

Intelligent Interactive Interface

Automatic In-Rip Trapping/Interactive Trapping



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I-Trap™

Setting Trapping Parameters

I-Trap version 3.0

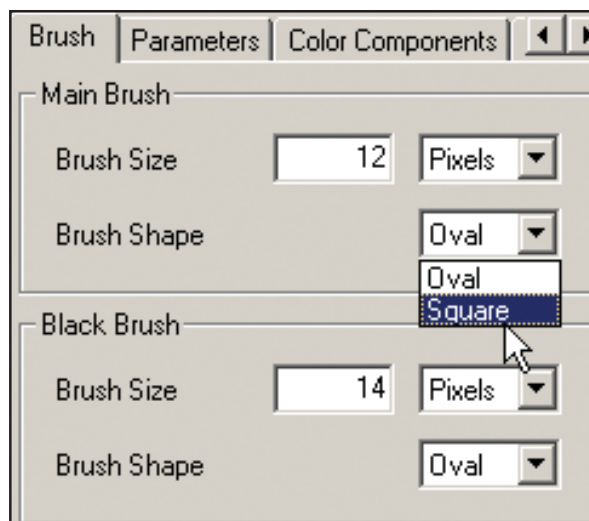
Revised: December, 2006

Setting Trapping Parameters

Easy mode of the Viewer presentation hides most of the trapping parameters except for the trap brush definition. In **Easy** mode default settings are used to apply trapping and in many cases this is sufficient. You can select pre-defined **TrapSets** that are available from the **Area** tab and edit the brushes width and shape.

In **Expert** mode all trapping parameters can be edited and new **TrapSets** defined and saved.

Trapping parameters in I-Trap™ Viewer are shown and can be edited in the **Area** tab box.



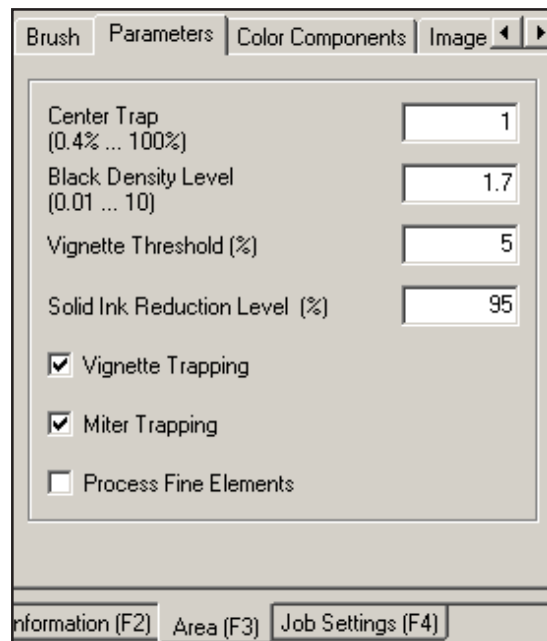
The Brush tab

The **Brush** tab lets the user define the **trap width**. The trap width depends on the trapping style. The trapping style can be regular, centered, or special black. The regular-style trap is done with the main brush width in one direction and spreads into the darker color of the objects' edge. The centered trap is done in both directions with half the main brush width. The special black trap is applied to objects one of which is considered as multi-black and is usually 1.5 times as wide as the regular trap unless specified otherwise by the setting in Black Brush. The trap brush width setting control lets the main trap brush and special black brush widths be set in selected units, such as pixels, inches, millimeters and points (typical values being 0.003-0.006 inches), while the centered trap width is half the size of the main one. Brush shape can be

circular or square.

Setting parameters for special case trapping are defined in the **Parameters** tab.

Black Special Case rules are applied to multi-black colors or spot colors that can be treated as black, if desired. This rule implies that the trap direction is always into the black object, as it should define the visual edge of the color boundary. The black brush width will be used for this special case trapping. The rule depends on the definition of the solid black ink specified by the black density level and the black color limit (black percentage) settings.



The Special parameters tab

Black Density Level indicates the neutral density at or above which the trapping engine considers an ink to be black. If you want to specify a spot ink to be black, its neutral density should be equal to or greater than the black density. The black color limit (SuperBlack %) is defined to be the same value for line work and image data and is set in the Image Settings tab.

Inks treated as black will cause the black special rule application if the amount of such an ink is greater than or equal to the value defined by the

SuperBlack % parameter in the Image settings tab.

Center Trap defines the percentage difference between two colors' weights (and integral parameter of the color calculated using its ink values multiplied

by coefficients based on the neutral density values) under which the centered trapping style is applied.

Vignette Threshold defines the percentage difference between two colors' weights under which these colors are treated as equal for the purposes of trap application. For instance, if a vignette is trapped to a solid color, the trap color will be the same for a certain length of the border despite the actual color slide in the vignette. This is used to prevent stair-stepping effect in trapping.

Solid Ink RedictionLevel defines the percentage of the ink's intensity at or above which the ink is considered *as _solid_*. This means that trap color will be calculated with such ink using the SolidInk%%. For instance, if you have a trap between 100% Cyan and 100% Magenta colors and the SoldInk%% is 100, then no reduction will be applied to the trap color and it will not need screening on output.

Vignette Trapping is an option to create centered traps between vignettes and abutting objects. Usually if the vignette has light color on one of its sides trap line could abruptly end there showing undesired results. If you enable this check box vignettes will be outlined with a consistent trap.

Miter Trapping is an option to create better-looking traps at sharp corners of the objects. The result is a mitered corner rather than an overlapping one.

Process Fine Elements is an option that works only when miter trapping is enabled. It causes the trap width to adjust to narrow shapes. It can be thought of as a bumper around the trap brush that reduces the brush size in conformance with the proximity of other objects.

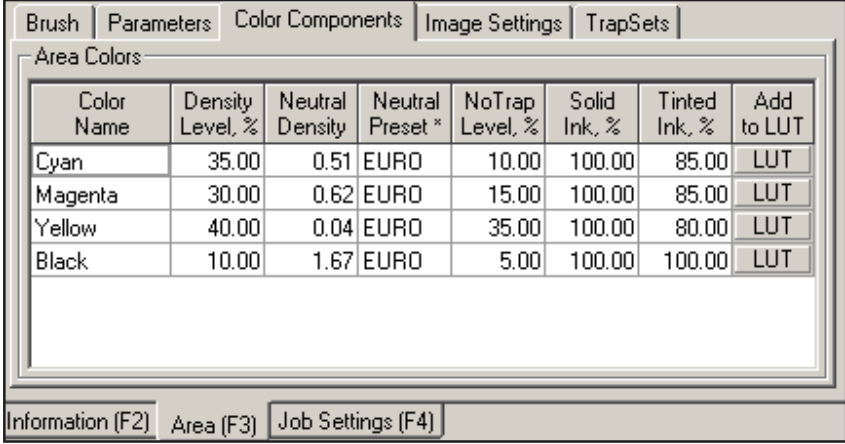
It should be noted that both the miter trapping and the fine element options require longer times for job processing (up to 30% for complex pages).

Ink based trapping parameters are defined in the Color Components tab or in the Graphical configuration tool described further in this section.

Color Components tab lets you define the setting for the trapping decision rule on the ink-basis. It contains the Neutral Density, Density Level, NoTrap Level, and trap color reduction values. Press the button *Add to LUT* if you want to save the settings for an ink to the Color Look-Up Table.

You apply the changes to the table values pressing *Enter* key or moving to the

next cell.



Color Name	Density Level, %	Neutral Density	Neutral Preset *	NoTrap Level, %	Solid Ink, %	Tinted Ink, %	Add to LUT
Cyan	35.00	0.51	EURO	10.00	100.00	85.00	LUT
Magenta	30.00	0.62	EURO	15.00	100.00	85.00	LUT
Yellow	40.00	0.04	EURO	35.00	100.00	80.00	LUT
Black	10.00	1.67	EURO	5.00	100.00	100.00	LUT

The Color Components tab contains all ink-based trapping parameters

The rule for determining the trap color (which is the resulting color applied by the trap brush) by the trapping engine is to select the highest value from each ink in the two adjacent colors. Once this value is selected, it is then reduced by the Solid or Tinted ink reduction value based on the original ink intensity, which is compared to the **Solid Ink Reduction Level** value. This new value is now used for the trap color.

Density Level settings define the amount of ink shared between two colors that must be equal to or greater than the density level in order for a trap condition not to exist. In other words, if two adjacent colors share an ink in common, and the amount of this shared ink in both colors exceeds the density level, then there is *no trap* between these colors.

Neutral Density and neutral preset columns define one of the standard neutral density sets (SWOP, TOYO, EURO) or user-defined values. Neutral density is used in the trapping engine to calculate the trap direction by establishing the darker and lighter of the adjacent pair. The density issues and trapping rules are discussed in greater detail in the Chapter 5 “General Trapping Rules and Conditions”.

No Trap Level setting defines the amount of ink that can be considered as white for the purpose of trap condition calculation. White color does not trap to any other color – except super (multi-colored) black.

Solid and Tinted Ink Percentages are settings used to apply color reduction

during the calculation of the trap color, explained above.

Press **Add to LUT** button if you want to save the trapping parameters for a certain ink permanently to the Color Look-Up Table. You can use these parameters only in the current job and not update the LUT if you wish to change the settings on the selected page.

Graphical Configuration Tool provides a graphical interface to edit the color components' values and inks' CMYK equivalents using the mouse and sliders tools and immediately preview the results of a change . It can be called from the *menu /Tools*. The section "Graphical Configuration Tool" further in this Chapter describes the details.

The **Image Settings** tab contains a set of parameters that control internal image trapping, the Image-to-Line Work trapping direction, a special black case for both image and non-image data, and a special image yellow case. **Image/Line work** radio buttons define the trap direction for normal image trapping. See the manual "Achieving High Quality results using I-Trap" to learn more about trapping images.

If the Image/LineWork setting is **No Trap**, then no other image trapping parameters take effect except **Internal Image Trapping**.

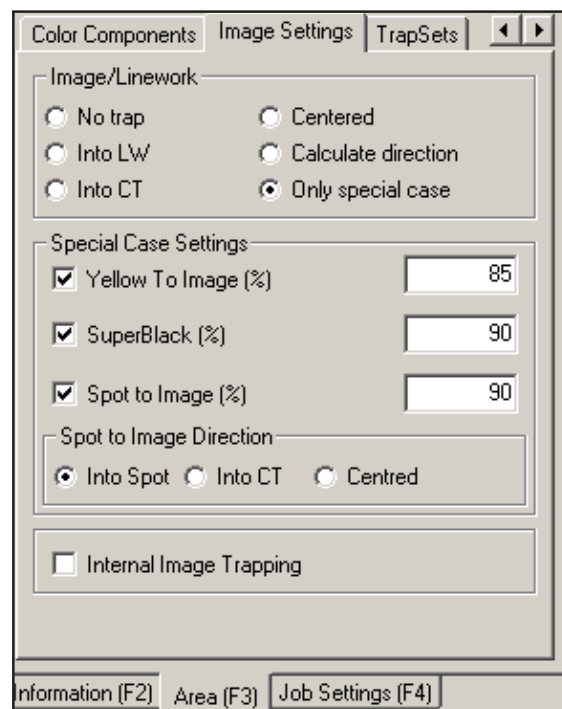


Image settings tab

Important! If an image overprints line work data and thus some inks in the color value are taken from the line work and some from the image, such a color will be processed under general trapping rules, not image rules.

The special **Yellow to Image** case is applied when the checkbox is enabled and the yellow percentage is non-zero. This rule is used when the line work color has a yellow ink component that is equal to or greater than the yellow percentage and the other color is an image value. The trap color is set to the image value for all components except yellow, which is picked up from the line work value and implies the trap direction to be always into the image.

The special **Super Black** case is applied when the checkbox is enabled and the black percentage is non-zero. This rule picks up the black ink along with the adjacent color for other inks and implies the trap direction to be always into the black object.

The special **Spot to Image** case is applied when the checkbox is enabled and the ink intensity of any spot ink in the color adjacent to an image is above the value in the edit box to the right. Then the radio buttons selecting direction of spot to image trapping become available.

The special case trap rules for yellow, black and spot will override other image trapping rules when they are enabled except for the **No trap** setting. If an image overprints the background (some separations of the color come from the linework and others come from the image, which is displayed by different colors in the densitometer panel) the image trapping rules are not applied. Instead general rules are used to calculate trapping condition.

The **Internal Image Trapping** checkbox lets you define this option in case trapping between two images should take place. The internal image trapping setting will result in the use of general trap rules as defined for the enclosed area for any internal image trapping. This should not be confused with specific image trap rules, which would only be applied at the images border. There may also be a case when if both the image trap rules and internal image trapping are enabled for the same image, then the results at the border

condition may not be as expected. For example, the top and left side traps may not match the bottom and right side ones.

TrapSets tab is described in the section “Working with TrapSets” below in this Chapter.

The **Job Settings** tab contains trapping parameters for the whole page. **Workflow** settings define the modes for reading source files by the Viewer input plug-in and creating the output files by the output plug-in. The trapping engine log file name is defined here. Output files can be generated to hold source and trapped merged data or traps-only data. The user can set the output format to be proprietary Lucid T-RLE format, or the formats supplied by the plug-ins. The workflow settings need to be edited only in the stand-alone work with the Viewer.

If you wish to add or change the output plug-ins for a given job then you should use the **Jobs Manager** workflow option as explained in the section “Working with the Jobs Manager” further in this chapter.

The buttons *In* and *Out* in the Workflow section of the **Job Settings** panel call the dialogs to show and edit the information about the plug-ins used for input and output and the source and resulting files names. These dialogs are similar to the dialogs in the TIO Wizard described in the “Working with the Viewer in a stand alone mode”.

Important! Though available for editing it is strongly recommended that users do not change this data if they don't have good reasons to do so. Only advanced users are encouraged to edit these parameters. They should know exactly what they want to achieve and what consequences their changes can lead to.

One of the possible ways of usage of these dialogs can be to run different files with the same TIO settings when trapping in the standalone Viewer mode. In such case the corresponding plug-ins should be selected and source and resulting files should be assigned according to them.

Setting trapping parameters

Color	Cyan, %	Magenta, %	Yellow, %	Black, %	Ink Type
Cyan	100.00	0.00	0.00	0.00	Normal
Magenta	0.00	100.00	0.00	0.00	Normal
Yellow	0.00	0.00	100.00	0.00	Normal
Black	0.00	0.00	0.00	100.00	Normal
PANTONE Cool Gray	32.57	33.11	33.39	0.00	Opaque
PANTONE 178 CV	0.00	63.18	65.24	0.00	Normal

Job settings tab

Important! The ink order is important for separated pages where the separation order should coincide with the ink order, and for the stand-alone workflow - with separated files source data.

A **Log file** is created to register the trapping process and to help track occurring problems. The user is encouraged to collect the log file and send it to the support team.

The usage and modification of the Color Table is explained below.