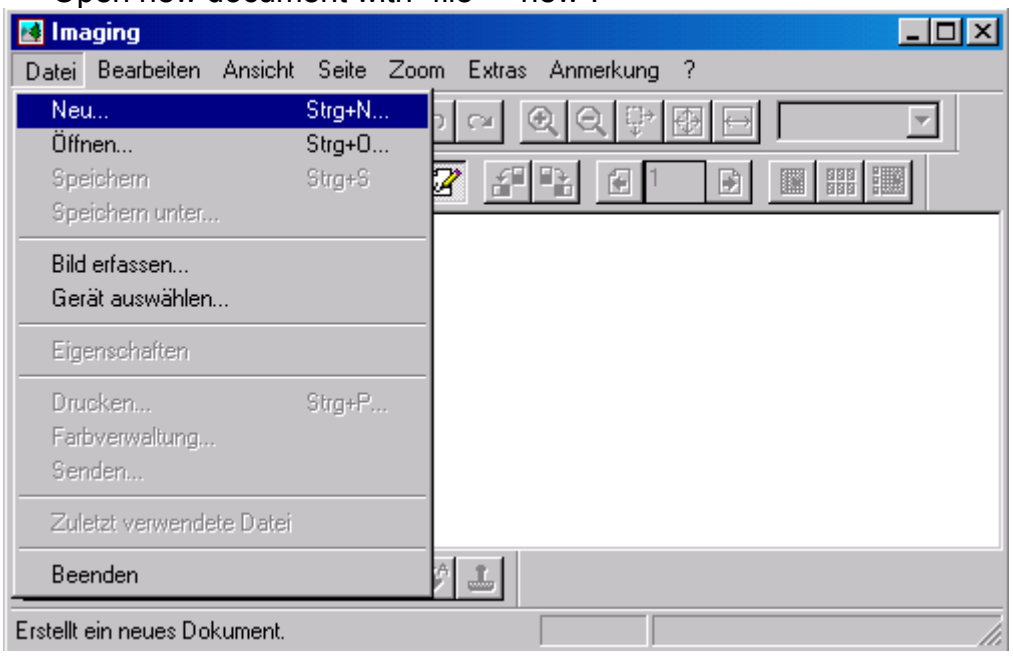

Figure 156: „Imaging“ open new document

- Define the desired size of the stamp field with the index **“size“** and **“user defined size“** – in this example 20 mm height and 210 mm width.

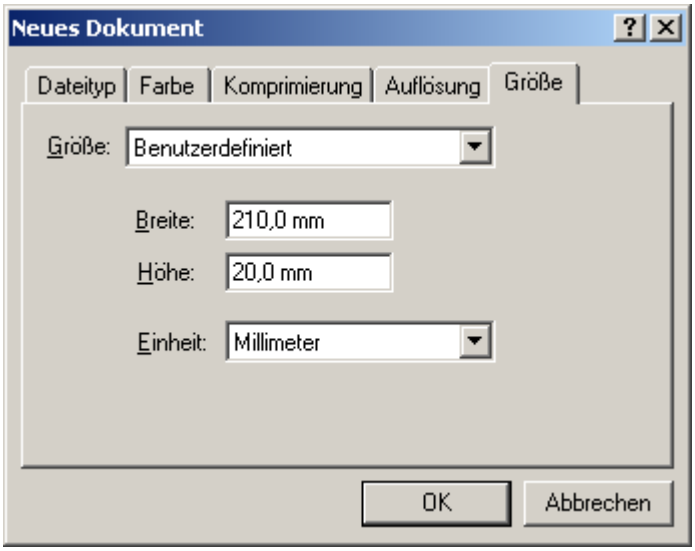

Figure 157: Create new document

- Confirm the settings with “OK“.
- The opened document can be edited now. Click to the desired annotation tool in the menu **annotation**, for example: **“entry of text“.**

Figure 158: Select entry of text from the menu

or in the symbol bar:

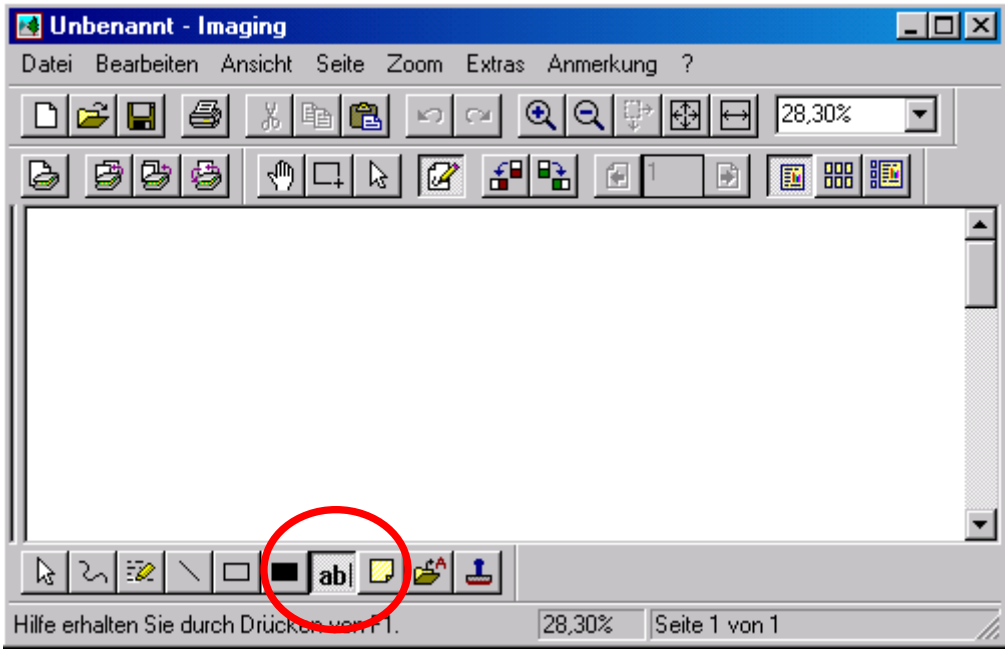

Figure 159: Select entry of text from the symbol bar

To indicate standard characteristics for annotation tools, e.g. line thickness, color or type, click to the desired button of the symbol task annotation and then to characteristics with the right mouse key.

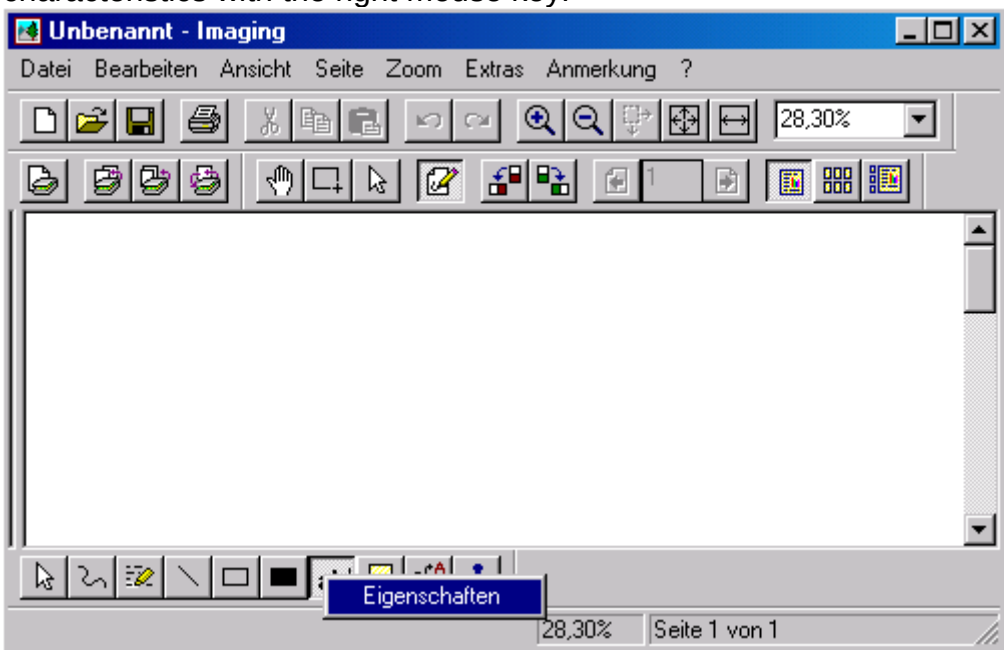

Figure 160: Selection text characteristics

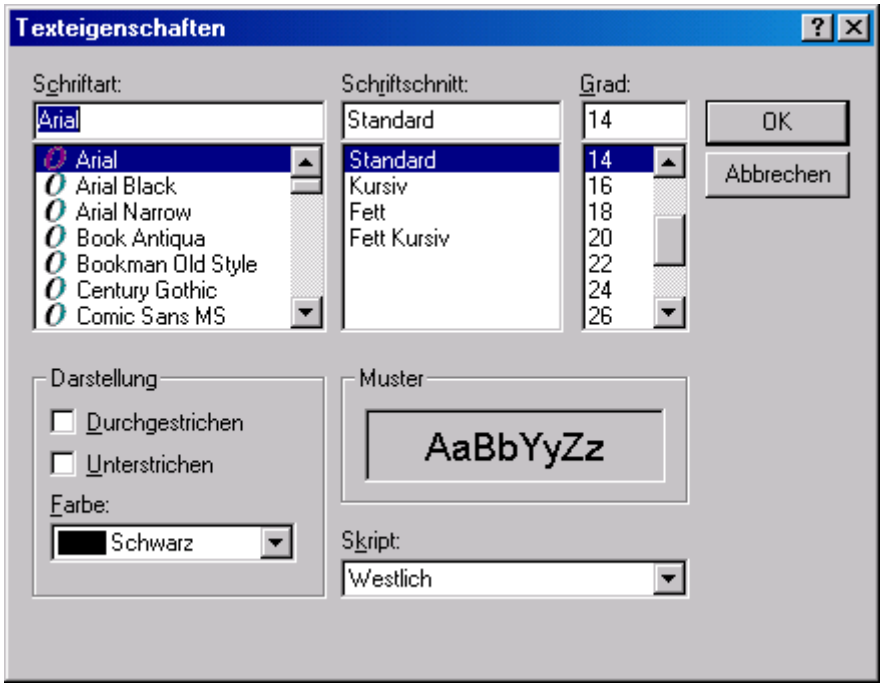

Figure 161: Text characteristics

- Click into the page to create the annotation, a frame will be displayed then. Create the annotation by entering an arbitrary text in this frame, for example “Zeutschel“.

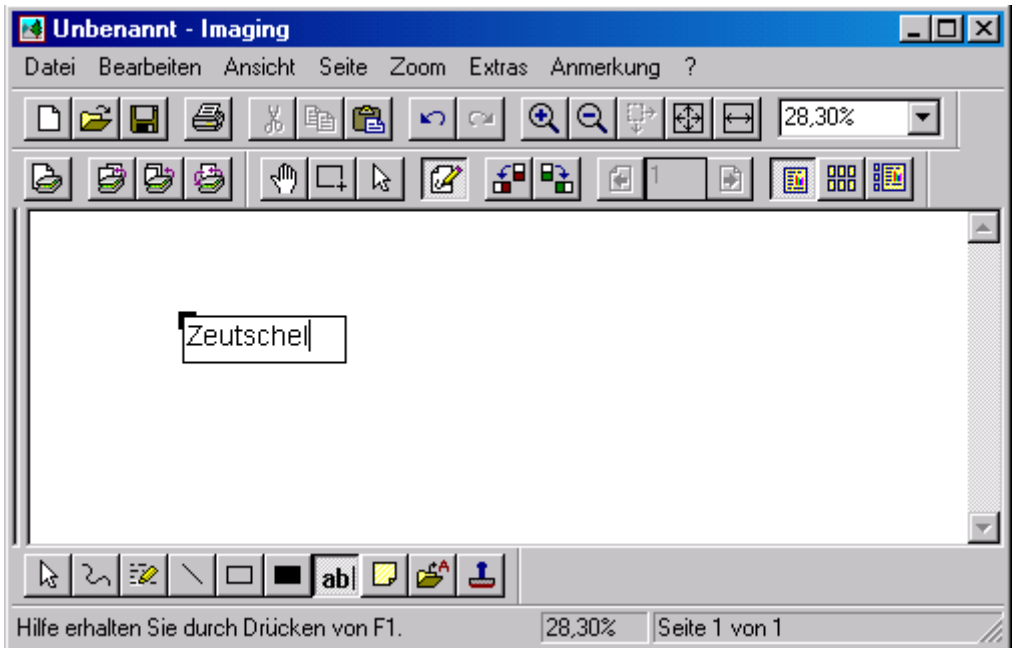

Figure 162: Create annotation

- Fix the entered text now in the menu **“annotations“** with **“define annotations as permanent“**

Figure 163: Define annotations as permanent

- Save the document (image) with the stamp data in an arbitrary directory as a TIFF file by giving a suitable name.
- The image or the stamp can now be selected with the stamp dialog.

14.3 Verso Recto numbering

14.3.1 Introduction:

Particularly with handwriting it is necessary to number the images, which are made with the scanning of a bound work, not continuously, but separated in front page and rear page. A sheet number is given there respectively and also an indication for the front page (recto) and rear page (verso).

14.3.2 Settings

14.3.2.1 Meta data

For each clip being concerned a clip-specific entry must be made here, which is neither counted nor queried (remove both check marks in the set-up dialog). Such an entry may be made repeatedly for various clips, if it refers to a particular clip (not to all).

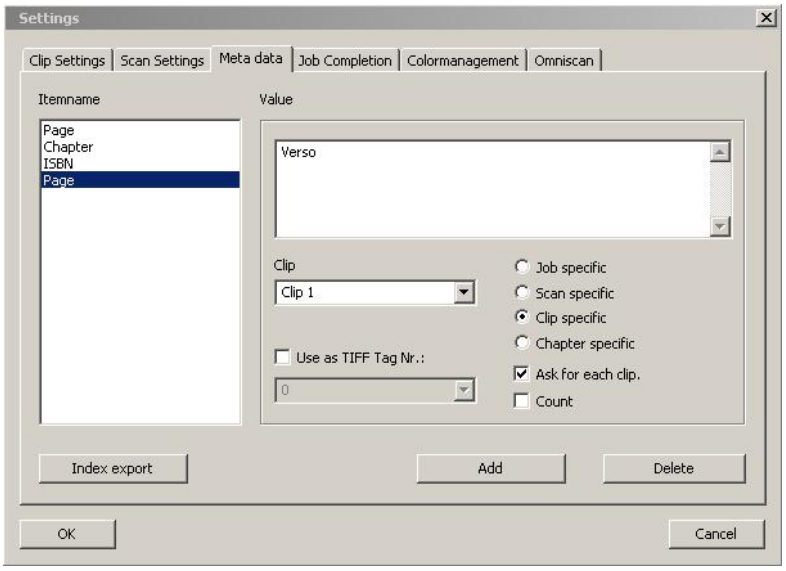

Figure 164: The entry „page“ has been made twice, once for clip 1 (verso) and once for clip 2 (recto) respectively. The check marks with „ask for each clip“ and „count“ have not been set.

14.3.2.2 Job termination (copy)

These information must be included then to the names of the images in the job termination. For this purpose the entry %mPage% must be indicated with the file name with the copying of the images. This string will be replaced then by the value of the appropriate meta datum „page“ with each occuring (other meta data appropriately). This means in the case above by verso or recto. In addition the check mark must absolutely be set with „count only if there is no change in the name“.

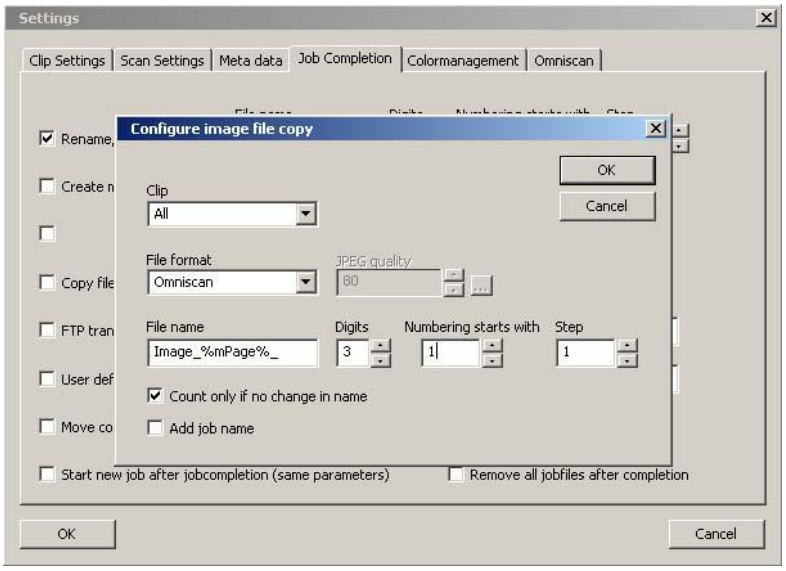

Figure 165: Dialog: „copy settings for image file“

14.3.3 Result

If the job termination is carried out (and the check mark is set with „copy files to“), the images will be copied to the directory indicated there and with that they will be numbered again. The first image of clip 1 will then become Bild_Verso_001.tif, the

second image of clip will then become Bild_Verso_002. tif, the first image of clip 2 will then become Bild_Recto_001. tif, the second image of clip 2 will then become Bild_Recto_002. tif. etc.

The counting is carried out separately for each file name (exclusive numbering), controlled by the check mark „count only if there is no change in the name“. The numbering starts again with the indicated initial value respectively and it will be carried out with the indicated increment.

14.3.4 Special features

Some critical is the naming of the first clips. It must be observed here that the empty image in clip 1 shall be deleted by the first scan, if necessary, or even shall just not be deleted, depending on the desired numbering. With a sheet number the image of clip 1 must be deleted with the first scan (or alternatively it must be observed that with the first scan the clip is deactivated, but will be activated for the second scan in time). Empty pages should absolutely also be scanned and numbered, since otherwise the complete numbering will naturally be mixed up at such a place.

14.3.5 Alternative

There is the option to define a clip-specific meta datum „sheet number“, which will be queried with each clip. Here the user has full control of the usage then, but also full responsibility and the work associated with that to increment the sheet number with each clip, if necessary.

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