

# Brief Overview of changes and improvements in ScanWise 2.0 for PC

## 1 Minimum System Requirements

- A video card that can display a minimum of 16 bit high color at a screen resolution of 800 x 600 pixels.
- 64 MB of RAM
- ScanWise 2.0 is compatible with all IBM™ PCs and compatibles running
  - Windows 98
  - Windows 98SE
  - Windows Me
  - Windows 2000
  - Windows NT4 (SCSI scanners only)
  - Windows 95OSR2 (SCSI scanners only)

## 2 ScanWise 2.0 improvements and changes

ScanWise contains several new features, such as

- Advanced Settings
- Original type preferences
- Downloadable destinations
- Enhanced printing functionality
- New button action parameters
- Improved keyboard interface
- Partial preview
- Persistent preview
- Improved toolbar layout and functionality
- Improved reflective/transparent switching
- User friendly menu layout
- Easier access to preferences and properties
- Improved orientation
- Easy reset to defaults for parameters.
- Easy access to resolution for current scan
- Improved feedback on parameter settings

## 3 Advanced Settings

ScanWise 2.0 has tried to meet the needs of the more advanced user, while still remaining easy and simple to use for the less advanced user. Therefore a number of additional features have been included.

Advanced Settings containing the following controls:

In the Image Control Tab:

- Density settings
- Sharpness

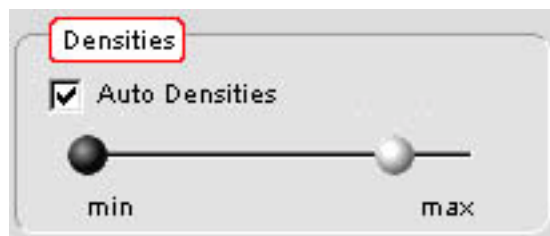
In the Advanced Tab:

- Skin Tone Enhancements
- Tonal Balance Enhancements
- Color Balance
- Neutralize

### 3.1 Density settings

#### Definition

Density indicates the degree of opacity (blackness) of an image on paper or film or of a material. It indicates how much light a reflective original a transparent original or a negative absorbs. Since black is created by the absence of light, the more light a material absorbs, the darker it will be. The maximum density (or Dmax) is the darkest point on a material or image. The minimum density (Dmin) is the lightest point on a material or image.



#### How to use the control in ScanWise

Select the Auto Densities check box to activate the “automatic density analysis”. ScanWise will analyze the selection to find the Dmin and Dmax of an image. With this information, ScanWise will calculate the optimal output. This is what happened automatically in ScanWise 1.x and without a UI to disable this behaviour. Now we added a checkbox and a slider to enable manual density settings.

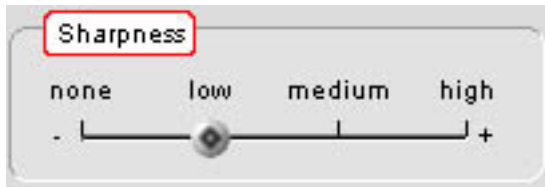
Clear the Auto Densities check box and use the Density Range slider to adjust the Dmin and Dmax settings manually:

The left-hand slider ball controls the Dmin setting. Moving this slider ball to the right increases the Dmin. This means that the bright portions of the image will become lighter. Some of the lightest parts may become completely white.

The right-hand slider ball controls the Dmax setting. Moving this slider ball to the left decreases the Dmax. This means that the dark portions of the image will become darker. Some of the darkest parts may become completely black.

## 3.2 Sharpness

In ScanWise 1.x the user had no control over sharpening. ScanWise 1.x applied a predefined sharpening tuned for a particular scanner. Now we added manual settings for sharpness by providing a slider with predefined settings none, low, medium and high.



Move the sharpness slider to adjust the sharpening of your scanned image. Changing the sharpness will have no effect on your preview image. The changes will only be applied to the final scan. Sharpness is not available for Line Art Mode.

ScanWise still comes up with default values, which are tuned for the destination (screen output or printed output) and the type of original (descreening required or not, film negatives), but it allows the user to override this setting for sharpness to none, low, medium or high.

## 3.3 Skin Tone Enhancements

Select the Enhance Skin Tones check box to activate “automatic skin tones enhancements”. ScanWise will try to improve the appearance of any skin tones it finds in the image.



Note:

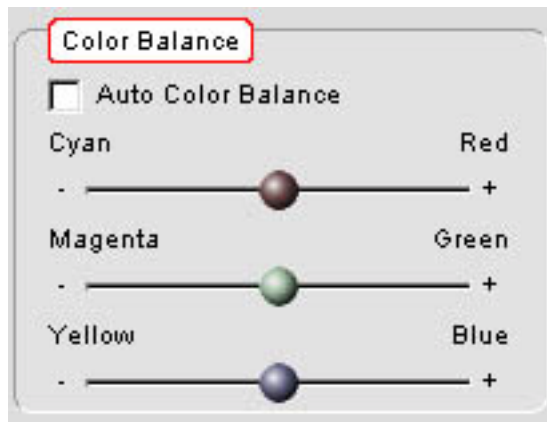
Enhancing skin tones may also result in changes to other parts of the image that have the same colours as skin tones.

## 3.4 Tonal Balance Enhancements

Select the Enhance Tonal Balance check box to activate “automatic tonal corrections”. The enhance tonal balance tool will try to expand the output range in areas with relevant information, and compress the output range in areas with less interesting image information.

This tool is particularly interesting for images that are over- or underexposed.

### 3.5 Color Balance



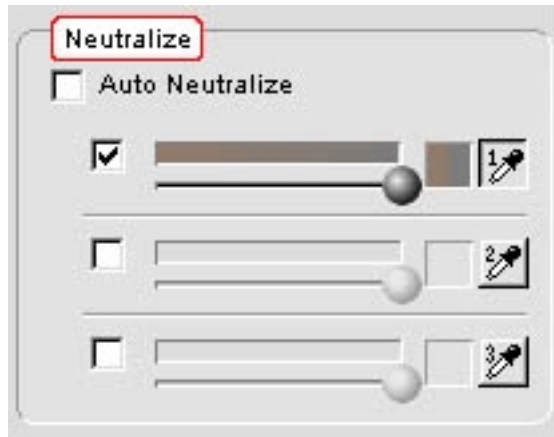
Select the Auto Color Balance check box to activate “automatic Color Balance analysis”. ScanWise will analyze the selection and try to correct global colorcasts.

Clear the Auto Color Balance check box and use the Color Balance sliders to remove or introduce a global color cast to the image manually.

For example, to remove a red color cast from an image, increase the cyan in the image by moving the Cyan-Red slider to the left. Conversely, to remove a cyan color cast from the image, add more red by moving the Cyan-Red slider to the right. The same logic applies to the other color balance sliders.

### 3.6 Neutralize

It is possible to improve the color quality of the image by changing near-neutral colors into white, gray or black (neutral colors). You can make these changes manually or you can use the “automatic Neutralize analysis”.



Select the Auto Neutralize check box to activate “automatic Neutralize analysis”. ScanWise will analyze the selection to detect near-neutral colors. It will automatically make these colors neutral (white, gray or black) which can improve the image.

Clear the Auto Neutralize check box and use the 3 available sets of manual Neutralize controls to apply your own Neutralize settings.

To select a color from the image that you want to appear as a neutral tone, click one of the color picker buttons on the right-hand side of the controls. Once a color is picked up on the preview, the full neutralize setting will be applied and the neutralize slider will be shown at 100%. Use the slider to adjust the amount of neutralization applied to the image, from 0 (no neutralization) to 100 (full neutralization).

The neutralize swatch shows 2 colors (if no color has been picked yet a cross is will be displayed). The left-hand color shows the color that was picked from the image and the right-hand color shows the neutralized color.

**Note:**

Only colors inside the active selection can be picked.

## 4 Original Type properties

To change the default settings or properties assigned to a particular original, select the Original name in the Original List and click Properties. In the Properties dialog box change the properties you want. Depending on the original, you can change the Descreening values (Reflective mode only), the Film Type (Negative Original only) or Gamma for slides (Transparent mode only). The changes will remain in effect until you change the properties again or until you reset the properties to their original settings. These settings are introduced for the more advanced user who knows what he/she is doing.

### 4.1 *Reflective originals*

#### **Descreening**

Descreening is removing the halftone dot patterns in printed matter. You descreen when scanning printed (or screened) material to avoid moiré patterning and color shifts in your resulting scanned image.

In ScanWise, the user normally does not have to know about this as long as he selects the right original type (magazine, newspaper...). ScanWise will itself use a good default descreening factor. But if the user needs more control, this is how it is implemented.

In the “Preferences for <Original Type>” dialog, the user can type in the descreening factor of his type of magazines that he usually scans.

(200 lpi is for high quality magazines.) If the user scans only magazines with a lower descreening factor (e.g. 150) he can change this value and optimise/speed up the descreening process.

### 4.2 *Transparent Originals*

#### **Slide Gamma**

The default slide gamma that ScanWise uses is set to 1.5. The Slide Gamma Preferences dialog allows the user to enter a different value.

This value must be a number between 0.5 and 2.0.

#### **Note:**

Gamma > 1 will brighten an image by compressing highlights and expanding shadows.

Gamma < 1 will darken an image by expanding highlights and compressing shadows.

Gamma correction does not affect the density range of an image but rather the distribution of its density. Gamma correction is often used to smoothly expand details in the shadows. This is often required for transparent originals. Typical slide gamma is 1.5 up to 1.8.

### 4.3 *Negative Originals*

#### **Film Type**

A film type is a profile of the qualities of a particular type of negative film. When scanning negative originals, ScanWise uses the film type that you specify to determine the density range of your original through its Total Film Scanning (TFS) software. By default a Generic film type is selected by ScanWise.

***Note on TFS:***

Agfa's Total Film Scanning gives you the best tonal range for your negative original. Based on techniques used in commercial photographic development machines, TFS incorporates knowledge about your film type with algorithms designed to know what type of picture you have. This complex program will usually produce the ideal tonal range for your scan.

For example, the program is intelligent enough to "know" when the image is a snow scene instead of simply being overexposed. It can then apply the proper adjustments to each type of original image. It does similar things with bright sunsets, dark rooms, fluorescent lighting, and other common photographic situations.

## **5 Downloadable destinations**

All destinations on the PC have been reworked to COM destinations. They are all implemented as local Servers (EXE's) that run in their own address space. This enhances the stability of the system when errors occur while transferring data to the destinations. It also makes it possible to add destinations that were developed later. They could be made available on the Internet.

Compared to ScanWise 1.7 new destinations have been added:

- Microsoft Office XP
- Photoshop 6.0
- CorelDRAW 10
- CorelPaint 10
- OmniPage Pro 10

## **6 Enhanced printing functionality**

### **6.1 *Use Printer's ICC Profile***

You can use the printer's ICC (International Color Consortium) color profile for a more accurate reproduction of the colors of the scanned image.

Note

If your printer has no associated ICC color profile, the check box is disabled. Each scan assigned to this Destination will use the default sRGB profile.

### **6.2 *Clip or shrink image to fit on the page***

In ScanWise 2.0 we provide the user with the possibility to choose between 2 scenarios when the image is larger than the printable area of the printer. In the preferences for printer the user can choose between:

- Clip image to fit on page
- Shrink image to fit on page

#### **6.2.1 Clip image to fit on the page**

Select the Clip image to fit on page radio button if you want to keep the original dimensions of the images that are bigger than the printable area that the printer supports. The application will center the image on the page and clip those parts of the image that exceed the printable area.

#### **6.2.2 Shrink image to fit on the page**

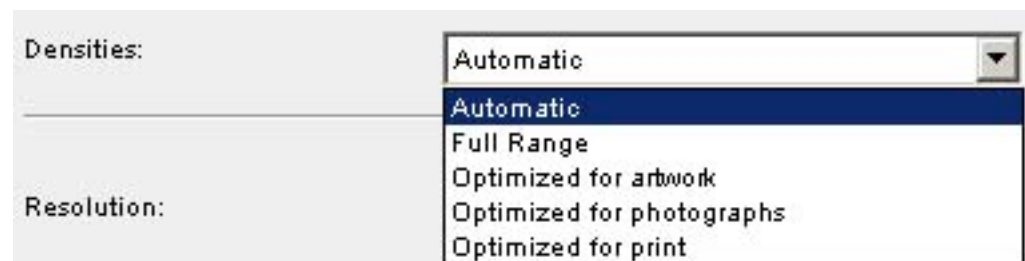
Select the "Shrink image to fit on page" radio button if you don't want to lose information when you print images that are larger than the printable area of your printer. The application will scale the image so that it fits within the printable area of the page.



## 7 New button action parameters

### 7.1 Densities

There are new Densities button action settings



Select Automatic if you want ScanWise to find the density range of the images. ScanWise maps this limited density range so that your final image contains both completely black and white.

Select Full Range if you want to use the full input range of the scanner. Use this option if you don't want to map the limited density range of your original to all output levels.

Select Optimized for Photograph if you want to scan photographs.

Select Optimized for Print if you want to scan full-page magazine articles.

Select Optimized for Artwork if you want to scan drawings.

Select Optimized for Slides if you want to scan slides.

#### Note:

If you do not select Automatic and if you are not using the Autoselect originals in the Selection popup, only 1 scan will be needed. Otherwise ScanWise will have to make a prescan to determine either the selections or the density range.

### 7.2 Dimension

There are also new button action settings for dimension:



From this pull-down list, you can choose to keep the final image the same size as the original, or to scale the final image to a fixed height or width. You can also choose to Scale to fit on the page.

If you choose to scale the image, you will be able to specify the height or width of the final image in inches, centimetres, millimetres or pixels.

### 7.3 Improved default copy button action

ScanWise has a better default copy (to printer) action. It uses "Optimized for Print" as densities settings and "Keep Original Size" as dimension setting. This gives this action the long awaited improved print/copier functionality. The densities are specially tuned so that white/light backgrounds are completely white (clipped) so that no single dots are printed. The Keep Original Size makes sure that the enlargement of the image is correct.

## 8 Improved keyboard interface

In ScanWise 1.x there were a lot of problems with Focus of controls, switching between Preview selections and controls in the UI etc...

To overcome all these problems, the keyboard interface has been completely redesigned to make it consistent and usable.

Navigation through the UI via the keyboard can be done by:

TAB	: navigate forward between the main elements of the UI. Tab order: <ul style="list-style-type: none"><li>• Rx/Tx tab</li><li>• Guide Me button</li><li>• Preview button</li><li>• Current Tab</li><li>• All controls within the current Tab</li><li>• Scan button</li></ul>
SHIFT TAB	: navigate backwards between the elements of the UI
SPACE	: activates the control that has the focus
UP/DOWN arrows	: advances to the next tab in the tab list (original type through Advanced) Selects the previous/next element in a drop down list when this control has the focus.
LEFT/RIGHT arrows	: advances to the previous/next slider position (slider controls) Selects between reflective and transparent preview tab (if available). Selects the previous/next element in a drop down list when this control has the focus. Positions the cursor in an Edit field.
DEL	: deletes the selected text/number in an edit field

Navigation through the selections can be done by

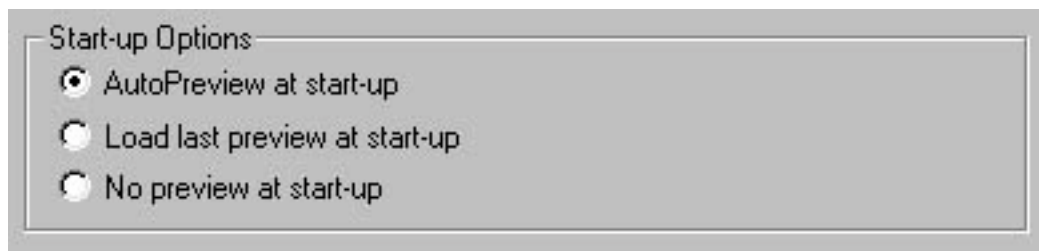
F6	: Switch to the next selection on the preview pane.
CTRL+D	: Deletes all selections
SHIFT+D	: Delete the active selection.

## 9 Partial preview

In ScanWise 2.0 the preview can be stopped. This is a nice to have feature if you only scan 10 by 15 photographs and you do not want to wait for the entire preview (A4) to be scanned. When the preview starts a progress box is shown with a Stop button. Pressing the Stop button stops the preview.

## 10 Persistent preview

In ScanWise 2.0, a new Start-up option called “Load last preview at start-up” is introduced in the Intelligence Tab of the Options dialog. The default setting is still “AutoPreview at start-up”, meaning that ScanWise will automatically start a new preview each time it is started.



But if the user wants this, ScanWise can save the preview of an image between different sessions. Especially if you use ScanWise as a Twain data source and when your host application can only accept 1 image at a time, it can be useful that ScanWise saves the preview between two sessions and display it at start-up time.

Select the “Load last Preview at start-up” check box. ScanWise will save the preview between two sessions and will display the preview at start-up time.

## 11 Improved toolbar layout and functionality

The toolbar layout and its functionality have been redefined.



The “Modify Selection”-button is used to size, rotate and move the selections in the preview window.



New Selection tool

Use the Selection tool to make one or multiple new selections in the preview window.

To make one selection, click the selection tool once.

To make multiple selections, double-click the selection tool. The selection tool stays active and allows you to make multiple selections.



Zoom-In tool

Click here to select the Zoom-In tool, and then click on the area of the image you want to magnify. The magnified image is centered around the point you click. Click and drag to draw an area to which you will zoom in when you release the mouse button.

There are also new context menus in the preview window to zoom in to the selection, or to zoom in/out to the entire preview window.

## 12 Improved reflective/transparent switching

ScanWise 2.0 makes it easier to switch between reflective and transparent scanning. In ScanWise 1.x, we had a preview button with an unclear double functionality, i.e. starting a preview by clicking on the main part and switching between reflective and transparent by clicking on a changing icon that was part of the preview button. On the PC, switching also started a preview immediately. In ScanWise 2.0 we have 2 tabs now to switch from reflective to transparent scanning mode. We don't start any preview until the user clicks on the preview button. When the user switches back to another mode, and has not yet made a new preview, the preview of the old mode is restored.



## 13 User friendly menu layout

The menus have been redesigned in order to group them into a more logical and more understandable layout.

## 14 Easier access to preferences and properties

We have improved the access to the original and destination preferences. The user has 3 possible ways to start up the preferences dialogs for original or destination.

- Use the preferences button (new for easy top level access)
- Double Click the item
- Right click and select preferences.

## 15 Improved orientation

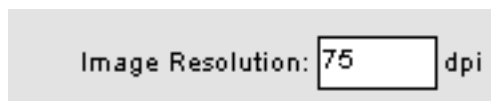
The orientation choices (rotation, mirroring) were unclear in ScanWise 1.x. The F-symbol we used in the UI was not clear and confusing. In ScanWise 2.0 we show a thumbnail of the current selection in the selected orientation. A button on the right of the thumbnail pops up a dialog to select the orientation.

## 16 Easy reset to defaults for parameters.

In each tab with settings such as the Image Control Tab, the Dimensions Tab and the Advanced Tab, a reset button has been placed to reset all parameters to their default value.

## 17 Easy access to resolution for current scan

In the Dimensions Tab, the resolution for the current scan is made available at the highest level. In ScanWise 1.x we presented the resolution one level deeper (a dialog that popped up when the user clicked a button). We got some complaints from the field that the users wanted to change their resolution from scan to scan more often than we initially thought.



## 18 Improved feedback on parameter settings

To allow the user to set his parameters to exactly the same settings again as in a previous scan, we introduced tool tips on the slider controls. The tool tip(s) appear(s) on the screen when the mouse cursor is over the control for more than a certain time period.

