

Intelligent Interactive Interface

Automatic In-Rip Trapping/Interactive Trapping



www.trapping.org

I-Trap™

User Manual

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I-Trap™ user manual
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Chapter 1

Introduction

I-Trap™ is a set of Trapping Tools by Lucid Dream Software, Inc. designed to help the user create high quality printed publications.

Trapping is a technique used to compensate for registration errors in the printing process by making them less noticeable. It is assumed that the user is familiar with the basic concepts of trapping, trapping terminology, main PrePress workflows, and file formats.

I-Trap™ applies trapping to pages created by the Harlequin rip or by other applications that can provide separated or composite raster data. In the latter case, input and output plug-ins are to be setup with I-Trap™ Viewer to read and write the specific data format.

I-Trap™ consists of the Trapping Rip plug-in for the Harlequin rip, an Interactive Trap Viewer, and a set of plug-ins working with the viewer. The heart of the software is the powerful Lucid Dream Trapping Engine.

In this document, we have discussed possible workflows and their configurations, including automated and interactive generation of traps.

Rules and parameters described here are used by the Lucid Dream Trapping Engine. The trapping parameters can be adjusted for every page of the job and for user-defined zones in any page. I-Trap™ Viewer immediately shows the trapped results of the page or the user selection.

It is suggested that you begin by setting up and trapping the supplied LucidTrapTest.PDF file included with your software documentation install.

Features and Benefits

Benefits of I-Trap™

I-Trap™ is capable of interactive and automatic trapping of an application using the Harlequin rip and working in a stand-alone mode with widely used graphic formats, such as TIFF/IT or Delta Document.

I-Trap™ provides a powerful set of tools to adjust trapping parameters on a page and page zone basis for multi-page jobs.

I-Trap™ has a powerful Trap-On-Fly option to immediately paint applied traps per user's specifications.

I-Trap™ contains a handy Graphic configuration tool to edit ink-based trapping parameters.

I-Trap™ includes an image trapping and vignette trapping options.

Intelligent brush capability of I-Trap™ automatically adjusts the brush width at the corners and when creating complicated shapes of objects.

General features of Lucid Dream Trapping Engine

- Selection of trap brush widths and shapes (circle, square).
- Automatic application of different trap widths for regular and special case trapping (centered, special Black, intelligent).
- Intelligent trap brush width adjustment based on user-defined options (mitering, fine elements).
- Spot color trapping. Trapping parameters are set on an ink-by-ink basis and spot colors are handled according to their individual characteristics.
- Support for up to 16 inks including CMYK, both in separated and composite modes.
- Special Black case trapping for image and line work data.
- Image trapping. The user can explicitly set the trapping direction between image and line work data, define special Black and special Yellow case applications, and switch on or off internal image trapping.
- Image data is treated on an ink basis to apply traps to fully transparent and partially transparent data.
- Area trapping. The user can define Trapping zones with trapping parameters in the I-Trap™ Viewer or in a page layout application and then use I-Trap™ to create traps. Trapping in those zones can be fully modified and switched on or off.

General features of Lucid Trapping plug-in for Harlequin Rip

- Provides interface for setting job trapping parameters. Once the trapping parameters have been configured, they can be saved in a page setup.
- Can be configured to trap jobs automatically and to accommodate different kinds of jobs.
- Can be set to prepare jobs for interactive trapping, to automatically open I-Trap™ Viewer and then receive the trapped data back in order to start the final output.
- Can be included in a queue transferring data to the rip through a spool folder and Apple Talk mechanisms.

General features of I-Trap™ Viewer

- Multi-platform Viewer for a Windows NT 4.0, 2K, XP and Macintosh OS X.
- Can be run on a remote computer and exchange job files with the Rip by local network.
- Starts when called up by the Lucid Trapping plug-in, opens a job supplied as a parameter on the command line.
- Opens a job from the standard file open menu to allow continuation of the work or re-trapping.
- Opens the source and trapped data in various ways (trap-on-fly, traps only, fully trapped).
- Has tools to zoom in and out, view ink values for image and line work data at the cursor position, view page coordinates at the cursor position, select and save pixel color for further comparison.
- Provides information about the page settings (size, resolution, etc.), a densitometer and all trapping parameters for the opened page.
- Trap-on-fly powerful option. The user can zoom into a selected part of the source page and apply traps immediately to this selection. The trapped result is painted to a special window providing a convenient tool to adjust trapping parameters for better output results.
- Source and trapped page can be examined in tiled windows and scrolled synchronously.
- Highlight trapping is a handy option to distinctly view all applied traps during the interactive adjustment of trapping parameters.
- Highlight image and line work data option allows to examine the page contents.
- Editing tool for Trap Instruction Object (TIO is a set of trapping parameters and commands for a job). The user can create, modify and save TIO to a disk file.
- TIO creation wizard tool works with user-specified files in formats supported by existing plug-ins.
- Wizard can import specified files to become the basis for the TIO creation.
- Graphic configuration tool is used to set ink-based trapping parameters with graphic representation instead of using a table of text and numeric values.
- Creates and edits user defined Trap Sets that contain collections of trapping parameters for use in the Viewer and in the rip Trapping plug-in.
- Convenient graphical edit tool for the Color Look-up Table that contains CMYK equivalents for all inks and ink-based trapping parameters for constant use.
- Area trapping. Trapping zones defined in the Viewer or in a page layout application are specially colored in the Viewer and their parameters can be edited individually for every

General features of I-Trap™ Viewer

- zone on the page to control the trapping decision, selection of trap direction, brush shape, and the width in that zone.
- Highlight trap zones helps navigate through the page and set trapping parameters for a selected zone.
- Edit trap areas shape tool (currently, rectangular shapes zones are available).
- Export tool is designed to save trapped data in specified formats using existing output plug-ins.
- PS Export is designed to save trapped data as PostScript data to be used in the Rip final output pass.
- Page Manager (PM) tool is used to work with multi-page jobs created in the rip or supplied in supported formats by the plug-ins.
- PM facilitates automated trapping of selected job pages and enables the job to be sent to the Rip for the final output pass. (Convenient when some manual adjustment of trapping parameters has been done to the selected pages of a multi-page job),
- PM option is also used to delete temporary files on output.
- A Watch folder can be started to collect pages of multi-page jobs and add them to PM automatically.
- An Instance manager allows only one instance of the I-Trap™ Viewer to run and receive all jobs from the Rip trapping plug-in.
- Contains powerful Ink Remapping Tool.

Chapter 3 Requirements

Windows NT 4.0 or Windows 2000 / XP operating system;

64 Mb RAM (128 recommended);

Monitor resolution 1024*768 or higher (800*600 will provide very poor quality)

Harlequin Rip version: 5.3 Revision 4 or higher. Version 5.5 and higher is needed to work with pre-separated jobs.

Rip API version: 16.1 and higher

Rip Page buffers version 15 and higher

Viewer on the Macintosh, OS X operating system.

128 Mb RAM; Monitor resolution 1024*768 or higher

Minimal configuration: G3, 366MHz, RAM 320Mb, Monitor resolution 800x600.

Recommended configuration: G4, 1GHz, RAM 760Mb, Monitor resolution 1400x900.

Free disk space required > 20Mb.

I-Trap™ software on PC is protected by a Sentinel License or by a Lucid dongle (Sentinel Super Pro) and can be run in a trial or full mode. The Free evaluation version is fully functional but has final output disabled.

The Mac Viewer version is free and has final output disabled.

Package contents and possible workflow

I-Trap™ package consists of the Lucid Trapping plug-in for the Harlequin rip, Interactive Trap Viewer, and a set of plug-ins providing the Viewer with the ability to input and output files of widely used graphic formats. The powerful Lucid Dream Trapping Engine is implemented to work inside the Trapping plug-in and the Viewer to actually trap raster data. The Trapping Engine processes a compressed proprietary Lucid RLE-type format (T-RLE) that stores data in run-lengths, color values, transparency values, images and area shapes. The internal format allows I-Trap™ tools to apply trapping to any input formats using corresponding plug-ins to read and convert input data. Output data can be saved either in the internal format or converted into the formats supported by the plug-ins. There is a number of implemented Viewer plug-ins for widely used file formats, such as PostScript, TIFF/IT P1 and Delta Document.

Two types of workflows integrated with the Harlequin ScriptWorks rip (or OEM rips) are available: interactive and automated. It is also possible to create trapped output working with I-Trap™ Viewer in stand-alone mode.

The Viewer and the Rip can be installed on separate computers. In this case the Viewer for a Windows or Macintosh operating systems can be used to preview and trap jobs.

Interactive workflow

In this workflow, the actual trapping is implemented in I-Trap™ Viewer. The workflow chart is presented in Fig. 1.

Source PostScript or PDF files are interpreted by the Harlequin rip and converted into T-RLE data by the Lucid Trapping plug-in. The Trapping plug-in is used in the *Prepare for I-Trap* mode. Trapping parameters are defined in its configuration dialog and stored in the Trap Instruction Object (TIO). Every page of the job has its own TIO attached to the page. Multi-page jobs are supplied with the same TIO for all pages. Raster page data and TIOs are saved to disk files.

Interactive Flow Chart for the ScriptWorks RIP

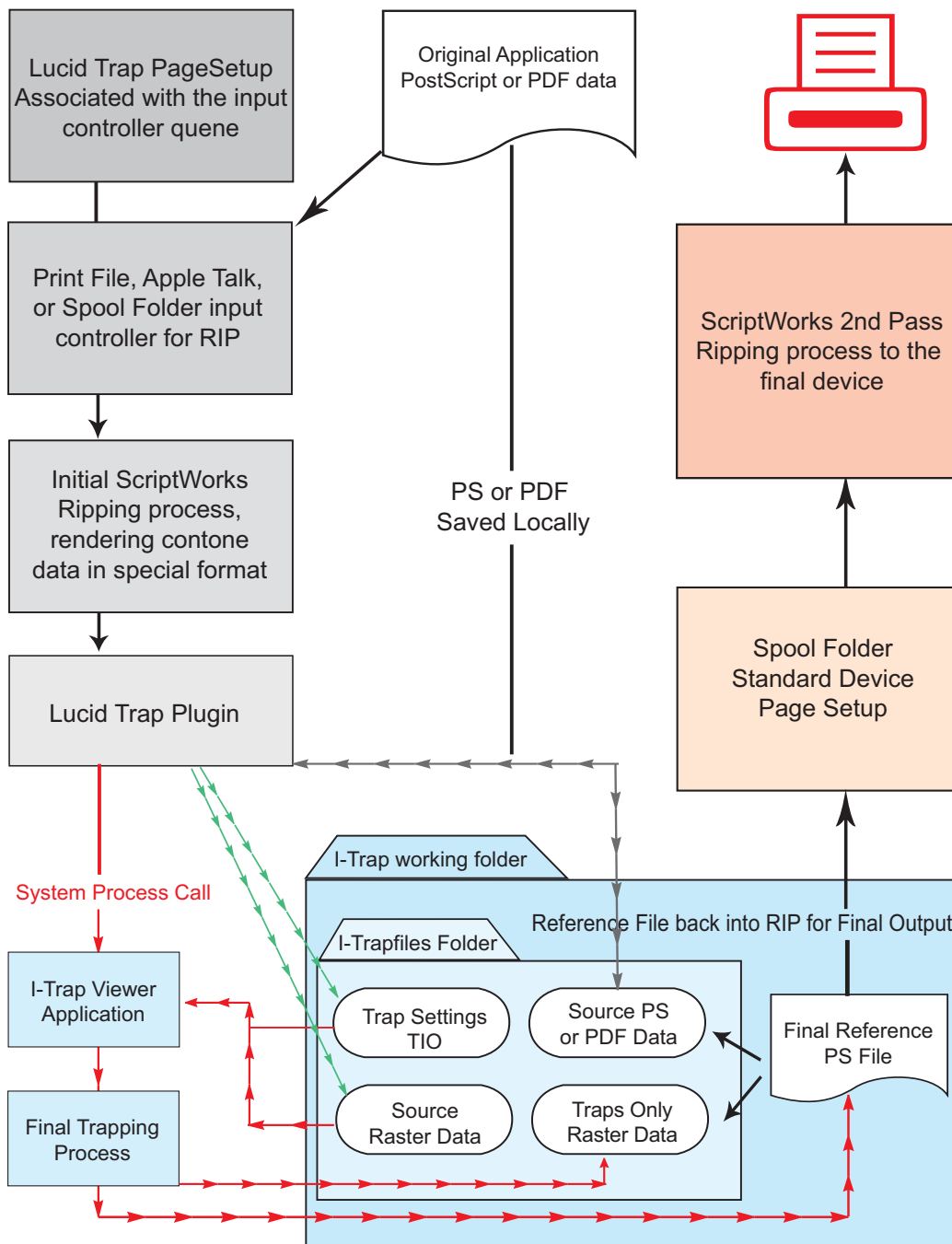


Figure 1. Interactive workflow

The Lucid Trapping plug-in working in the *Prepare for I-Trap* mode automatically starts I-Trap™ Viewer. The Page Manager panel in the Viewer can be used to select pages that need trapping parameters adjustment. The trapped results for individual pages can be viewed using the *Trap-On-Fly* option. I-Trap™ Viewer then saves the trapped data into a temporary PostScript file. A PostScript control file is created to instruct the rip to merge the source PS data with the PS trap data. The rip spool folder mechanism is used to send the control file to the rip final output queue.

Automated workflow

In this workflow, the actual trapping is implemented in the Lucid Trapping plug-in. The workflow chart is presented in Fig. 2.

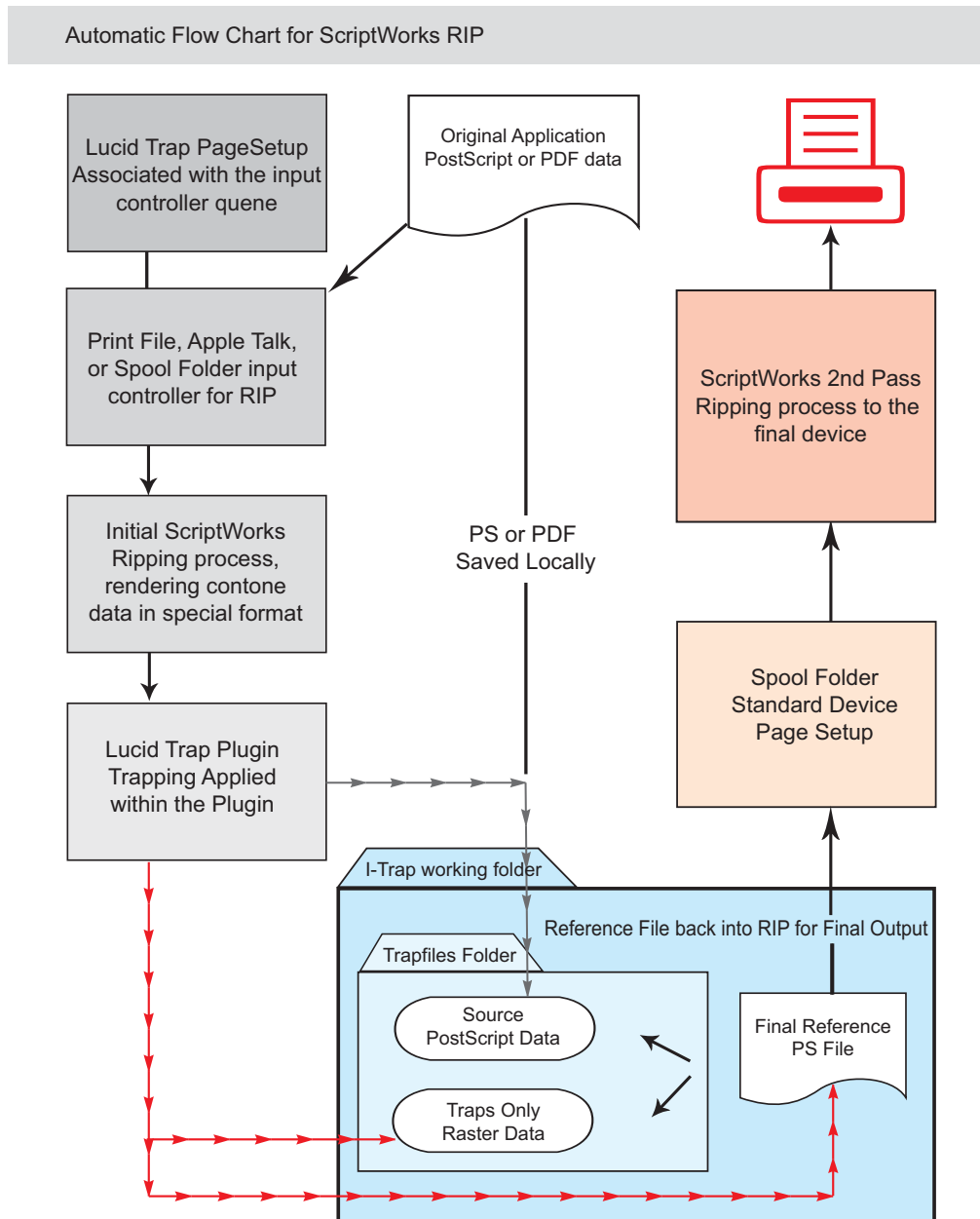


Figure 2. Automated workflow

Automated workflow contains two passes to rip: (a) it traps and (b) sends the job to output. The input spool folder mechanism of the rip is used to merge the trapping raster and original page data created on the first pass and to send the resulting data to the rip for the second pass where screening and other options can be applied for final output.

Stand-alone mode

In this mode, the actual trapping is implemented in I-Trap™ Viewer. Running in this mode requires an appropriate input and output plug-in setup with the Viewer that converts the source raster data into the T-RLE format and creates output data in the desired format.

The Viewer has the necessary interface to create TIOs for source pages or import basic control files created by other authoring applications that can generate source raster data.

General trapping rules and conditions

Lucid Dream Trapping Engine (TE) is designed to apply trap rules to raster page data. These exact rules depend on a set of parameters combined into the **Trap Instruction Object (TIO)** that can be modified by the user to achieve a customized trapping effect for a job (a number of logical pages) and for individual pages.

TIO parameters control the TE base trap rule, the width and shape of the trap brush, the trapping of image boundaries and the area trapping.

A page can be covered by a number of user-defined shapes - **trap areas**, (or trap zones). Every shape is assigned a full set of its own trapping parameters. The trap areas can be created in the Viewer or in a page layout application, such as Adobe Acrobat using the widely available plug-in. This feature allows a better tuning of TE when the user can select only the necessary part of the page to be trapped with specific settings. I-Trap™ Viewer then enables the modification of a full set of trapping parameters for each individual zone.

Every pair of adjacent colors in the page is checked for the existence of trapping conditions. If the trapping condition exists, TE calculates the trap direction and trap color, and applies a trap brush of a specific width. Trapping decisions are made at shapes/colors boundaries and take effect for full run-lengths rather than for a pair of pixels. Such an approach allows trapping on compressed data, uses fewer resources and speeds up the trapping process. Image trapping is controlled by a set of parameters that allows an application of special rules on image - line work boundaries.

A source page can contain up to 16 inks including process inks.

The following rules are considered to accurately calculate traps.

When there are two adjacent colors in the page, it is necessary to decide whether this boundary requires a trap or not. If the decision to trap is made, the trapping direction should be defined and the trap color will be calculated.

Controlling trap decision

The parameters that control the trap decision rule are defined on the inks

basis. The trap decision rule defines a *Yes* or *No* trap condition for a boundary pair of pixels.

No Trap Level setting defines the amount of ink that can be considered white for the purposes of **trap condition** calculation. White color does not trap to any other color – except super (or multi-colored) black that is not a registration mark color. If all ink values in one of the colors are less than No Trap Level setting, the trap condition is set to *No*.

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 value, then there is no trap condition between these colors.

Controlling trapping direction

Neutral Density settings are used to calculate the **trapping direction** by establishing the darker or lighter of the adjacent color pair.

Neutral density represents a measure of how dark the color is. The lightest possible value corresponds to a neutral density of 0.0 and is equivalent to pure white; while the value 3.294 is roughly equivalent to the sum of 100 percent of each of the CMYK inks and can be interpreted as Registration Color.

The neutral density values for separate inks are based on Specifications for Web Offset Publications (SWOP) solid-ink standards. The page layout application or the rip must supply these neutral density values to the Trapping Engine. The neutral density of the spot ink can be calculated using the ink's CMYK equivalent. In most cases, the CMYK equivalent is accurate enough to give appropriate neutral density value that can create correct traps. However, in the case of metallic or other inks that are not easily simulated using process inks, the neutral density values may be inaccurate. For these types of inks, the user should change the neutral density values in I-Trap™ Viewer, using neutral density values derived from a commercial printer, the ink's manufacturer, or a densitometer.

The following densities are commonly used as preset values for process inks [CMYK]:

SWOP: = [0.61, 0.76, 0.16, 1.70]

EURO: = [0.51, 0.62, 0.04, 1.67]

TOYO: = [0.58, 0.74, 0.08, 1.82]

Trapping direction is generally selected in such a way that the lighter color spreads into the darker one. In some cases the trap direction can be centered, which means that traps spread equally into both adjacent colors.

Controlling trap color

Trap color or the color that needs to be applied along the colors' boundary in order to compensate for the misregistration, is calculated as a combination of the abutting colors' ink values using the **Dark and Light Ink Percentages** settings.

Special cases

Black Special Case rules are applied to multi-black colors or colors with spot inks that can be treated as black if desired. This rule implies that the trap decision is always set to *Yes*, and the trap direction is always into the black object, as it should define the visual edge of the color boundary. The rule depends on the definition of solid black ink specified by the black density level and black color limit (black percentage) settings. A special black trap brush width can be defined, which is generally greater than the regular brush width.

Image cases

A set of parameters controls image to line work trapping direction, internal image trapping (or trapping inside the images), special Black and Yellow cases for image and line work boundaries. See more detailed description of image trapping rules and conditions in the manual "Achieving HiQuality Results.pdf".

Vignette cases

Special case vignette trapping can be switched *On* or *Off*. When the switch is *On* vignettes are outlined with the centered trap of vignette color.

Controlling trap brush selection

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 of 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 wider than the regular trap if not specified otherwise by the setting in Black Brush.

Trap brush shapes can be set to either circular or square.

Configuring the Rip Trapping plug-in

Rip configuration

Open the Harlequin rip configuration dialog and set the parameters shown in the screenshots on Figure 3

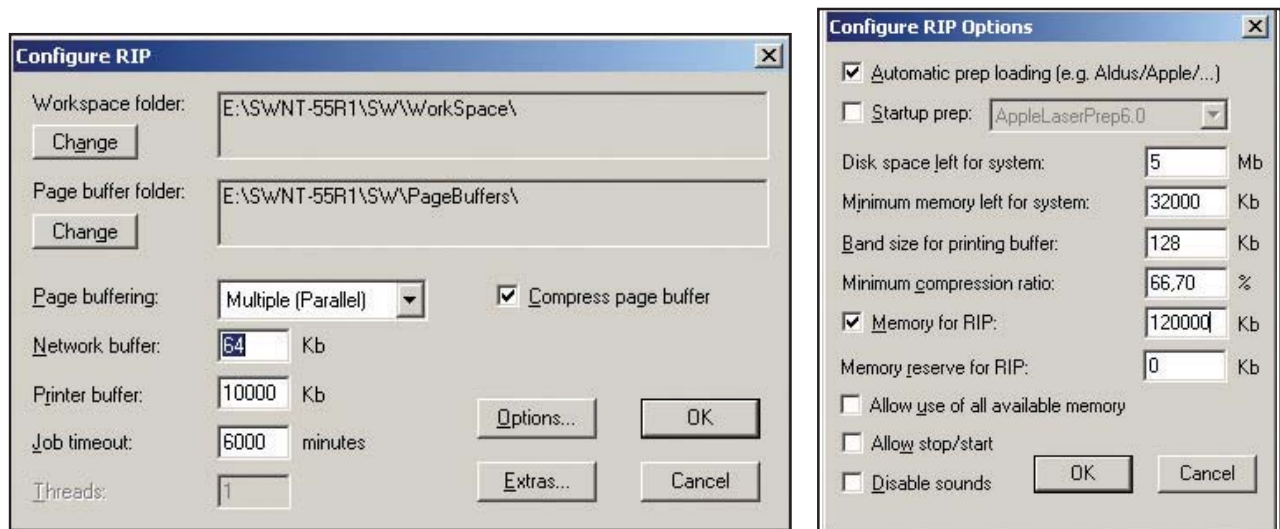


Figure 3. Rip configuration dialogs

Minimum memory for the Rip should be 50 000 to let the trapping plug-in work, 120 000 and more is recommended. If the job lacks memory, the *PS VM error* is indicated in the Rip log window and adding memory in the configuration dialog becomes necessary. Raster trapping uses a consistent amount of memory so once you have the memory set then you should not experience difficulties with varying size or complexity of jobs.

Important! If you are running pre-separated jobs that need to be recombined, the rip does not write data to disk page buffers, these complex jobs need a lot more memory to correctly process the final output pass. In case when the rip lacks RAM on the second pass it logs the *PS VM error* into the log window and issues the error message “Interpreter error of stopped context”.

Trapping plug-in configuration

The first step in setting up the Trapping plug-in is to configure the page setup in the Harlequin rip to use a new device - **Lucid Trap**. The Lucid Trapping plug-in installs and functions as another output device to the rip. Although not an actual hardware device, the Trapping plug-in can be thought of as a data format device.

Create new Page Setup with Lucid Trap device, select resolution and press *Configure device* button.

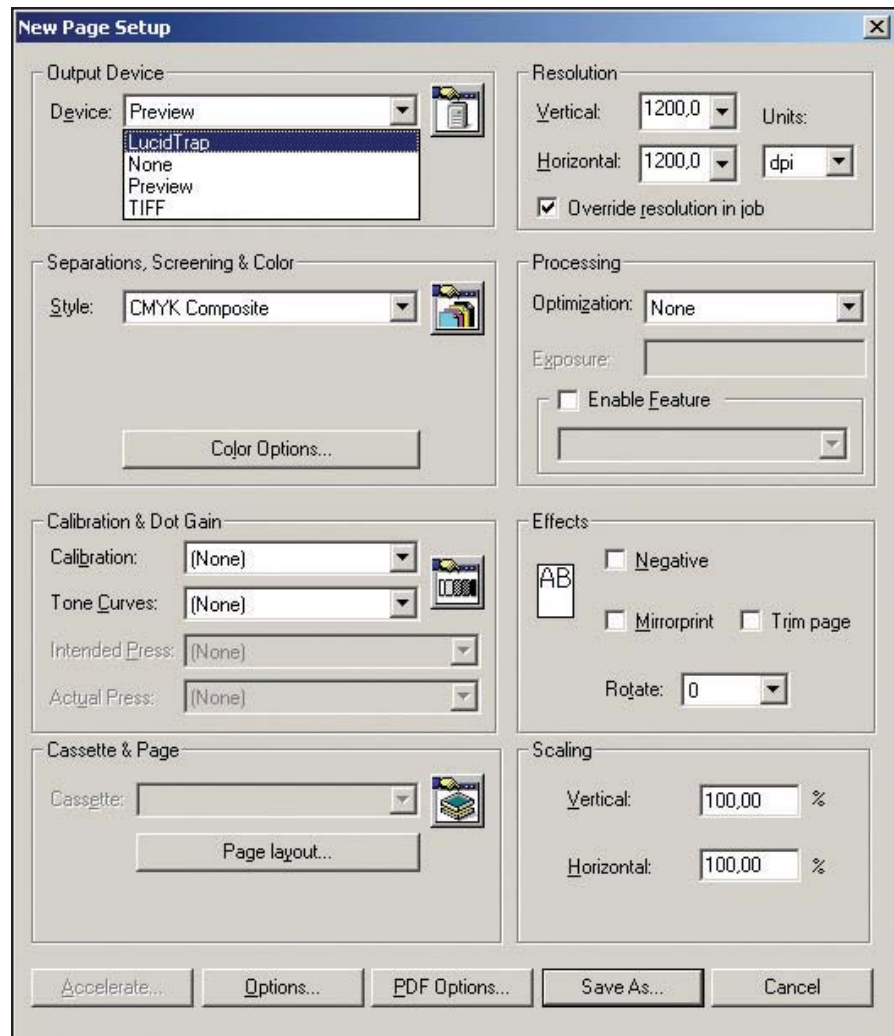


Figure 4. Rip Page setup dialog; select Lucid Trap device and configure it

The device configuration window for the Trapping plug-in is where the initial trap settings are made. Since the Trapping plug-in can function as either an “In-Rip” trapper or an “Interactive” trapper, the settings in the device configuration window can be used either for trapping or as the default settings, respectively.

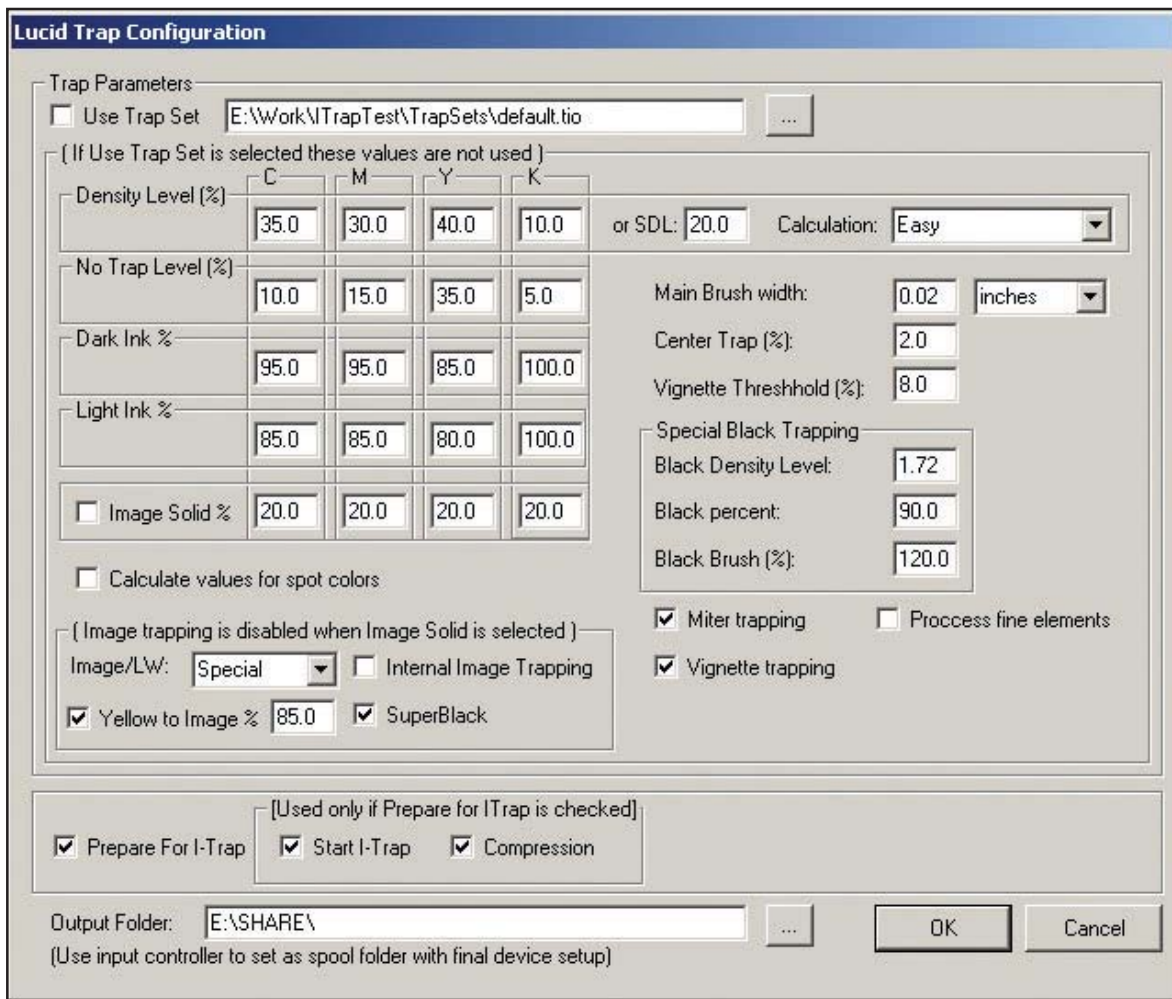


Figure 5. LucidTrap plugin configuration dialog

The Figure 5 shows the Trapping plug-in configuration dialog where trapping parameters can be defined. The explanation of how to set these parameters is provided in Chapter 7 section “Setting trapping parameters”. Below the explanation is given only for the items that differ from those defined in the Viewer. Default parameters set in the plug-in will be mostly useful to create traps in simple pages. You can learn how to modify trapping parameters to create better traps in the manual “Achieving High Quality Results Using I-Trap™” on fine tuning trapping parameters for the interactive trapping. An **Output Folder** should be defined in the dialog. If this folder does not exist, the plug-in will create it on startup. It is recommended to set the operating system attribute **Compress contents** in the Advanced properties for this folder in your Windows to save the hard disk space. If the I-Trap™ Viewer is installed on a remote computer the Output folder for interactive trapping needs to be shared and mapped to a drive letter before setting it as the plug-in parameter.

Default trapping parameters are set in the plug-in when you first start the configuration dialog.

If you want to change one or two values only it’s simpler to do so directly in the dialog. To use param-

eters specific to a queue or a job you can enable a TrapSet. “Working with TrapSets” section in Chapter 7 explains how to create and modify TrapSets.

If the check box *Use trap set* is disabled trapping parameters defined in the configuration dialog window take effect.

Important! If the check box *Use trap set* is enabled in the plug-in configuration dialog and a TrapSet is selected trapping parameters will be used from that TrapSet but will not show in the dialog. The parameters defined in the dialog will be dismissed. (Note: general plug-in interface with the rip does not allow the values in the dialog to change dynamically and they cannot be modified and displayed according to the values in the selected TrapSet. When the configuration dialog is reopened the values will be changed according to selected TrapSet values.)

The message is written to the Rip log window indicating if the TrapSet or the Trapping plug-in configuration dialog was used to extract trapping parameters for a given page.

Default trapping parameters (factory settings) are defined in the special TrapSet file with “default.tio” name supplied with the I-Trap™ installation. This file is pointed to when the Trapping plug-in first starts in the rip. These default values can be changed in the I-Trap™ Viewer as explained in “Working with TrapSets” section in Chapter 7.

Trapping plug-in has easy and advanced modes to define the density level values for inks. In an easy mode, only one parameter, **SDL (Standard Density Level)**, is set as the density level for ink with 50% intensity. Other density levels will be calculated automatically using that setting.

In an advanced mode, you set all of the density level values for CMYK inks. Values for spot colors will be calculated by the formula using the CMYK equivalents.

Image solid check box enables creation of a solid color placeholder instead of images on a page. If this option is **On** the CMYK values for the placeholder color are defined in the edit boxes to the right. **Image trapping** should be set to **None** and **Internal image trapping** disabled otherwise the trapping results would be undesirable. Image solid option is created to speed up processing of complex pages with lots of image data if images do not need trapping.

Trapping parameters for spot colors are taken from the Color Look-Up Table that is created and updated by the I-Trap Viewer. The Color Look-Up Table starts with the CMYK only and is increased by every new spot color of the customer’s jobs prepared for interactive trapping. If the spot color is not present in the table the plug-in would calculate the trapping parameters values for this spot color according to its CMYK equivalent and neutral density supplied by the Rip.

Calculate values for spot colors check box when enabled, instructs the plug-in to calculate the trapping parameters for spots rather than use the ones from the Color Look-Up Table. This option can be useful if you want to save some specific trapping parameters for the spot colors and at the same time a job should be processed with default values.

Compression option, if enabled, has effect only when the Trapping plug-in is configured to **Prepare for I-Trap** and saves disk space used for the intermediate files that the Trapping plug-in writes for the Viewer. The process time to prepare compressed page in the rip plug-in could increase about 10% for complex files.

The check boxes **Prepare for I-Trap** and **Start I-Trap** enable/disable the interactive or automated workflows. They are discussed in the next section. In the I-Trap™ Viewer is installed on a remote computer the **Start I-Trap** option does not start remote Viewer, you need to start it manually.

Save your settings and give a descriptive name to created page setup for trapping queue.

Creating separate page setups for interactive and automated trapping is recommended.

When you start your rip after installing the Trapping plug-in, you will see a log message indicating the ! Lucid Dream Trapping Plugin: Version x.x.x.x.

Lucid Dream Trap Engine (ver.x.x.x) included.

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If you don't have a dongle or license activated to use the I-Trap™ software, a corresponding message will be logged to the rip window and the plug-in will not work.

Understanding the workflows

Trapping workflow involves two passes through the rip for both automated (In-Rip) and interactive modes. On the first pass the source PS or PDF job is printed using the Page setup with the Lucid Trapping plug-in selected as an output device. The second pass is usually configured as a spool folder using the Page setup for your actual out device, and it picks up the trapped file produced during the first pass.

The configuration dialog starts with a selection of the working output folder (see Fig. 5) as it is described in the Chapter 6, section “Trapping plug-in configuration”.

Important! The output folder to the Trapping plug-in page setup will become the input Spool Folder for your actual final device output.

There are two subfolders created in the output folder with standard names

ITrapFiles and **TrapFiles**. The **ITrapFiles** folder is used to save the files with TIOs and source pages data for the Viewer, and the **TrapFiles** folder is used to save source PS (or PDF) pages data and created traps PS data. A subfolder of the **ITrapFiles** folder is created for every job's files. Control files are saved to the output folder root.

Control files are used in the rip final output queue, and instruct the rip to merge source and traps data. If you want to keep the source data for re-trapping in the interactive trapping queue, you should configure the inputs spool folder *not* to delete files on completion. In an automated workflow, it is better to check this option in order to clean up the disk files after processing.

If the *Prepare for I-Trap* option is not checked in the LucidTrap device configuration dialog, the trapping occurs in the rip and source view data is not saved. If it is checked, then the source view data is saved and sent with these settings to the I-Trap™ Viewer.

In an automated workflow, the Trapping plug-in generates a PS file containing traps only data and a PS control file.

In an interactive workflow, the Trapping plug-in generates TIO and raster source pages data in an internal format and calls the I-Trap™ Viewer for further processing of the job. If the check box *Start I-Trap* is enabled then the Viewer starts immediately. If the Viewer is running and the one instance option is enabled in its Preferences settings the job adds to the **Page manager** rather than starts another copy of the Viewer. If the check box is disabled the created job is saved to the **ITrapFiles** folder and could be opened manually from the Viewer any time later. Job's files are saved to a subfolder with the job's name. The option is handy to create a number of jobs in the rip prepared for interactive trapping, open them later all at once and edit their trapping parameters in one session. Traps can be then created in the Viewer and you can execute the command to send the job (page) back to the rip. This command generates a control file in the same way as the Trapping plug-in would. The I-Trap™ Viewer **Page manager** tool provides the option to trap and send a number of files to the rip with one click on a button (see

the section “Working with Page manager” in Chapter 7).

The control file is then picked up by the final output queue using the inputs spool folder mechanism in the rip. Processing the control file results in an actual application of the traps onto the source page. The final output queue is the right place to set such parameters as mirror, negate, rotate, etc. The trapping page setup should not contain any of these settings, or special rip features.

Configuring the trapping queues manually

You can create trapping page setups and input channels in the Rip manually (in I-Trap versions prior to 1.3.3) or use the configuration tool in the I-Trap™ Viewer (in I-Trap versions 1.3.3 and higher, described in the section “Configuring the trapping queues in the Viewer” in Chapter 7).

It is recommended that you start creating trapping queues using the Viewer tool and only after familiarizing yourself with the procedure and requirements start editing (or create new queues) setups and input channels manually.

Please read Chapter 4 and “Understanding Workflows” section in Chapter 6 to understand possible workflows with the Lucid Trapping plug-in before manual creation of the setups. As described there, automated and interactive workflows consist of two passes through the Rip. On the first pass traps are created (or the job is prepared for interactive trapping in the Viewer where traps are created interactively), and a control file. Those files are sent to the Rip spool folder. On the second pass through the Rip, traps are applied to the source page data, the job is processed by the selected output device and sent to final output.

Trapping and output queues should be configured to correspond with one another. Further sections present a step-by-step guide with pictures of the configuration dialogs where all needed buttons and edit boxes are marked by reddish ovals. Important notes start the paragraph with red notice.

Let’s assume that you have at least one final output queue with the name “tiff_1270” and its page setup resolution is 1270 dpi.

Important! The Page Setup configuration for the final output device should set the trapping method to *None*.

Step 1. Create trapping page setup

Open the Rip menu */ScriptWorks/Page Setup Manager...* and create a new Page setup for the trapping queue.

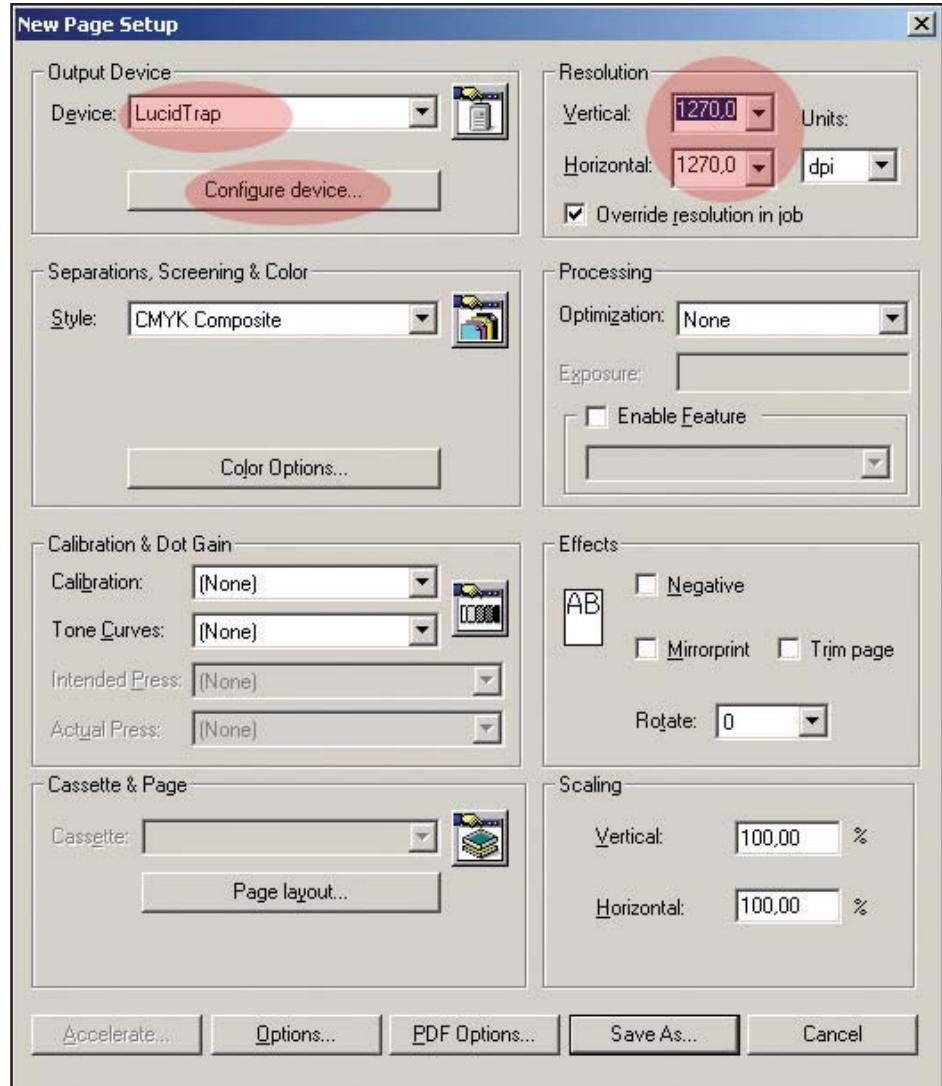


Figure 6. Set the resolution and configure LucidTrap plugin

Select the **Lucid Trap** device from the pull down box and set the resolution for this page setup.

Press **Configure Device** button to call trapping configuration dialog and set trapping parameters

Important! No page features or other processing optimization should be set in the trapping page setup. The resolution should match

In the Trapping configuration dialog you have to set the working folder for the trapped files.

Browse and select the **Output Folder** name for the files created by the Trapping plug-in and by the Viewer. If the folder does not exist you have to create it beforehand. This folder will be used as spool folder for the final output device in the rip Input Controller configuration.

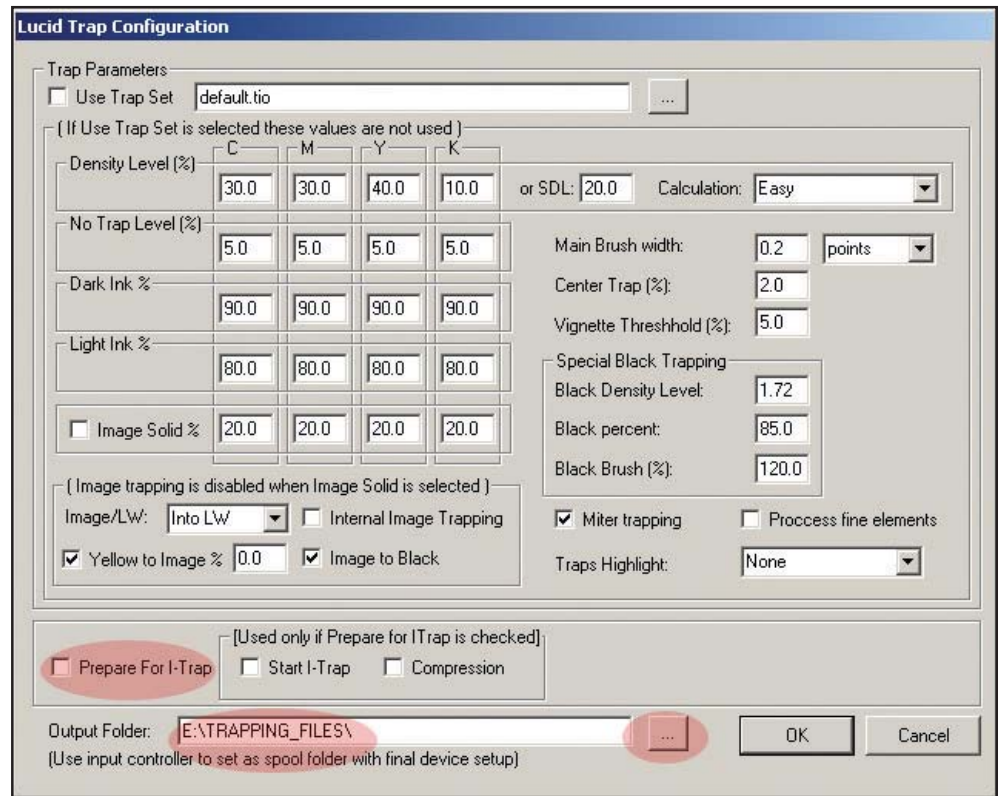


Figure 7. Select output folder and trapping mode

If you are not sure what trapping parameters to set leave the default ones. Read the User Manual Chapters 5 and 7 to learn how to set trapping parameters.

If you want to use this setup for automated queue the check box **Prepare For I-Trap** should be unchecked. If you want to use this setup for interactive queue the check box **Prepare For I-Trap** should be checked and you can also enable **Compression** and **Start I-Trap**.

Click Ok to return to the Page setup configuration dialog.

Important! Resolution values in the page setups for the final output and trapping queues should coincide.

Step 2. Configure the color space style from the Page setup dialog

Figure 8 (a) shows part of the Page setup dialog for color space configuration that calls the Rip Separations Manager dialog (Figure 8-b).

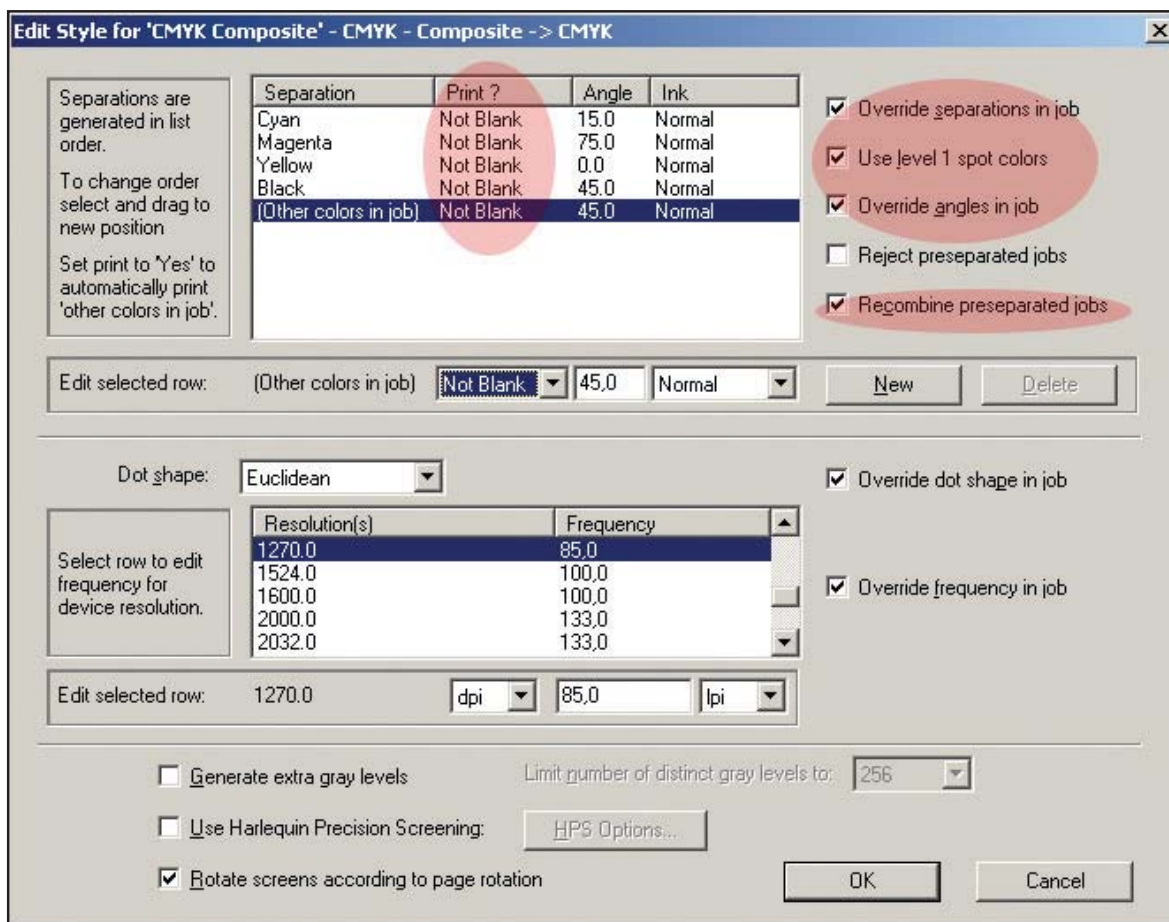
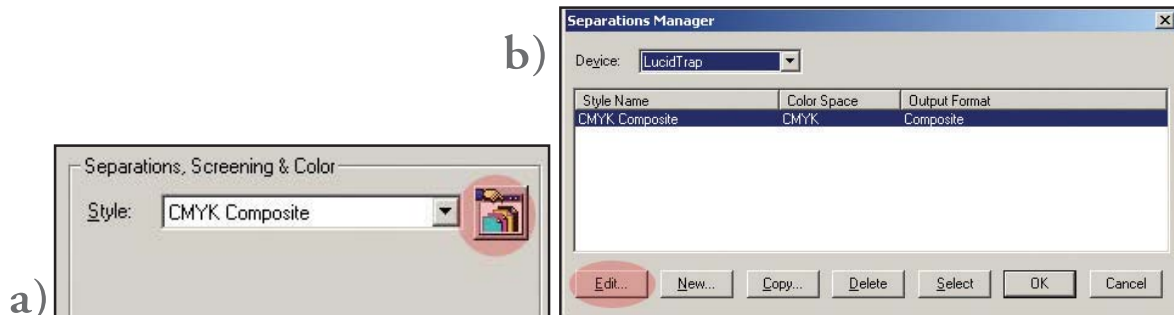


Figure 8. Configure color style and other setup options

You can use the Rip Separations Manager later to edit both color spaces for trapping and final queues at once, and set the same options in the *Print?* column, e.g. if final queue setup requires **Not Blank** for the separations, then the trapping queue setup should require the same. If spot colors are enabled in the final queue setup, they should be enabled in the trapping queue as well.

Important! Separations count values in the page setups for the final and trapping queues should coincide. Though the Trapping plug-in always uses Composite color space, it is not necessary that the same color space be used in the final output. (See Figure 9 where setups for trapping and final tiff output queues have different color spaces but the same resolution, and they can be compatible.)

Important! If the source page does not have full CMYK inks, e.g. any or all of them are not present, and there are spot colors instead, it is required that the trapping queue color space settings in the Separations Manager must be *Not Blank* for all the separations. The final output queue color space settings must be *Not Blank* as well though in most cases the Rip does not output blank pages.

If the recommendations above are not followed the results can be undesirable.

One of the common problems occurring is that the traps on final output page come out properly placed but being white instead of the correct color.

Another problem can be disappearing traps on final output.

It is required that you enable *Override separations in job* and *Use level 1 spot colors* in the trapping queue.

The option *Recombine pre-separated jobs* must be enabled if the printed job is pre-separated. **Note** that the rip can be unreliable if this option is enabled and that ripping times will increase due to poor memory usage solution. You can run into the Rip *VM error* condition as explained above and need to add

more memory to the Rip. Thus it is not recommended to enable the recombine option if the job can be processed without it. Some composite jobs won't run if the recombine option is enabled.

If the *Recombine preprepared jobs* option is enabled on the final output queue the rip requires a lot more memory to be allowed in the rip configuration dialog not to run into *VM error* condition. On complex jobs though the rip can throw the error dialog "Interpreter error out of stopped context". In such case try to add even more memory to the rip or switch the recombine option *Off* for final output.

Save your Page setup with a descriptive name, e.g. Traps_1270_Auto, or Traps_1270_Viewer.

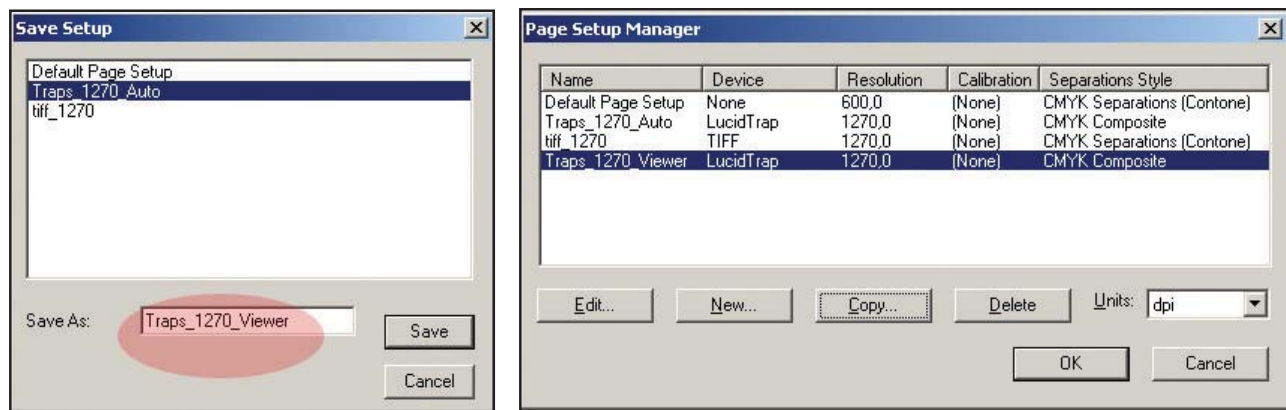


Figure 9. Save trapping page setup with a descriptive name

It is recommended to create separate Page setups for automated and interactive workflows.

Step 3. Configure Input queues to create final output

Trapping plug-in and interactive trapping in the I-Trap™ Viewer do not apply traps directly. They create the PostScript file that contains all traps for a page and a control file that would instruct the Rip how to merge source page data and traps. These files are written to the folder that you had defined as *Output Folder* in the Trapping plug-in configuration dialog (Figure 7).

The Rip spool folder mechanism is used to pass these files to the final output queue.

Now you have to set this folder as the spool folder for your final output

Configuring the trapping queues manually

device queue.

Open the menu */ScriptWorks/Input Controller...* and press *New*.

In the Input Channel Edit dialog (Figure 10-b) enter descriptive name of the channel, set its type to be “Spool Folder” and select the Page setup of the device you want to use for final output. Press *Configure* to define the folders of this input channel.

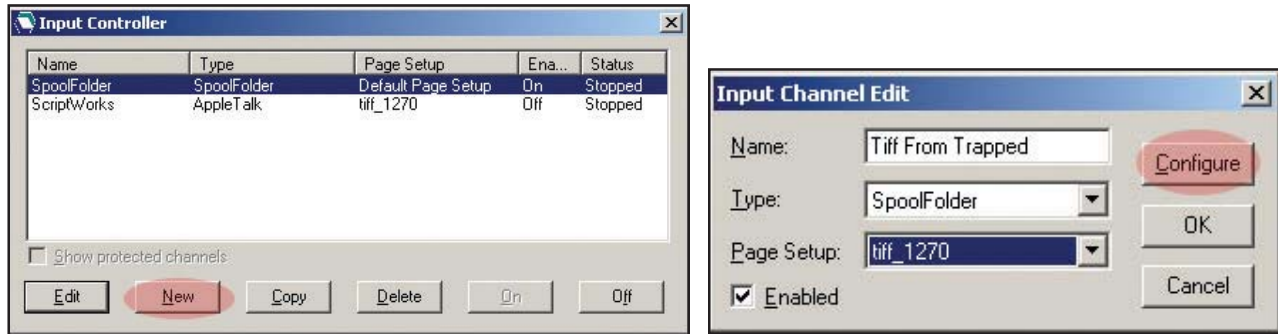


Figure 10. Create an input channel for the final trapped output

We created the output folder for the Trapping plug-in with the name E:\TRAPPING_FILES as shown in Figure 11. Now this folder name should be entered in the Spool Folder edit box or browsed and selected. Configure other folders as needed. Check box *Delete on completion* impacts the Trapping plug-in behavior related to the files with traps and control files created.

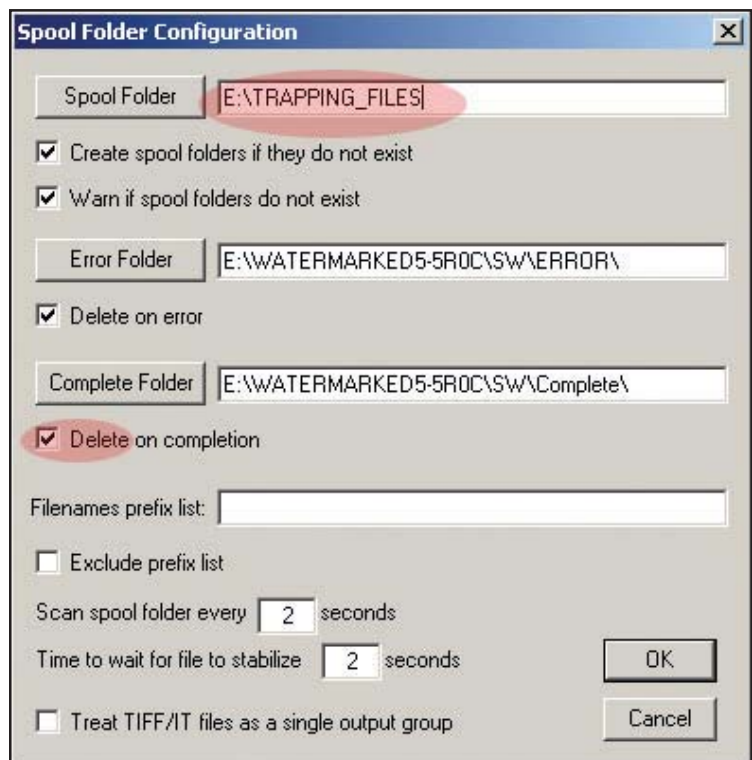


Figure 11. Spool folder should coincide with the one selected as output folder in LucidTrap plugin configuration

Configuring the trapping
queues manually

Important! If you want to re-trap jobs in the Viewer do **not** enable *Delete on completion*. If you want to save disk space and do not want to re-trap jobs this box can be enabled.

After you have saved your input channel configuration your Rip is ready to run the first job to apply trapping. It is recommended that you submit the LucidTrapTest.pdf file supplied with the installation.

Some examples of the queues configurations are contained in the [Troubleshooting I-Trap](#). There you can also find the guidelines how to preserve screen angles or other screening information.

Chapter
7

Working with Interactive Trap Viewer

I-Trap™ Viewer is designed not only to examine the source page data, but also to apply trapping *On-The-Fly* to a selected part of the page or the entire page, in order to immediately view the results. You can modify trapping parameters as many times as needed to achieve the desired results. Afterwards, the trapped page is saved to a disk for output or further processing. The original data is not overwritten; so its integrity is maintained.

The Interactive Viewer has a **Page Manager tool** that takes in jobs of any number of pages. You can easily see how many pages are in the job and quickly see the preview of any page with a double click to open and a simple keyboard shortcut to close. Trapping can be turned on or off for all pages in the job with a single click and can be individually set for each page.

The Interactive Viewer has an **Information Manager tool** that provides access to all data about the trap settings and page information. It starts with a main info window that gives the full list of inks in the job. This doubles as a densitometer tool by giving the precise color values from the cursor position over the preview. It also provides positional information of the cursor relative to the original data. The tabbed panel can then be switched to show the list of trap zones in the job. For each zone, it will show the trapping parameters for that zone. The next tab provides ink information allowing you to control the color representation and ink settings. The last tab controls the job workflow parameters.

The Interactive Viewer has the industries first **Graphical Configuration tool** for trapping. No longer do you have to try to figure out all those numbers and tables. With the Graphical Configuration tool, you are given easy to read feedback on the most important trap settings in a composite graphical window.

The Interactive Viewer has a **Page Preview tool** that lets you quickly see the source page. It lets you zoom in to the finest detail of any place in the job. You can quickly move around while you zoom in and out on the job. You can switch from the source un-trapped view to the trapped view.

The Interactive Viewer has a **Trap On The Fly tool** that allows you to zoom into any Area of Interest in the job and with a single click it uses the actual trap engine to apply your current trap settings to only the currently zoomed data. This is one of the most useful tools in the chest, as it gives fast feedback of how

your job will be trapped. Using the feature of random access in the trap data format, the Trap on the Fly option of I-Trap™ can apply traps to zoom windows of entire plate signatures in just seconds. Sections of this Chapter describe in detail how to use these tools to achieve high quality trapping results.

Panels, toolbars, menus and tabs. Changing the layout.

There are three main panels in the Viewer work area.

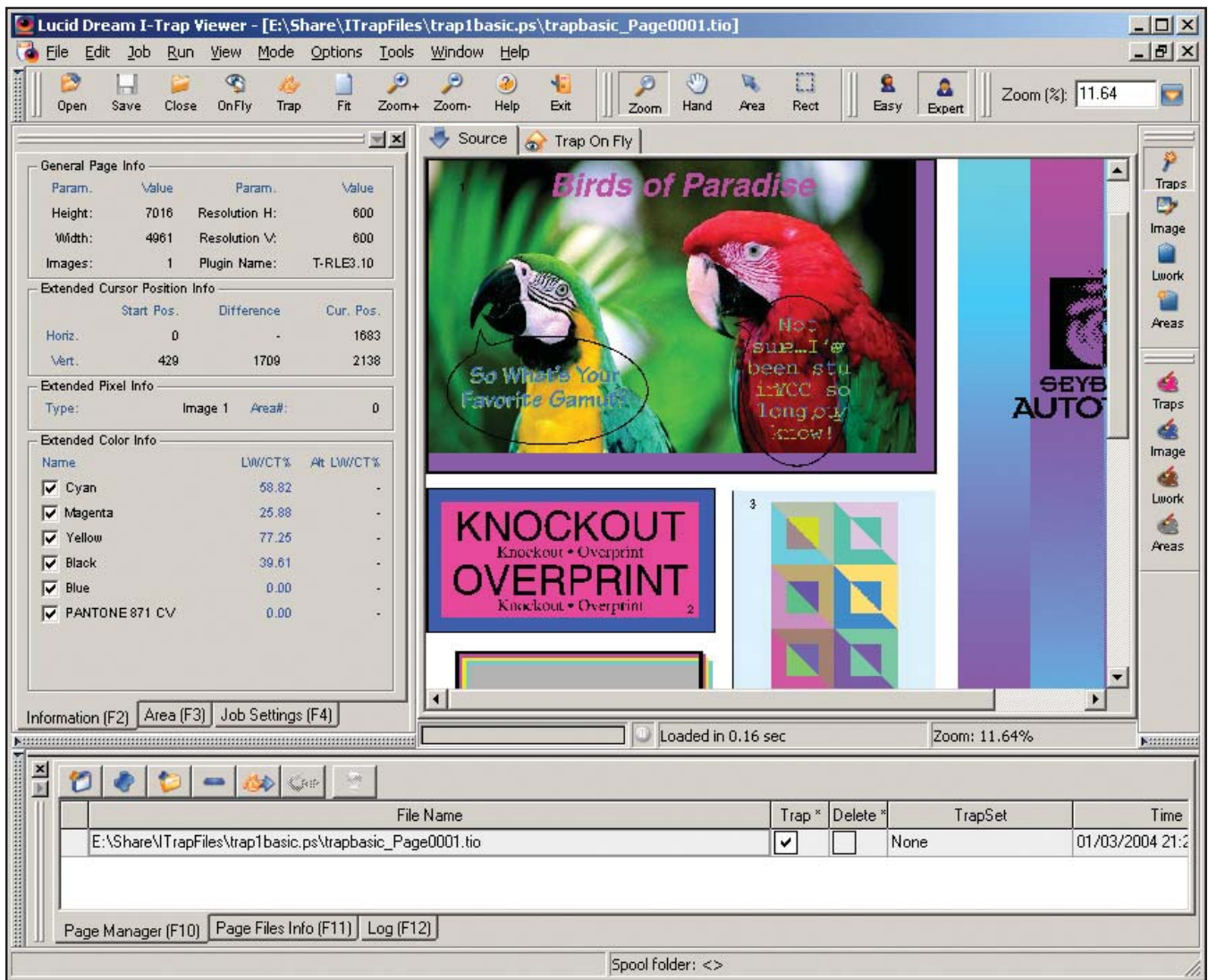


Figure 12. Viewer overview

The **Page Display** panel includes two tabs - Source and Trap on Fly. When a page is opened in the Viewer, its source view shows in the source window. You can split the display window to view source and trap on fly synchro-

Panels, toolbars, menus and tabs. Changing the layout.

nously at the same time

The **Left Information** panel has three tabs - Information, Area, and Job Settings. The panel is used to examine page values and to edit page-trapping parameters.

The **Bottom Information** panel includes three tabs - Page Manager, Page File Info, and Log. This panel is used to select pages to work with interactively. The log window displays all operations and error messages. These messages are copied to the log file created in the Viewer working directory. The user is encouraged to collect this file and send it to the support team when problems occur.

The panels are supplied with the shortcut keys (see the list in the Appendix). A set of toolbars provides for quick access to the main commands. Toolbar icons are supplied with tool tips. You can arrange the toolbars around the display panels or hide them.



Figure 13. Standard toolbar

The list of the **standard toolbar** commands includes:

- **Open TIO file**, which means a corresponding input page should be opened in the source view panel and its trap instruction object is available for editing trapping parameters. The TIO file can also be opened from the Page Manager window.
- If you are trying to access a page of the job with more than 16 inks the job will be opened in the **Ink Reamapping Tool** and not displayed in the Display panel. You cannot trap a page with more than 16 inks and have to reduce inks count.
- **Save TIO to a file**
- **Close current TIO and page view**
- **On Fly** applies traps to a selection in the source view panel and immediately shows the result in the Trap On Fly window.
- **Trap (save trapping)** applies traps using current trapping parameters to the source data and saves the results to a file in a specified format (see stand-alone workflow definition).
- **Fit** displays a full-size page fitting into the window.
- **Zoom in** (select the rectangular area with the mouse inside the view panel).
- **Zoom out** (right click inside the view panel).
- **Help** changes the cursor to a question mark and lets you click an element for help.
- **Exit**

Panels, toolbars, menus and tabs. Changing the layout.



Figure 14 a) Basic and b) Expert mode toolbars

The **basic toolbar** commands include **Zoom**, and **Hand** tools. Use shortcut **Ctrl-M** to switch to the Zoom tool, **Ctrl-H** to switch to the Hand tool.

Expert mode toolbar contains buttons to switch between easy and expert mode of defining trapping parameters. In easy mode most of the parameters are used from the settings done in the Rip plug-in, predefined TrapSet or set by default. Easy mode is perfect for the novice. In expert mode you can create and save your own TrapSets, change ink based, image and other trapping parameters. Expert mode is ideal if you want to experiment with resulting traps, to learn how to control trapping and clearly know what impact on trapping results you want to achieve.

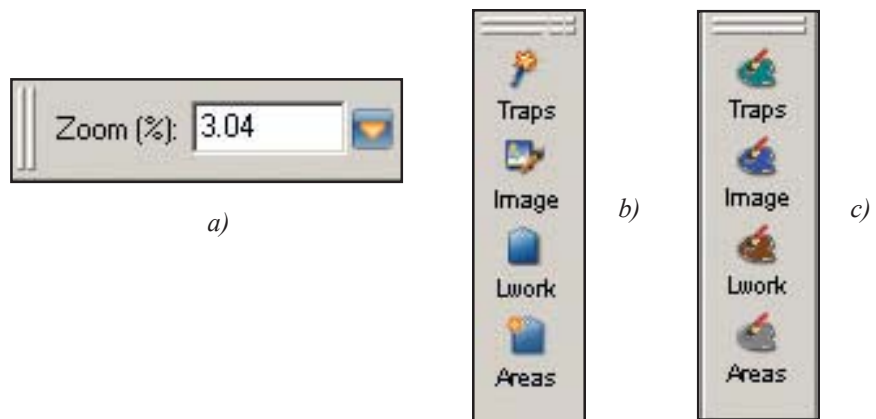


Figure 15. Zoom (a), Highlight mode (b) and Highlight colors selection (c) toolbars

The **zoom toolbar** contains **Zoom factor** drop down menu.

Highlight mode toolbar contains the buttons to switch the corresponding highlight modes **On** and **Off**. Pressing any of the four buttons you can enable highlighting of the page display elements to help examine the source and trapped data.

Highlight colors selection toolbar is used to select the highlighting colors for different highlight modes. The palettes on the buttons are painted with the color selected for highlighting traps, images, line work data and trap areas.

Panels, toolbars, menus and tabs. Changing the layout.

Most **menus** are traditional and self-explanatory. The menus described below have some specific functionality.

Menu **/File/Imports...** is used to select *.sum file which is the control file created by ArtQuest Crescendo OEM Rips workflow, and build the TIO based on the source page data generated from the files.

Menu **/Edit** relates to work with trap areas defined in the Viewer. Its features are covered in the section “Creating and editing traps areas and parameters” further in this manual.

Menu **/Job** duplicates the toolbar in the bottom information panel of the Page Manager tab. Open a selected page and trap pages selected in the Page Manager window table.

Menu **/Job/Add page(s)** opens standard File dialog to select a set of TIO files to be added to the Page Manager window.

Menu **/Job/Add current page** adds the TIO of the current page to the Page Manager window.

Menu **/Job/Remap** links in Job starts the InkRemapping Tool for a page (job) selected in the Page Manager window.

Menu **/Job/Start inputs** starts/stops monitoring the watch folder that can be defined in the **/Options/Preferences.../Workflow** dialog.

Menu **/Run** duplicates the **OnFly** and **Trap (save trapped data)** toolbar buttons.

Menu **/View** contains the options that help arrange display windows, toolbars and view source and trapped data in a convenient way to compare the traps color and position. The Figure shows the menu selections most of which appear with a check mark that indicates the option to be switched *On*. You can show/hide the toolbars, the left information panel and the Page manager panel.

When **Show split Trap-On-Fly (Ctrl-P)** is enabled either vertically or

Panels, toolbars, menus and tabs. Changing the layout.

horizontally the Traps are shown together with the source page at the right or bottom parts of the display window. When you are moving the cursor in the source page view the 1st and 2nd columns of the Extended Color Info table show the source color and the 3^d column shows the traps color at the current position.

The *Show grid* option (toggle by **Ctrl-G**) is handy when you want to examine the placement of traps compared to the source objects. The grid size and line properties are adjusted in the */Options/Preferences* dialog.

View	Mode	Options	Tools	Window	Help
<input checked="" type="checkbox"/>	Standard Toolbar				
<input checked="" type="checkbox"/>	Basic Toolbar				
<input checked="" type="checkbox"/>	Expert Mode Toolbar				
<input checked="" type="checkbox"/>	Highligh Mode Toolbar				
<input checked="" type="checkbox"/>	Highligh Colors Toolbar				
<input checked="" type="checkbox"/>	Zoom Toolbar				
<input checked="" type="checkbox"/>	Log And Page Files Info				
<input checked="" type="checkbox"/>	Information And Settings				
Show Grid			Ctrl-G		
Fit To Box			Ctrl-NumPad /		
Zoom In			Ctrl-NumPad +		
Zoom Out			Ctrl-NumPad -		
Actual Size			Ctrl-NumPad *		
Show Split Trap-On-Fly			Ctrl-P		
<input checked="" type="checkbox"/>	Split Trap-On-Fly Vertically				
<input type="checkbox"/>	Show Source			Ctrl-F5	
	Show Trap-On-Fly			Ctrl-F6	
	Show Trapped			Ctrl-F7	
	Show Traps Only			Ctrl-F8	
Full Screen			Ctrl-F12		
Refresh View			Ctrl-R		

Mode	Options	Tools	Window	Help
<input type="checkbox"/>	Zoom Mode			Ctrl-M
	Hand Mode			Ctrl-H
	Area Mode			Ctrl-A
	Rectangle Mode			Ctrl-E
<input checked="" type="checkbox"/>	Highlight Trapping			
	Highlight Image			
	Highlight Linework			
	Highlight Outside Current Area			
Show Memorized Color				
<input type="checkbox"/>	Show Color Synchronously			
Easy Mode				
<input type="checkbox"/>	Expert Mode			

Figure 16. a) View and b) Mode menus

Panels, toolbars, menus and tabs. Changing the layout.

Menu **/Mode** allows to control the display and highlight modes of the Viewer and to switch the Easy and Expert presentation of the trapping parameters. You can use this menu to switch modes if the toolbars are hidden.

Show memorized color is handy when you want to compare the special point color to some surrounding values. To do so use the combination of **Ctrl + Left** mouse button click and the color value of the position under cursor will be displayed in the 3d column of the Extended Color Info table (LW/CT light blue color header) on the Information panel. While you move around this value stays unchanged and can be easily compared to the current color values. 3d column shows the traps color at the current position. The **Show color synchronously** option is handy if you are examining the traps in a split display window.

Options	Tools	Window	Help
Color Look-Up Table		Ctrl-Shift-L	
Trapping Highlight Color			
Image Highlight Color			
Linework Highlight Color			
Inactive Areas Highlight Color			
Plugins Information		Ctrl-Shift-I	
Preferences...		Ctrl-Shift-P	

Figure 17. Options menu

Menu **/Options/Color look-up table** calls an editing tool for spot inks CMYK equivalents – instead of entering the values into tables. The functionality is described below in the job parameters definition section.

Menu **/Options/...Highlight Color** can be used to call standard color selection dialogs to choose highlight colors for different parts of the page.

Menu **/Options/Plug-ins information** opens the window with the existing plug-ins in the I-Trap™ subdirectory. Figure below show two parts of the plug-in table where the status column determines whether the module can be used by the current I-Trap™ version or not.

Panels, toolbars, menus and tabs. Changing the layout.

Plugins Information						
Plugin Name	Module Name	Type	Vendor	Version	Files Types Supported	Status
SEPTIFFIT	E:\I-Trap2040\Plugins\aqTIFFIT.dll	Input/Output	LucidDreamInc	1.5 (27 Feb, 2002)	sum,par,sdkyl,ilw	OK
DELTADOC	E:\I-Trap2040\Plugins\ddoc.dll	Input/Output	LucidDreamInc	1.5	ddc	OK
ITRAP	E:\I-Trap2040\Plugins\itrap.dll	Output	LucidDreamInc	1.5.2.0 (02/22/2004)		OK
TIFFITP1	E:\I-Trap2040\Plugins\TIPL.dll	Input/Output	LucidDreamInc	1.5 Sep, 23, 2002	fp,tif,tiff	OK

Figure 18. Plugins information box

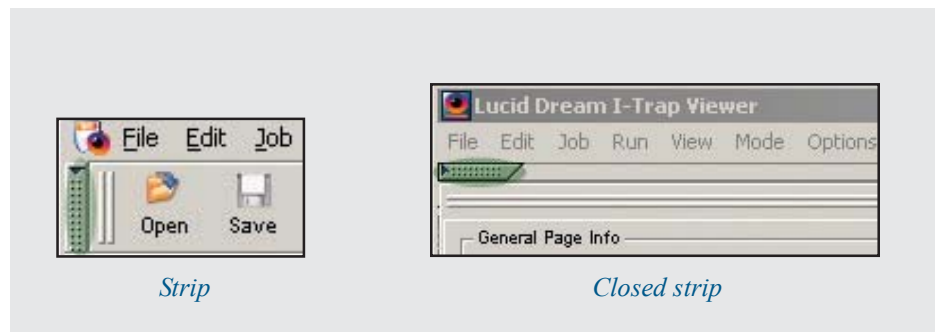
The plug-in status column shows any problems that can occur if the plug-in version does not match the Viewer interface version.

Menu */Options/Preferences* calls the dialog to tune the look and feel of the Viewer windows and behavior. The “Viewer preferences” section describes possible options.

Menu */Tools/Graphical Configuration Tool* calls an editing tool for the color component parameters values and Color Table inks CMYK equivalents – instead of entering the values into tables. The functionality is described below in the trapping parameters definition section.

Menu */Tools/Trapping Queues Setup...* calls the dialog that helps you configure your rip queues for automatic and interactive trapping. It is described in the section “Trapping queues configuration tool” further in this Chapter.

You can change the application layout if you want more space for the display windows or more information present at once on screen. To quickly show/hide the panels right-click on one of the colored strips near the panels and the toolbar, as shown in the Figure below. A closed panel also opens when you press the corresponding hotkey.



Panels, toolbars, menus and tabs. Changing the layout.

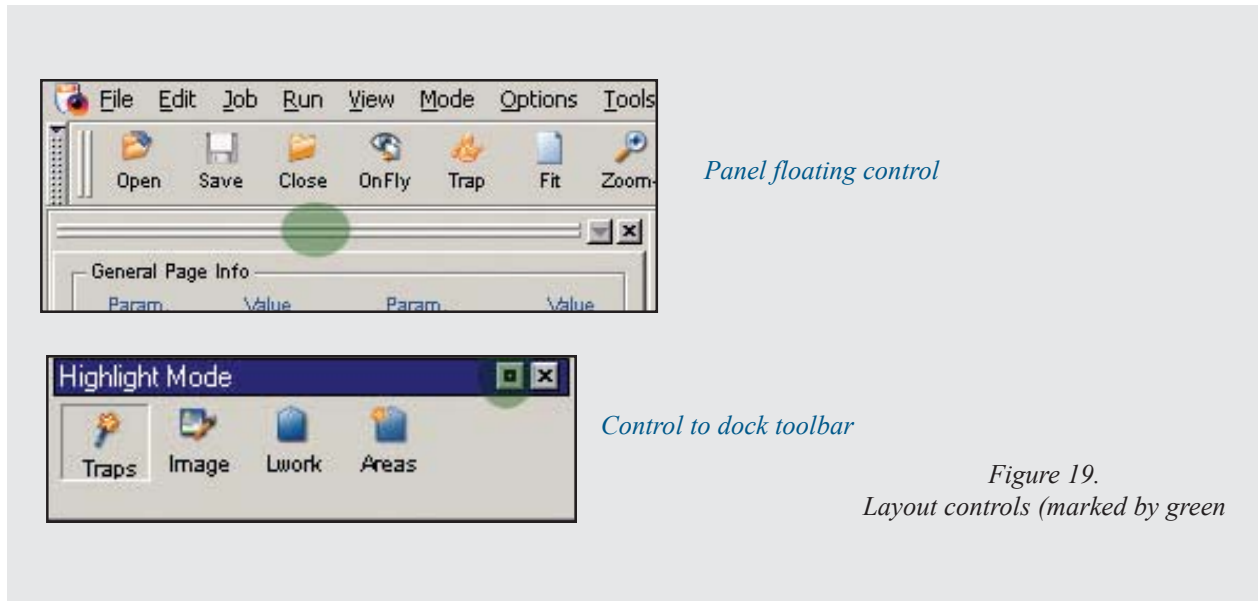


Figure 19.
Layout controls (marked by green)

The width of the panels is resizable, and the height parameter is resizable and adjusted automatically according to the screen resolution. Panels can be ***Floated/unfloated*** which means that you can drag them by the two lines present in every panel, as shown in the Figure. Use the **X** button near these lines to close the panel. Use the small round button to return the floated panel or toolbar to its docked position.

Ctrl-F12 key toggles full screen layout for the I-Trap™ Viewer window.

Viewer Preferences

Three preferences tabs contain a variety of settings to help you tune the Viewer for best layout and performance.

The Figure below shows the panel of **General** application preferences.

If ***Synchronize zoom factor for all views*** is checked all panels will have the same zoom factor and scroll synchronously too. If this option is unchecked you can have different zooming in source and trapped windows.

Enable floating panels check box lets the panels detached from their places.

Allow to add a job to the Page manager if its source file is absent lets you add the TIO to the Page Manager and run trapping for multiple pages in the batch mode when the Viewer is operated in standalone mode. In such case the jobs cannot be processed by the rip's second pass because their source files would not be found.

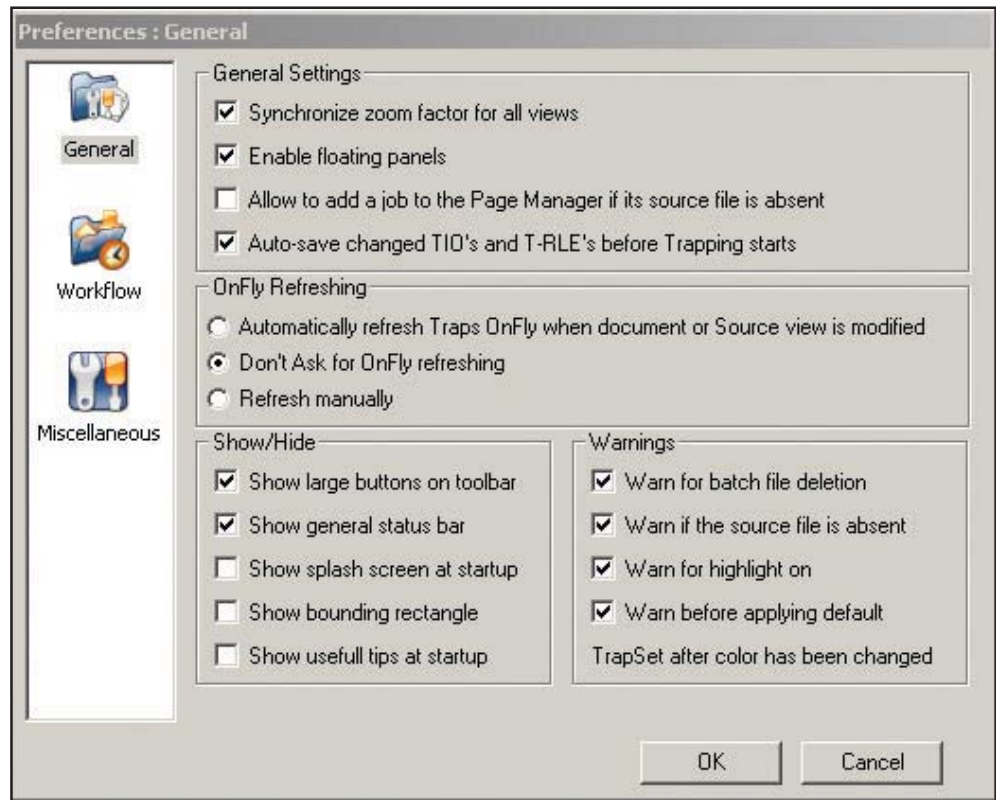


Figure 20. General preferences dialog

Auto-save changed TIO-s when batch trapping starts check box enables automatic saving of the TIO settings to files. Otherwise you should save the changed TIO-s manually.

Radio buttons in the **OnFly Refreshing** section let you select one of the options to update On the fly panel. **Automatically refresh Traps OnFly when source of document view is modified** would update the trapping panel after every user action and is handy if you want to examine traps in split panels. **Don't ask for OnFly refreshing** is used to terminate a message box question that would pop up every time when you switch and browse the source window. This option takes effect only if you don't use split traps view and is handy to examine larger portions of the trapped page synchronously with browsing the source page view. If you select **Refresh manually** then refresh button should be pressed every time you want to view trapped data. **Show/hide** options are self-explanatory except for the **Show bounding rectangle for the page**. If this option is enabled and you trapped some selection of the source page the trap-on-fly page will show the position of

the trapped part within the whole page area outlined with the page's bounding box. It is convenient when you want to see where the traps selection is on the page.

Warnings are useful until you get familiar with the software. If they are irritating you can switch them off in this dialog.

Workflow preferences let you enable the spool folder (see "Working with Page Manager" section) and start the mechanism to pass interactive jobs from the Rip to a single running copy of the I-Trap Viewer. If the **Allow one copy of application to run** is unchecked and the rip Trapping plug-in is configured to start I-Trap automatically there would be several instances of the Viewer started, one for every job. To avoid this check the option box.

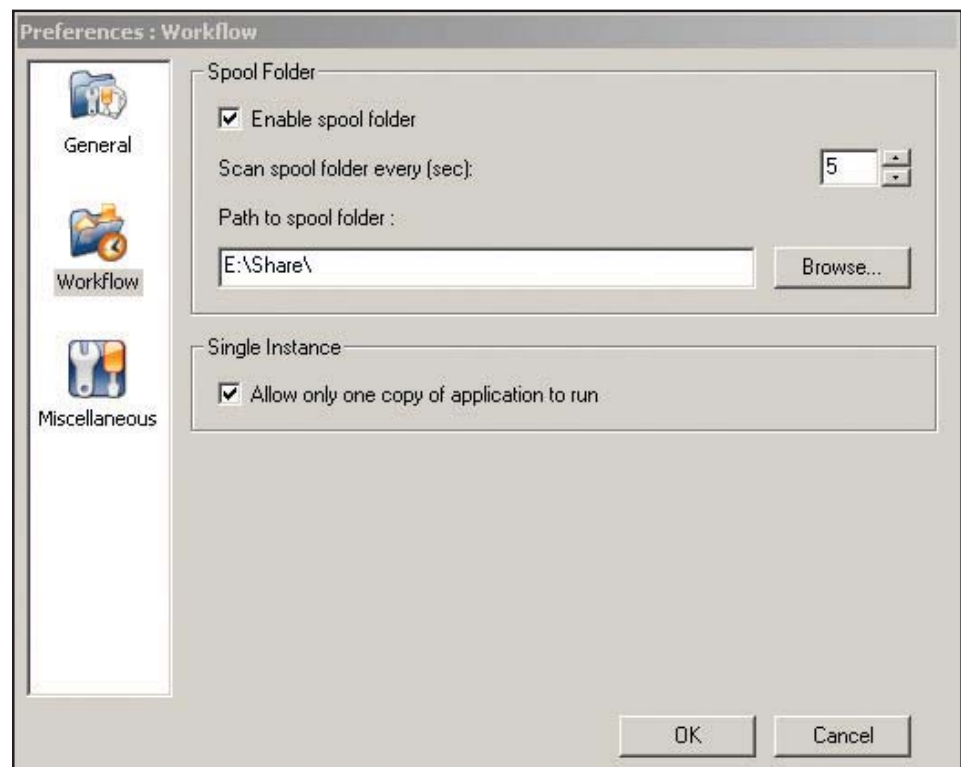


Figure 21. Workflow preferences dialog

Figure 22 shows the Miscellaneous options dialog.

Highlight Blending

Upper one defines the intensity of the color that would highlight such page elements as images, linework data and traps, and the lower controls the color intensity for highlighting trap zones. The color itself is defined using the standard color picker dialogs called by the buttons of the Highlight Color

toolbar.

Highlight Color toolbar. *Selected* slider lets you define the intensity of the colors that highlight image data, linework data and traps. When you highlight image data and linework data at the same time the vignettes are painted with actual color that makes it easy to distinguish them from other objects.

Deselected slider controls color intensity of the page highlighted outside a selected trap area. So when you wish to work with a certain trap zone and press **Highlight Area** button, then the other part of the page is painted with a defined tint while the working area is painted with its real colors.

The *Grid* options let you define the grid line type and the mesh size. You can switch the grid *On/Off* in the */View* menu.

Image scrolling step sets the number of lines (pixels) that scroll in the display window at one click on the scroll bar arrow. Increase this value if you want faster scrolling.

T-RLE compression level can be set to No compression, Minimum, Normal or Maximum. This setting affects the speed of generation and size of the temporary files created when you trap on the fly. At No or Minimum compression you'll get results faster but use more disk space.

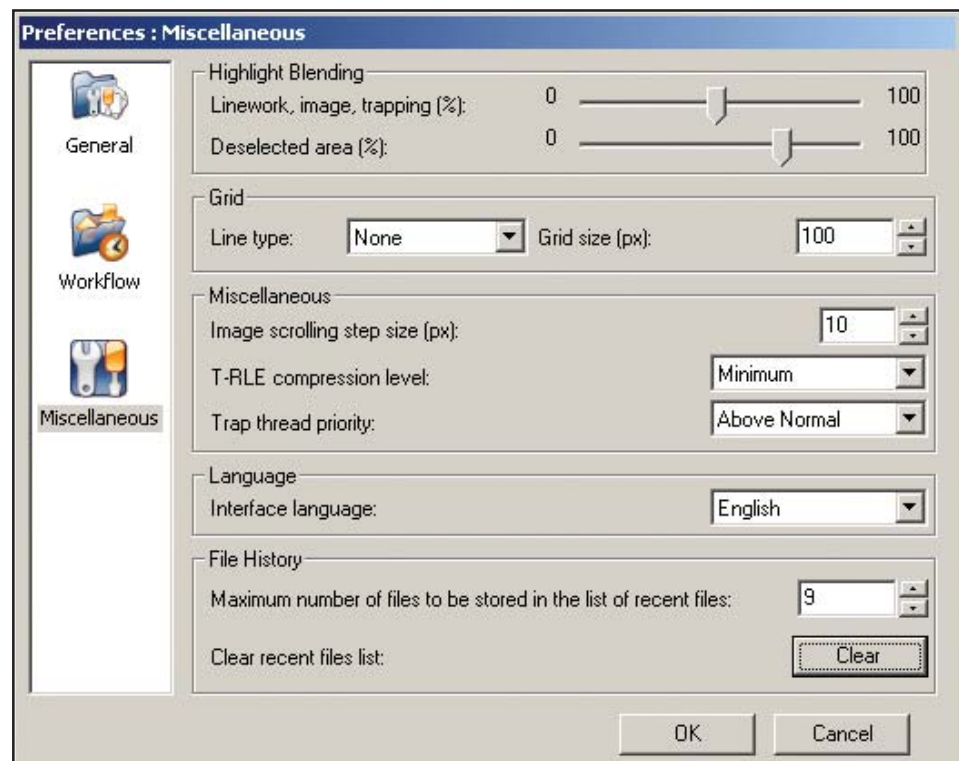


Figure 22. Miscellaneous preferences dialog

Trap thread priority can be Normal or Maximum. Setting maximum priority lets you get trapping on the fly results faster but your interface button would be hardly responding, while normal priority lets you execute some interface activity. By default this option is set to maximum value.

You can select interface language if the language files are supplied with the installation. Default interface language is American English.

In the File History box you can define the **Maximum number of recent files** in the **/File** menu and clear the recent files list.

Trapping queues configuration tool

The I-Trap™ version 1.3.3 and later includes the configuration tool in the Viewer. Using this tool allows to quickly start trapping your jobs without detailed tuning of the Page setups in the Rip.

Use the menu **/Tools/Trapping Queues setup...** to call the dialog showed below.

If you are opening this dialog for the first time you'll have to define the Rip's folder. Select the Rip's main folder then, or the page setups will not be found.

You can select another the Rip pressing the **Select RIP** button if you need to configure more than one Rip for trapping.

Provided your Rip is configured to generate output to a number of different Page setups as listed in the upper box of the dialog. Otherwise you have to start your Rip and create Page Setups for your printing devices first. It is recommended that you read the Chapter 4 to understand possible workflows with the Lucid Trapping plug-in.

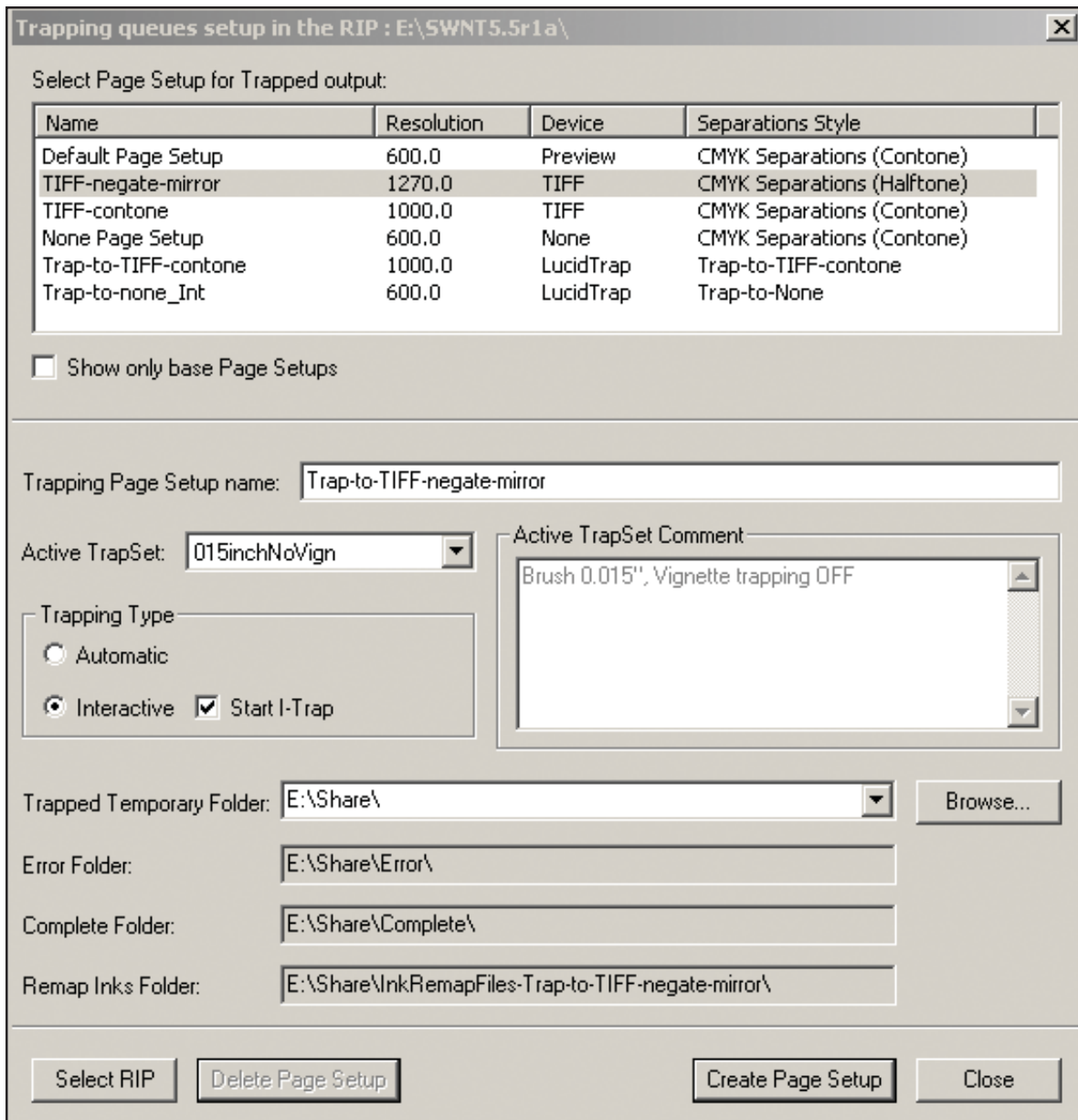


Figure 23. Configuration of trapping queues for the Rip

Select the device from the list you want to print trapped results to

Important! The Page Setup configuration for the final output device should set the trapping method to *None*. Otherwise the results are unpredictable.

If the check box *Show only Base Page setups* is unchecked you will see the trapping setups in the list. Currently you cannot edit Page Setups but you can delete a trapping setup using *Delete Page Setup* button.

You can accept the Page Setup name suggested in the *New Page Setup name*

box or type in another one. This will be the name of the trapping page setup with LucidTrap device.

Select the **Active TrapSet** to define trapping parameters in the setup. The TrapSets are created in the Viewer (see “Working with Trap Sets” in Chapter 7) and contain all of the trapping parameters. If you don’t have the prepared TrapSets leave this box blank and the Trapping plug-in will be configured to use the default parameters set. **Active TrapSet Comments** box presents the description of the selected TrapSet for your convenience of selection.

Trapping Type box allows to set Automatic trapping queue or Interactive queue – select the appropriate radio button. For an Interactive queue you can define if you want the Viewer to open or pick up the prepared page automatically. Check the box **Start I-Trap** to enable the option. It is available only for the Interactive queue.

The last thing to define is to select the folder where trapping software will output its temporary output files. Press the **Browse** button or type the path into the **Output Folder** box.

Press the **Create** button to generate the defined trapping queue. Restart the Rip for your actions to take effect.

Job and Page information

The original page source data and TIO are opened in I-Trap™ Viewer. They are generated in the rip when the file is printed to the Lucid Trap device using the Lucid Trapping plug-in, and saved to a special folder, as described in the Chapter 6, section “Understanding the workflows”. The TIO file represents the corresponding page internal trapping parameters. You can easily edit the trapping parameters for every page of your job using the Viewer.

If you are using the Viewer in a stand-alone mode, the existing TIO file can be opened using a toolbar icon or from the **/File/Open/** menu. You can create the TIO for your source page using the Viewer Wizard or import some predefined files with the page parameters.

If you want to re-trap some pages that were previously ripped, you can open

the Viewer in stand alone mode and add those pages to the Page Manager. After adjusting the trapping parameters and re-trapping the pages, you can send them again to the rip final output queue.

You can add the current page opened in the Viewer to the Page Manager from the menu **/Job/Add Current Page**. You can add a number of pages from the same folder using **/Job/Add Page(s)** menu.

For pages that have been previously ripped through the Lucid Trap device, this operation is possible only if the source data had not been deleted by the rip (see the details in the Chapter 6, “Understanding the workflows” section). If the source data has been deleted you have to print the job to the Trapping plug-in once again.

If you want to apply trapping to the raster pages generated in third party applications the Page Manager tool can be used to collect those pages for batch trapping after all trapping parameters have been set.

When the page is opened, its source view is displayed in the source window and the trapping parameters are presented in the Information panel Area and Job Settings tabs.

Information about the currently opened page source file, its path, date and time of modification can be found in the Page Files Info tab.

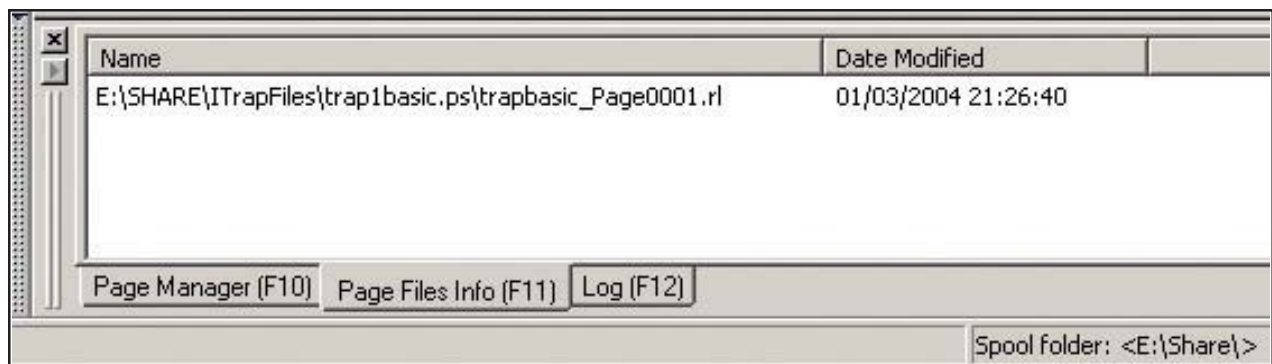


Figure 24. File information tab for a page opened in the display panel

The information panel shows the page size, resolution, values of inks under the cursor and the cursor position. When the ink values in the Color Info table are painted in black, they correspond to line work (LW) data, and those painted in light blue correspond to image (CT) data on the page. Extended pixel info shows if the pixel data belongs to a trap zone, the image, vignette or line work data.



Figure 25. Information panel

There is an option that allows you to select and store a specific pixel value with **Ctrl-LeftClick** on the cursor position. This color would be present in the third column with light blue header in the Color Info table (memorized color). Memorize color option can be toggled in the menu */View/Show Memorized color*.

You can uncheck the checked boxes on the left of the ink names and disable painting of these inks in the display window but their intensity values will be present in the table. This option helps in examining overprints, knockouts, object borders and traps.

When you select the */View/Show color synchronously* option and browse the source data panel the left column (LW/CT%) shows source color values and the right column (Alt LW/CT%) shows the color values in the traps-on-fly panel. The color of the values correspond to the selected highlight colors of line work and image data, so when the cursor is moved over the image area the ink values are painted with the image highlight color and when it is

moved over the line work area the ink values are painted with line work highlight color. It helps to examine source page objects.

Extended pixel info box shows the objects' characteristics that are important for trapping, for instance images or vignettes.

Working with areas

In some cases it is difficult to adjust trapping parameters for a whole page. It happens when parameters need to be different for different parts of the page, so these parts can be defined as trap zones (trap areas) with individual trapping parameters in each zone. You might want to define trap zones where trapping is actually needed and disable trapping in other parts of the page to significantly speed up processing the job.

Trapping parameters can be defined individually for pages and for trap areas (other name is trap zones) in a page. Trapping parameters are combined in sets or collections related to zones present on the page.

The **Area tab** is a window where most trapping parameters can be edited. In **Expert mode** its top box displays a table of trap zones and its bottom box contains tabs to define trap brushes, ink-based parameters, and control image trapping as well as special options. In **Easy mode** the top box shows the table of trap zones and the bottom box allows to set trap brushes width and select TrapSets from an existing list.

The **Area table box**, at the minimum, contains the page default area, which is always Area#0. It is described below how to add area definitions in the Viewer. Currently only rectangle zone shapes can be defined, polygonal and elliptic shapes are under construction. See Appendix in the **Achieving High Quality Results** manual to learn how to use the Adobe Acrobat plug-in to create arbitrary shaped trap zones on a page.

If an area was created in other layout applications its shape cannot be edited but you can view them using the highlight button on the Highlight toolbar and edit trapping parameters for individual areas in the same way as for areas created in the Viewer. When highlighting is enabled the outside of a selected area is blended with the highlight color. After you have moved

selection to another area press **Ctrl+R** or use the **/View/Refresh** menu to update the source view.

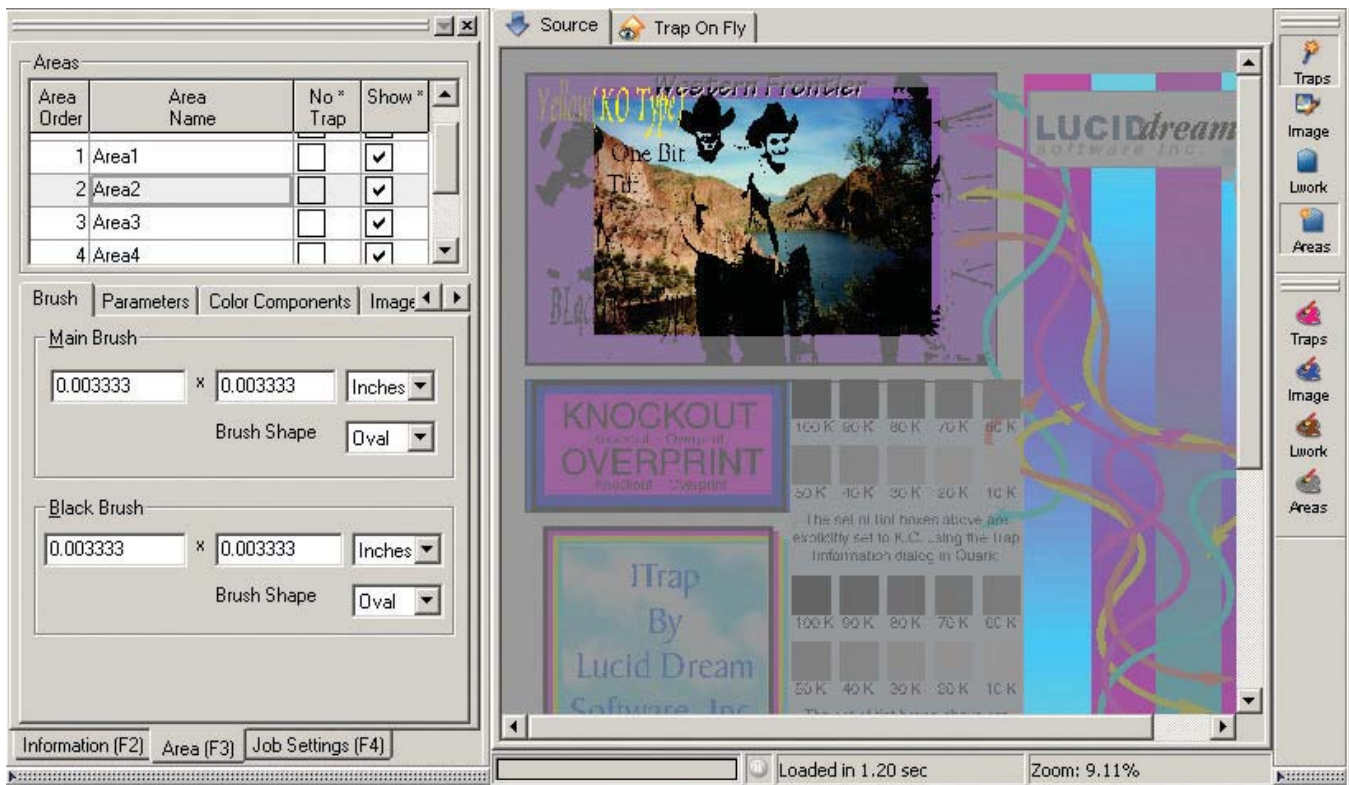


Figure 26. Areas created in layout applications can be viewed highlighting their outside

The areas present on the page are listed in the table **Areas**, and trapping parameters of the active area can be adjusted.

All jobs have **Area#0** (zero) that is named “Page defaults” and represents basic page trap parameters. Area#0 is always shown and its name cannot be changed, however, its trapping parameters can be modified and the entire page trapping can be enabled or disabled using the **No Trap** checkbox. Then trapping will be applied only inside other defined zones.

Area Order lists areas from back most to front most. **Area Name** defaults to “Area #” but is user-editable. You can press the **Areas** toolbar button on the **Highlight mode toolbar** or select the **Highlight outside current area** mode from the menu **/Mode** to paint the outside of the current area with a selected highlight color. The **/Options/Preferences.../Miscellaneous** tab (slider **Highlight Blending/Deselected**) lets you define the intensity of those highlight tints for inactive areas.

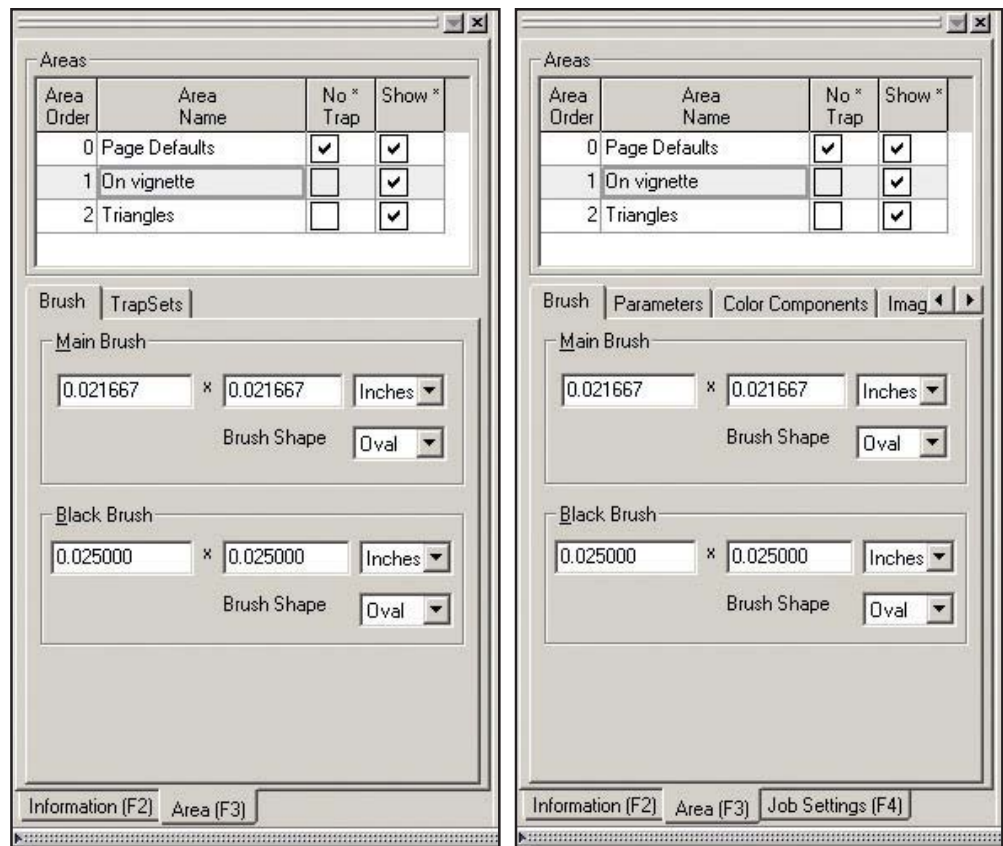


Figure 27. Area tab for the a) Easy Mode and b) Expert Mode

The **No Trap** checkbox turns off trapping for the specific area when it is checked. Right clicking on the table's header for the **No Trap** column, enables or disables all the check marks in it.

Descriptive zone names and highlight colors are very helpful for tracking changes and viewing traps. Remember that each trap zone can have a completely different set of trapping parameters in the settings tabs below the area table box.

Creating and editing trap areas

The Area#0 in **Area table box** list of all trap zones is the page default area. It can be thought of as a `_background_` with trapping parameters for the whole page. This zone has priority order 0 (the lower one) and cannot be hidden. Maximum count of trap zones on a page is 128.

You can define new trap zone only when the Source tab is active and your page is displayed in it. Now press the **Rect** button on the **Basic Tools** toolbar to switch to the zone adding mode. You can also do it selecting the menu **Mode/Rectangle Mode**.

Creating and editing trap areas



Figure 28. Press Rect button to start creating a new rectangle trap zone

Now press the left mouse button and drag over a rectangle area, or left-click the mouse and a rectangle area 50 pixels wide and 100 pixels high will be created around the click point. The Viewer automatically sets the created zone active and switches to the zone edit mode (button **Area** on the toolbar). At any given time only one trap zone can be active. It is painted with a marquee box that has square markers on the box edges and corners. Active zone is selected in the Area tab and the trapping parameters associated with this zone are available for editing in the Area box of the Information panel. You can switch active zone either by the **Area** toolbar button (pressed on the Figure) or by the selection in the areas list.

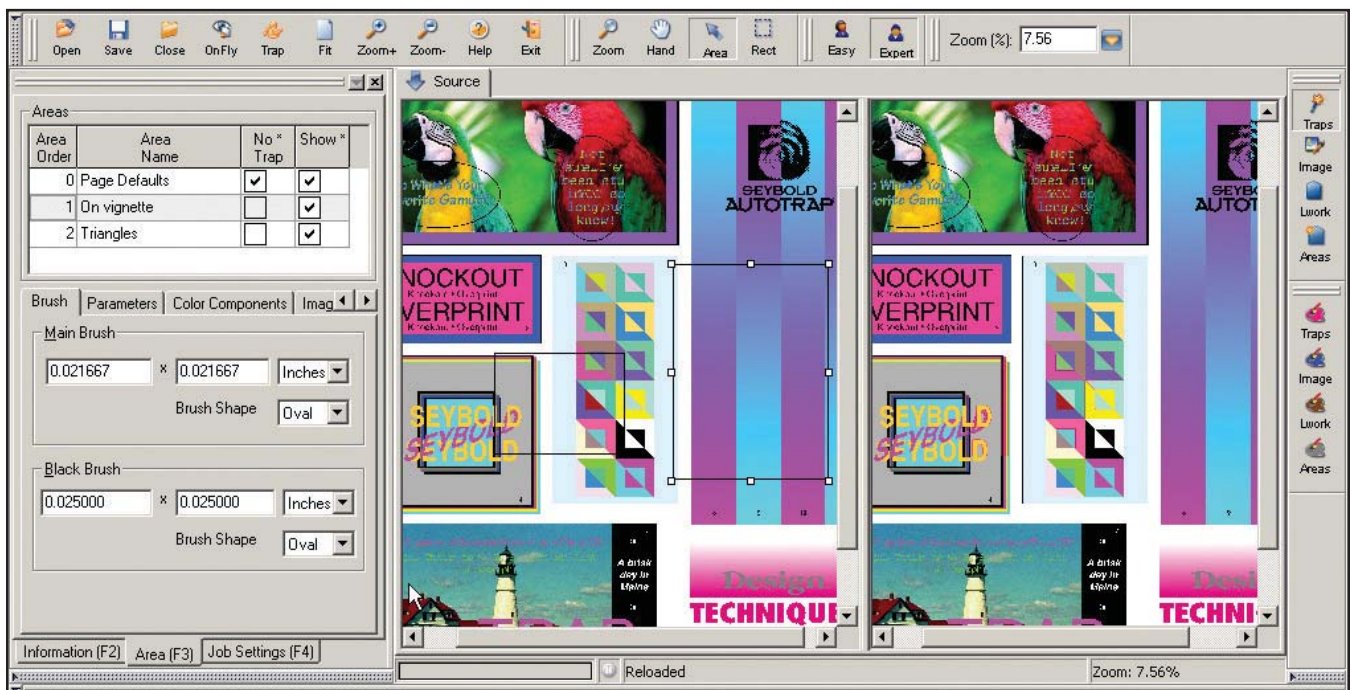


Figure 29

Trapping on the page is disabled in NoTrap check box, trapping is enabled only in zones ; zone #1 “On vignette” selected is and its trapping parameters are presented in the Area panel; on panel TrapOnFly zone shapes are not painted

If you want to hide the zone's box on the source view set a check mark in the **Show** column of the areas list table. Right click on the column's header to show/hide all zones on the source view. If a zone is hidden you can activate it only from the areas table.

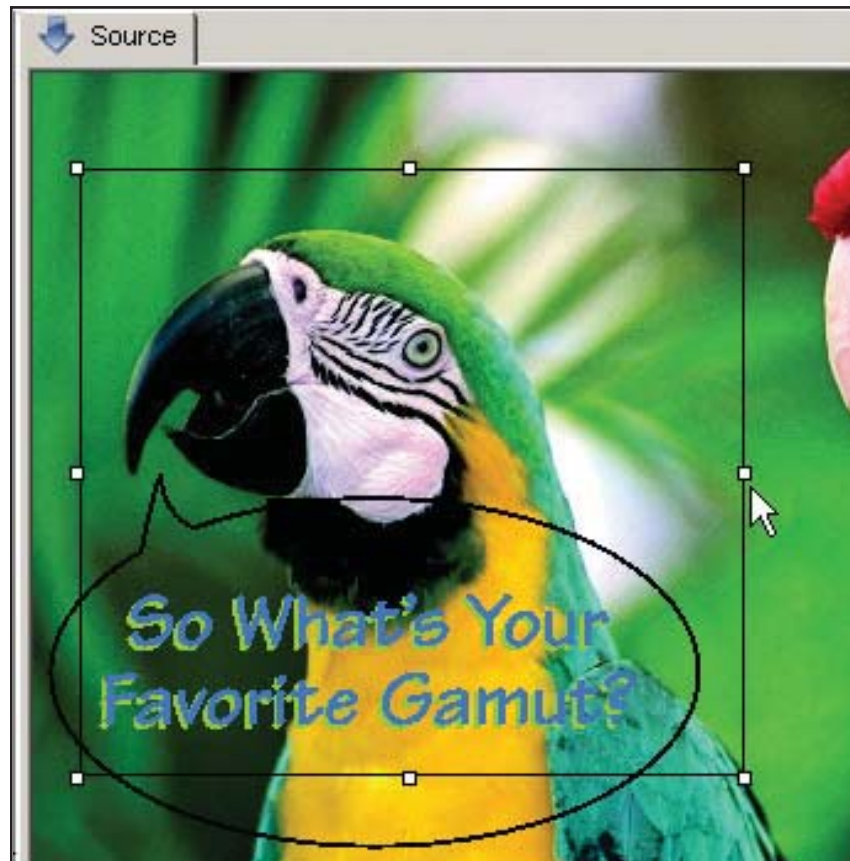


Figure 30. Markers on the zone border let resize it on the Source display panel

To reposition a zone in the **Area** mode drag zone by the mouse. You can reposition active and inactive zones, inactive ones activate automatically. To change zone's size you have to first activate it and then use the markers to increase/decrease the size.

You can use all standard clipboard operations with the active zone using the menu commands and shortcuts: *Edit/Copy*, *Edit/Cut*, *Edit/Paste* and *Edit/Clear*. The *Edit/Undo* and *Edit/Redo* commands can be used too.

When zones intersect their order is important for appropriate trapping parameters selection. All zones have ordinal numbers in the table (**Area**

Order column) and the zone with greater number takes precedence over a zone with less number and its parameters will be used for trapping on the intersection area. You can change the order of a zone using the menu **Edit/Arrange**. Item **SendToBack** sets the zone to minimal number 1, and **BringToFront** sets maximal number. **Send Backward** and **Bring Forward** decrease and increase a zone's number by 1 accordingly.

Zone's names are given by default as "Area #x". You can rename zones except the "Page Defaults". Descriptive zone names are very helpful for tracking changes and viewing traps.

After you have completed adding and editing trap zones and their trapping parameters and wish to finally trap the job, it is required that the source file should be saved. However trapping **OnFly** can be done without saving.

When the I-Trap™ Viewer saves the source file you have to wait for the process to complete and cannot abort it because otherwise the file will be corrupted. This can take a while depending on the file size. The status line contains the "source image update, please wait" message and the cursor changes shape.

You can display the actual zone (even a hidden one) using the **Areas** button on the **Highlight Mode** toolbar or menu **/Mode/Highlight Outside Current Area**. Then everything outside this zone will be over-painted by a selected color that is shown in the **Areas** button on the **Highlight Colors** toolbar. You can alternatively use the menu **/Options/Inactive areas highlight color** to select the highlighting color. The intensity of the highlight color is set in the **/Options/Preferences.../Miscellaneous** tab (slider **Highlight Blending/Deselected**).

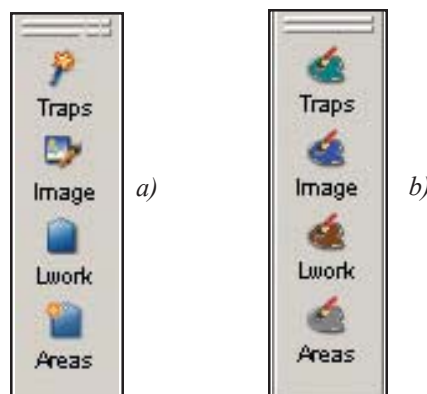


Figure 31.
a) Highlight mode toolbar;
b) Highlight Colors toolbar

You can detect what trap zone relates to a given pixel in the **Information** panel in **Extended Pixel Info** Area# value.

In **Easy Mode** you can select predefined **TrapSets**, edit brush width parameters and define **NoTrap** option for any zone where trapping is not needed.

You can also right click on the zone's name to activate **Graphical Configuration Tool** and tune the ink-based parameters in it. See section "Setting Trapping Parameters" in chapter 7 of the manual for a detailed description.

In **Expert Mode** you can edit all available trapping parameters as described in the "Setting Trapping Parameters" in chapter 7. This mode is handy to create, test and adjust **TrapSets** for further use in automated trapping.

Next versions of the **Viewer** will contain elliptic and polygonal zones shapes and more options to work with trap zones.

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 predefined **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.

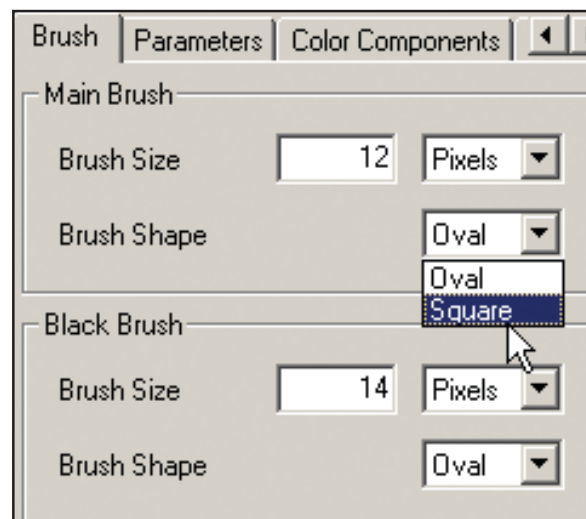


Figure 32.
The Brush tab

Setting trapping parameters

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.

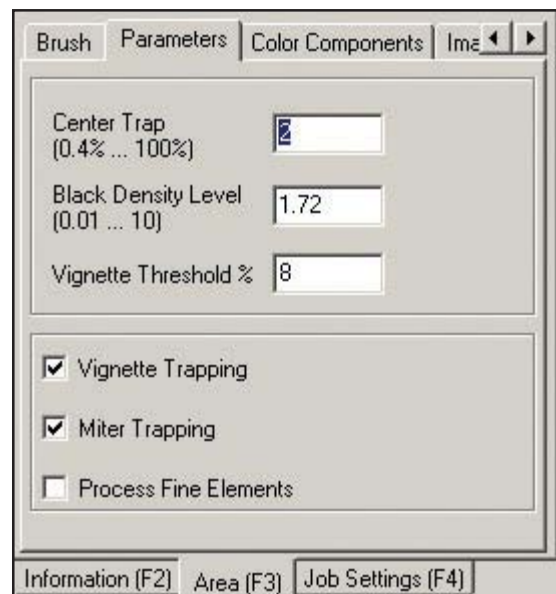


Figure 33.
The Special parameters tab

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.

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.

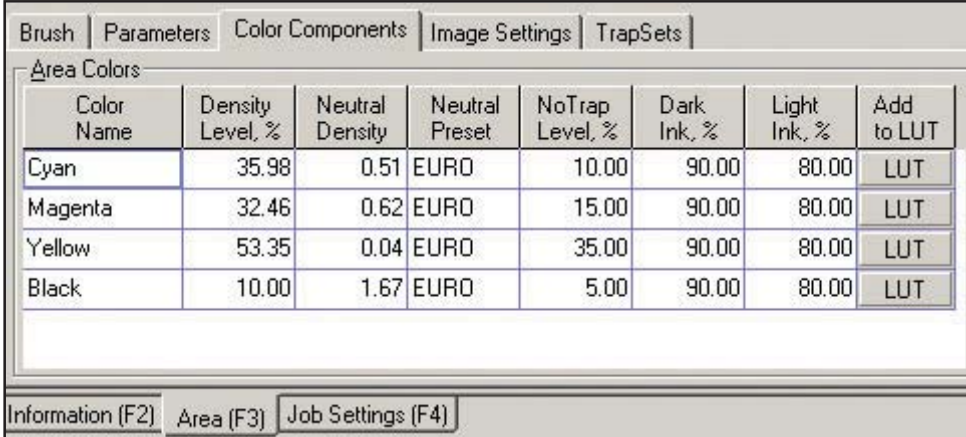
Process Fine Elements is an option that works only when miter trapping is enabled. It causes the trap width to adjust to narrow shapes. It can be thought of as a bumper around the trap brush that reduces the brush size in conformance with the proximity of other objects.

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, %	Dark Ink, %	Light Ink, %	Add to LUT
Cyan	35.98	0.51	EURO	10.00	90.00	80.00	LUT
Magenta	32.46	0.62	EURO	15.00	90.00	80.00	LUT
Yellow	53.35	0.04	EURO	35.00	90.00	80.00	LUT
Black	10.00	1.67	EURO	5.00	90.00	80.00	LUT

Figure 34. 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 dark or light ink reduction value based on its original color (darker or lighter). 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.

Dark and Light 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 in the */Job Settings/Color Table* panel using the mouse and sliders tools. Each ink’s CMYK equivalent is represented by a section of the type shown on the right of the Figure. 35.

At the bottom of the dialog you will see the legend that helps you operate the arrows and sliders. To set any value in an edit box click on one of the buttons: , each of which has a corresponding tool tip.

The slider arrows can be dragged with the mouse to set the values of **Dark and Light Ink Percentages** using the left and right blue arrows; **Density Level** using the left yellow arrow; **No Trap Level** using the right blue-yellow arrow; and **Neutral Density** using the filled color slider – click inside the slider and drag it with the mouse. When the value is defined, click the mouse to set it. You will see the changing numbers while you drag the sliders.

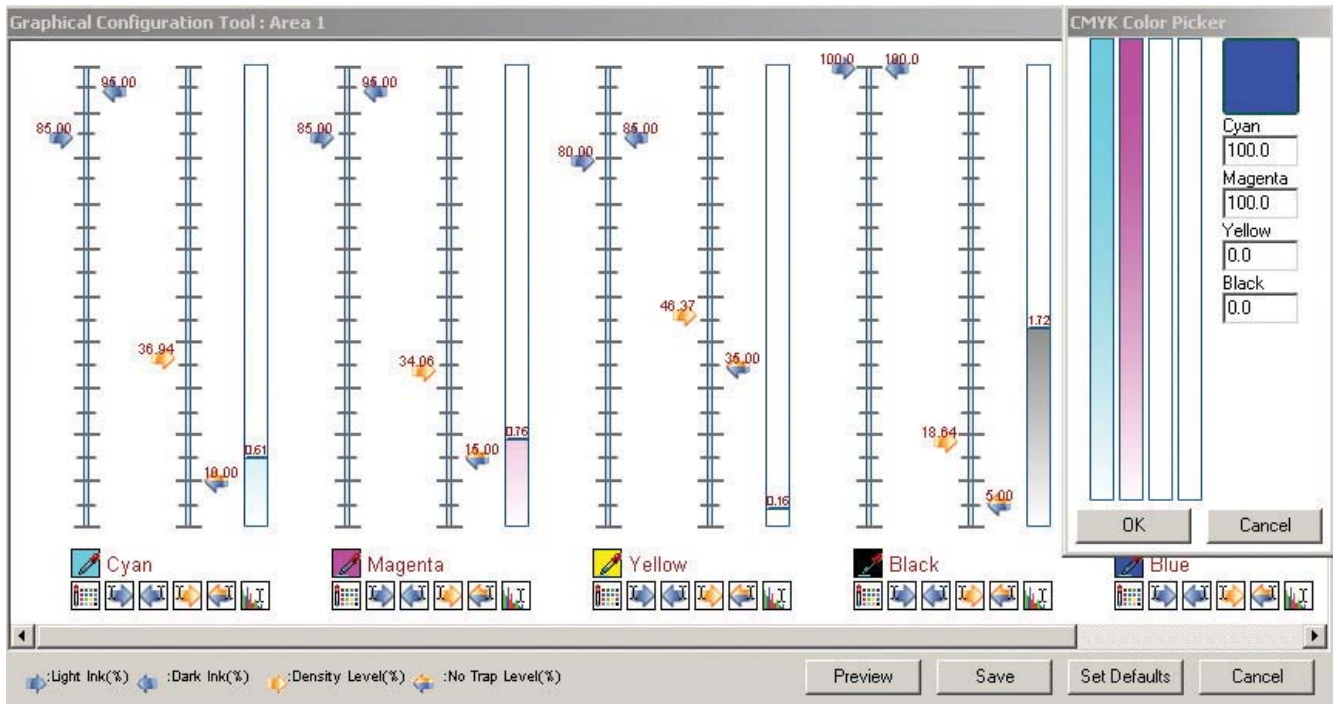



Figure 35. Graphical configuration tool

Click on the colored square with a picker to the left of the ink name to call the picker and edit this ink's CMYK equivalent as shown in the Figure above.

Important! When you edit CMYK equivalent in the Color Picker window the values in the page's Color Table presented in the Job Settings panel are changed automatically.

Press the **Update color in 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.

Press **Preview** button to update trapping in the current **OnFly** panel with the new trapping parameters, so you can immediately view the changes and continue adjustments without closing the Graphical configuration tool.

Save button saves all changes to the Color Components table.

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**.

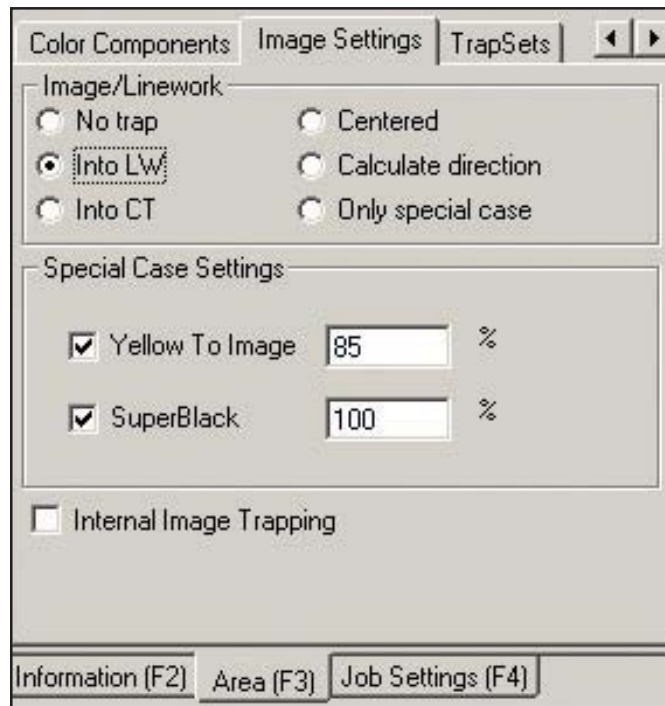


Figure 36.
Image settings tab

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 case trap rules for yellow and black will override other image trapping rules when they are enabled except for the **No trap** setting.

If an image overprints the background (partial transparent) 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.

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”.

Color	Cyan, %	Magenta, %	Yellow, %	Black, %
Cyan	100.00	0.00	0.00	0.00
Magenta	0.00	100.00	0.00	0.00
Yellow	0.00	0.00	100.00	0.00
Black	0.00	0.00	0.00	100.00
Blue	100.00	100.00	0.00	0.00
PANTONE 871 CV	46.04	52.54	72.78	0.00

Figure 37.
Job settings tab

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.

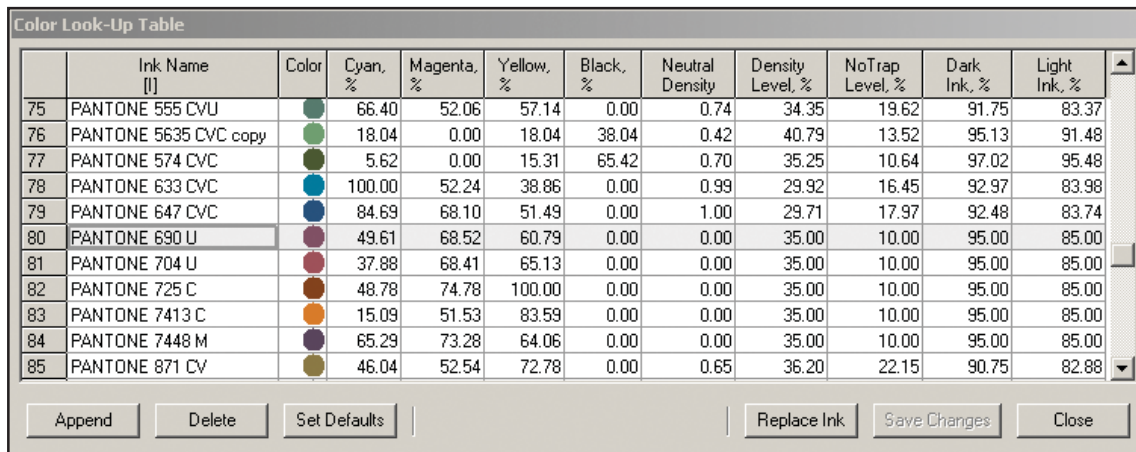
One of the possible ways of usage of these dialogs can be to run different files with the same TIO settings when trapping in the standalone Viewer mode. In such case the corresponding plug-ins should be selected and source and resulting files should be assigned according to them.

But the same results would be received easily if you create a TrapSet with the selected parameters and use it with different pages (see the section “Working with TrapSets” below in this Chapter).

Color Table and Color Look-up Table

The **Color Table** defines the ink order and CMYK equivalents for all job inks. Color table entries can be edited in the table or in the Graphical con-

figuration tool as explained above. The **Color Look-up table** editor pops up if you right click on the name of the ink in the Color Table.














	Ink Name [I]	Color	Cyan, %	Magenta, %	Yellow, %	Black, %	Neutral Density	Density Level, %	NoTrap Level, %	Dark Ink, %	Light Ink, %
75	PANTONE 555 CVU		66.40	52.06	57.14	0.00	0.74	34.35	19.62	91.75	83.37
76	PANTONE 5635 CVC copy		18.04	0.00	18.04	38.04	0.42	40.79	13.52	95.13	91.48
77	PANTONE 574 CVC		5.62	0.00	15.31	65.42	0.70	35.25	10.64	97.02	95.48
78	PANTONE 633 CVC		100.00	52.24	38.86	0.00	0.99	29.92	16.45	92.97	83.98
79	PANTONE 647 CVC		84.69	68.10	51.49	0.00	1.00	29.71	17.97	92.48	83.74
80	PANTONE 690 U		49.61	68.52	60.79	0.00	0.00	35.00	10.00	95.00	85.00
81	PANTONE 704 U		37.88	68.41	65.13	0.00	0.00	35.00	10.00	95.00	85.00
82	PANTONE 725 C		48.78	74.78	100.00	0.00	0.00	35.00	10.00	95.00	85.00
83	PANTONE 7413 C		15.09	51.53	83.59	0.00	0.00	35.00	10.00	95.00	85.00
84	PANTONE 7448 M		65.29	73.28	64.06	0.00	0.00	35.00	10.00	95.00	85.00
85	PANTONE 871 CV		46.04	52.54	72.78	0.00	0.65	36.20	22.15	90.75	82.88

Figure 38. Color Look-Up table window

The **Color Look-up Table** contains CMYK equivalents for spot colors and ink-based trapping parameters. The Color Look-up Table (**LUT**) window shows the color of an ink to make it convenient to select them. The default table comes with CMYK inks and the test files spot color inks only and the software updates this table automatically when new jobs are processed, hence an individual table is created for every user.

To sort inks in preferred order click on the column's header. A “[I]” or “[D]” mark in the header indicates the selected order (see the Color Name column in the Figure).

The I-Trap™ Viewer has the mechanism to add inks to the table and to edit the CMYK equivalents using the graphical interface. Right click on the ink's name to call the color picker dialog window.

Append button in the LUT dialog allows to add inks to the LUT. When you press it the CMYK Color Picker automatically pops up and you can set necessary color values. Pressing OK automatically calculates the ink-based trapping parameters and fills all fields in the ink's line. The ink's default name “PANTONE” is ready for editing. After entering the name it is required to step one cell to the right in the table, otherwise the edit will not be accepted. If you later wish to edit the ink's CMYK equivalents the trapping parameters will not be recalculated automatically, you'll have to edit their values explicitly.

Set Defaults button allows to calculate the default trapping parameters based on the CMYK equivalent of the ink.

Replace Ink button is available when you call the LUT dialog from the Color Table tab. If you wish to edit the ink or replace it with the settings from the LUT right click on the ink's name. The LUT dialog opens and you can then edit CMYK equivalents and ink-based trapping parameters in the LUT for the given ink. When you press the *Replace* button the LUT values replace current ink values for this job.

After the ink's CMYK equivalents are changed the corresponding color compo-

nents values will be calculated and changed in the Area Color Components 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.

Working with TrapSets

TrapSet is a collection of trapping parameters that are defined for an area (grouped under the Area tab of the Viewer Information panel). Creating a list of TrapSets with your own common and fine tuned trapping parameters will let you easily achieve consistent trapping results.

The default TrapSet file is installed with the Viewer in the **TrapSets** subdirectory and contains all necessary parameters for a four ink page and special image trapping and other settings.

The I-Trap™ Viewer and the Trapping plug-in in the Rip can use the same pre-created TrapSets.

To create a TrapSet you should open a job in the I-Trap™ Viewer, define trapping parameters in the **Area** panel, select the **TrapSet** tab, and press **Save As** button. Then select the name from a list or print it in the box and press **Save**.

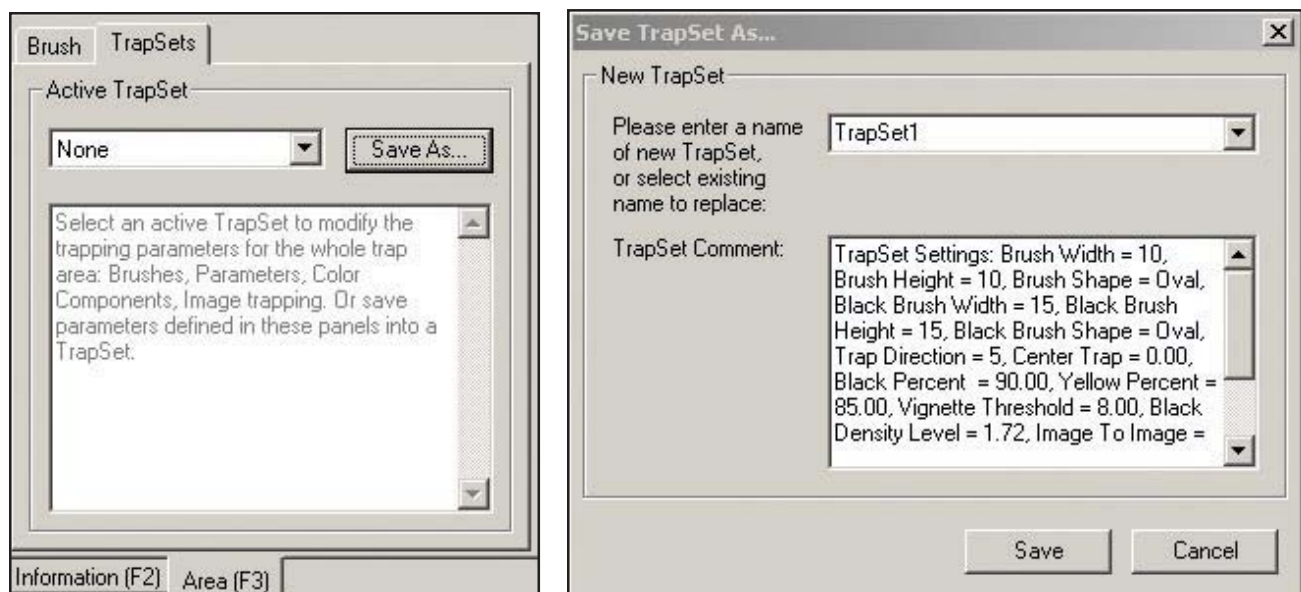


Figure 39. Selecting and creating a TrapSet

To edit a TrapSet you should select the TrapSet tab in the I-Trap™ Viewer **Area** panel, choose one of the names in the **Active TrapSet** box (values of trapping parameters automatically change), edit trapping parameters, go back to the TrapSet tab and press **Save As** button. The dialog window will suggest a different name for this set. It is possible to select the name from a list or type it in the box and then press **Save**.

Use descriptive names and write comments for your TrapSets. It is then easy to find and apply them for a page or an area on the page. By default TrapSet's comments contain the listing of its trapping parameters and their values.

The TrapSet “Default” can be also edited to store individual settings that the user wants to be default for his jobs. In this case the set of trapping parameters should be saved with the name “Default” to replace the factory file.

Important! If you are using a TrapSet with the number of inks different from that in the current page the results can be undesirable. In this case most often the values for trapping parameters will be set to the default values.

To use a TrapSet in the Viewer to trap a page, select a TrapSet name in the **Active TrapSet** box. All trapping parameters presented in the **Area** panel will change according to the trap set values.

To use a TrapSet in the Viewer to trap an area on the page, select that area in the **Area** window and then select a TrapSet name in the **Active TrapSet** box. All trapping parameters presented in the **Area** window will change according to the trap set values and these parameters will be applied to trap the area.

To use a TrapSet in the Page Manager (see next section) to trap a page or the default zone on a page: select the TrapSet name from the drop down box in the PM table, save the TIO file and send the page to the RIP for final output.

To use the default or other created TrapSets in the rip Trapping plug-in, enable the **Use trap set** check box in the plug-in configuration dialog (see the Figure in the section “Trapping plug-in configuration”) and select a TrapSet. The plug-in logs a message into the rip log window to indicate the source of trapping parameters for the processed page.

Note: if you have problems with automatic trapping in the rip please collect the rip log file that is located in your rip /SW/ subdirectory and named “Logfile”. Attach this file with the problem report. Thus the developer would know what trapping parameters were used for a page.

Working with the Page Manager

If the Lucid Trapping plug-in has been configured to Prepare for I Trap™, it automatically opens the Viewer with the current jobs' TIO files listed in the Page Manager panel. For multi-page jobs, all pages have identical TIO files created by the Trapping plug-in.

When the TIO is listed in the Page Manager panel, it can be selected and double-clicked to open the information and viewer panels for that page.

Then the trapping parameters can be edited as described in the Setting Trapping parameters chapter. You can also press the left button on the panel toolbar to open the TIO and page source view.

Page Manager (PM) is opened by default at the bottom of the Viewer work area.

Files prepared for trapping by the Lucid Trapping plug-in are listed in the PM table. The **Trap** checkbox enables an automatic trapping of the checked file. If the job consists of several pages, and only some of them need adjusting of the trapping parameters, others can be checked for automatic trapping. Only the pages selected for manual trapping need to be opened in the viewer.

The **TrapSet** column indicates what TrapSet was selected for the page. You can change the selected TrapSet if you click on the cell. The drop down box appears and presents all available TrapSets. In a page that contains Trap areas (zones) the TrapSet will be applied to the default zone #0.

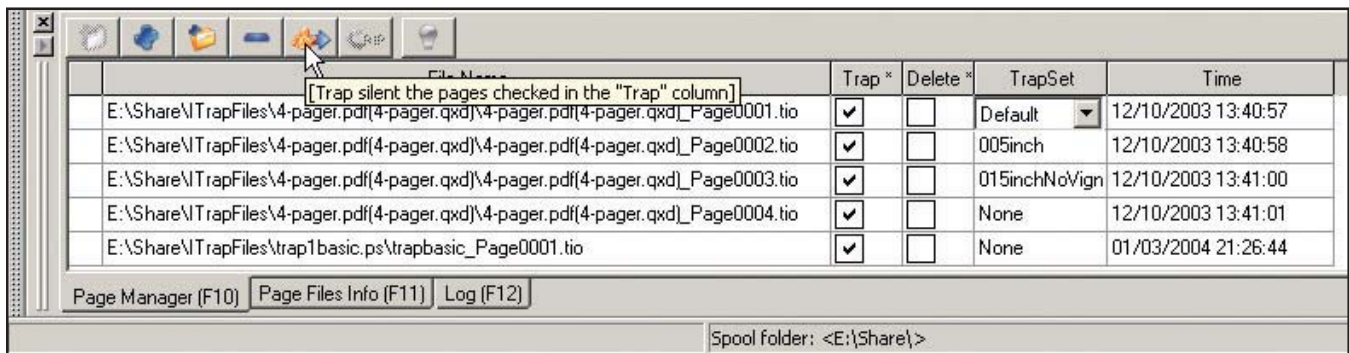


Figure 40. Press Trap silent button of the PM toolbar to trap the pages automatically after you've adjusted trapping parameters for them using predefined TrapSets

The batch trapping window shows the trapping progress on the processed pages.

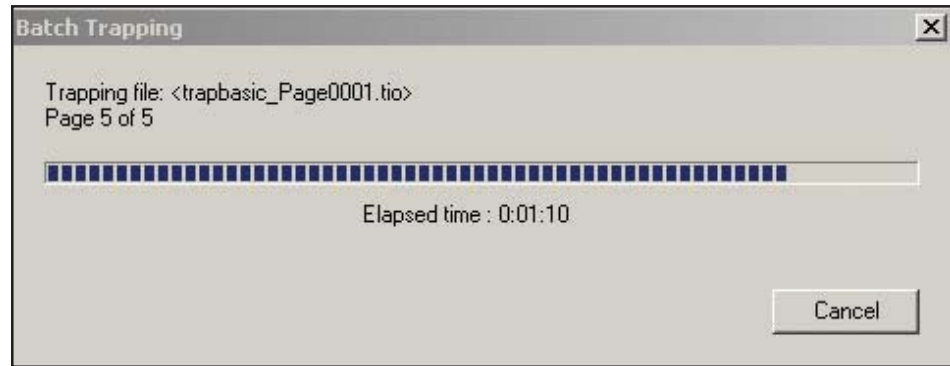


Figure 41. You can watch the trapping progress

The **Delete** checkbox option allows deleting temporary source page data in T-RLE format and its TIO file after the job has been sent to the rip for final output.

Right-click on the **Trap** or **Delete** column header to enable or disable all checkboxes in that column. The PM panel can be hidden by clicking on the Hide Handle at the left of the panel or from the */View* menu.

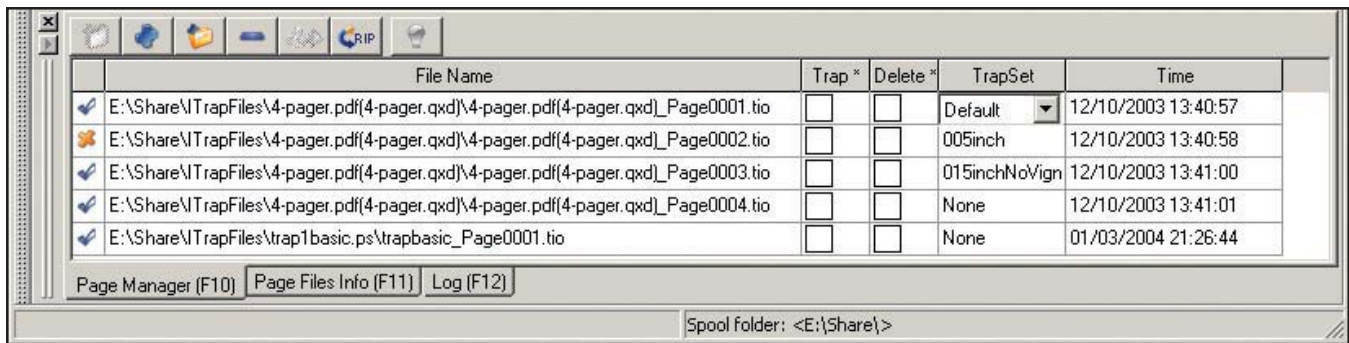




Figure 42. Left column check marks indicate the successfully and unsuccessfully processed pages

PM panel has two support tabs that show the information about the file currently open in the active view panel (e.g. if the Trap-on-fly is active the information shows the temporary file data).

With every page, TIO is supplied with the information about its creation date and time.

Selected pages are marked by a light blue color.

A “success” icon  marks the successfully trapped pages. A “failure”  icon marks pages that had trapping problems and whose trapped results were not saved. You can view the problem report in the Log tab.

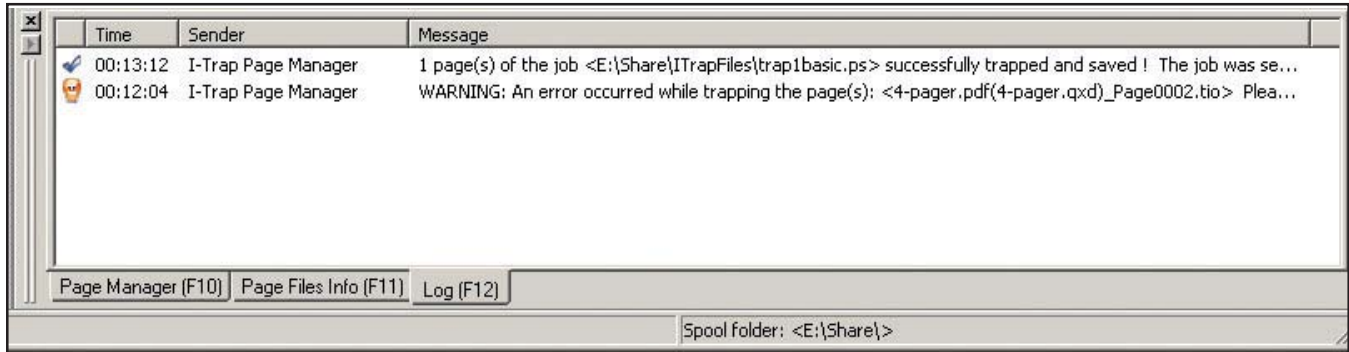









Figure 43. A four-page job had problems trapping page #2

Buttons on the toolbar and menu items in the **/Job** menu are used to add existing page(s) to the PM, remove pages from the PM, open them in the Viewer, apply trapping and send the jobs to the rip final output queues.

-  - Open
-  - Add TIO
-  - Add all TIO-s from a folder
-  - Remove TIO
-  - Trap silent
-  - Send to Rip
-  - Spool folder On

The **Trap button** starts a “silent” trapping process of the pages marked in the Trap column. If the trapping was successful for all pages in the job, the job will be sent to the rip automatically.

Note that before sending the job to save trapping by clicking the **Trap button** it is necessary to save trapping parameters to the TIO file if they had been modified. The **/Options/Preferences.../General** dialog lets you set the option to **Auto-Save changed TIO-s when batch trapping starts**.

The **Rip button** is enabled only after the page has been trapped. If the user has saved the trapped data in an interactive mode, it is necessary to press the **Rip** button to send the job to the rip final output queue or call this option from the menu **/Job/Send to Rip**.

Several pages can be opened in the Viewer at once. The **Window** menu allows switching between the display windows and the information panel that shows the information for the window currently present in the display panel.

Hotkey **Ctrl-W** will close the current view so you can quickly move through the PM list to find the pages that need manual adjustment of the trapping parameters.

The **watch folder button** is enabled and the folder path displayed in the PM status bar if you selected it in the **/Options/Preferences.../Workflow** dialog and started Inputs in the menu **/Job**. Toggle the watch folder by **Ctrl-U** hotkey.

Trapping in the Viewer

I-Trap™ Viewer allows you to open the source page data, select a part of the page and apply trapping “on-the-fly” to immediately view the results. This could be repeated with modified trapping parameters until the desired results are achieved. Then the trapped page can be saved to a disk for output or further processing. The original data is not overwritten; so its integrity is maintained.

Trap On Fly is a powerful option of the Viewer that helps you see and adjust trapped results without printing the proofs. Using the Trap Areas feature, you can create high quality results you need in your production. Examining traps is more convenient in the **Trap On Fly** panel if you select the **Synchronize zoom factor for all views** and **Automatically refresh traps-on-fly** when document or source view is modified in the **/Options/Preferences.../General** dialog and check the menu **/View/Show split trapOnFly** (**Ctrl-P** hotkey). You can also check the **/View/Show grid** (**Ctrl-G** hotkey) to more clearly see the placement of the applied traps and check the **/View/Show color synchronously** to watch the traps color while navigating in the

source page window.

Highlight Traps toolbar button is a handy option that allows to indicate the placement of traps generated by I-Trap™ Viewer in one of selected colors. In this case, it is recommended to increase the trap brush width. If the option is *Off* (the button depressed) the actual trap color will be generated. The highlight color can be selected from the standard color picker dialog that is called from the toolbar pressing the *Traps* button.

Highlight Image toolbar button and **Highlight Line work** toolbar button help examine the source page data and the corresponding colors can be selected. **Highlight Area** (highlight outside current area) button helps to outline the current area if you wish to set trapping parameters or view trapped results in it. The current area colors are painted unchanged while all the rest of the page is over-painted with a selected color. The blending option in the */Options/Preferences../Misc* window allows to set the percentage of blending for the highlight colors.

The **status bar** at the bottom of the display panel shows the current magnification and trapping engine status as well as the trapping progress bar.

The red / green small bullet in the center of the status bar is an **abort** process button.

You will find some useful examples of trapping parameters selection in the document “Achieving High Quality Results”.

Inks Remapping Tool

Trapping in I-Trap can be done on jobs with 16 and less inks. But with the interactive Viewer you can trap jobs with more inks in them using the powerful **Inks Remapping Tool**.

The Ink Remapping Tool (IRT) reducing the number of inks in a job, converting some of the spot colors into CMYK and/or replacing spot inks in a job with other spots. The 16-inks limitation is related to an individual page, while the number of inks in the whole job is unlimited.

The IRT can be launched either automatically or manually. It will be launched automatically if you want to access any page of a job that contains page(s) with more than 16 inks. Such jobs cannot be trapped by the trapping

Inks Remapping Tool

engine, and the IRT opens its dialog and loads the pages of the job into it inviting the user to remap some spot inks and reduce the inks count. The page(s) that requires remapping is highlighted in red.

You can also remap inks in any other job opening the IRT from the menu / **Job/Remap Inks in Job** (hotkey **Ctrl+Shift+M**). This menu item will be available if the job or a page is added to the **Page Manager** panel and selected.

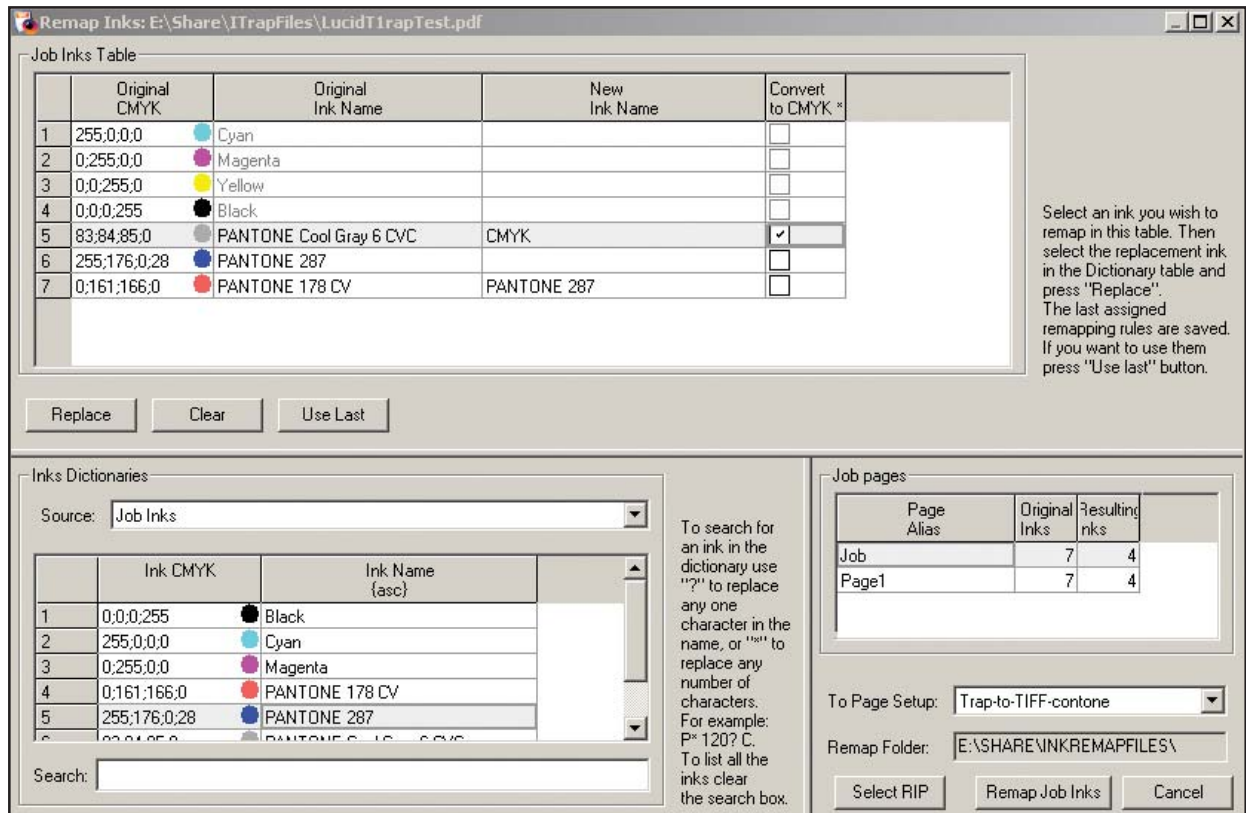


Figure 44. Inks Remapping Tool

The header of the IRT dialog shows the name of the job. There are three adjustable parts in the dialog: job inks table, inks dictionaries and job pages. **Job Inks Table** is at the top of the dialog. It contains all inks in the job/page and is used to select an ink that you wish to remap. First column is the ordinal number of an ink; second column presents the ink's CMYK equivalent in the range 0-255 absolute units. The colored circle shows the actual color of an ink. Next columns contain the original ink name and the name of the ink that will replace it. You can put a checkmark in the rightmost column if you wish to convert an ink to CMYK. Right click on this column header to convert all spot inks to CMYK. Then the corresponding inks will contain the

name CMYK in the “new ink name“ place. If a job/page did not contain process inks and a spot color should be converted then process inks will be added to such job. Select an ink in the Job Inks Table and right click on the New Inks Name cell. The pop-up list of job’s inks lets you select one of them to quickly replace selected ink.

You can use one replacement ink to map several inks at once in the job. To do so select all these inks using the mouse and Shift or Ctrl keys (as usually for multiple selection). Then choose the ink in the **Inks Dictionary Table** and press **Replace** button. All these original inks will have the selected name in the New Inks Name column (for those where there was no CMYK conversion enabled).

Note that process inks cannot be remapped in this version of the tool.

You can use **Clear** button to undo the remapping for an ink (or for multiple selected inks). Convert To CMYK setting will be also removed.

If you have some frequently used remapping rules you can use the **Use Last** option. It scans the table of all lately used remap pairs or CMYK conversions and if the job’s inks were found there these remap rules are applied to them.

Inks Dictionaries Table is in the left lower part of the IRT dialog. You can select inks from this table that will be used for remapping the original job inks. The **Source** combo-box allows to choose one of the two sources of possible inks. **Job inks** dictionary coincides with the inks in the current job. Using this source you’ll automatically reduce the number of job inks. Another source of the replacement dictionary is the Viewer **Color Look-Up Table (LUT)**. You can select any ink in the LUT and replace the original job ink with it. If the desired ink is not in the LUT you have to add it first (see the section Working with Color Look-Up Table).

When you’re using the LUT dictionary it’s convenient to search an ink there with the powerful **Search** option at the bottom of the table. You can use masking characters ‘?’ and ‘*’ to set the criteria. ‘?’ is used to mask any one character, ‘*’ is used to mask any number of characters. For instance, if you want to browse only through Pantone inks, use the mask “PANTONE*”; if

you want only coated inks use the mask “* C”; all Pantones in the range 100-199 can be displayed using the mask “PANTONE 1??*”, etc. Clear the search box to display all inks in the dictionary.

The **Job Pages** table is presented at the lower right part of the dialog and contains the list of all pages and the count of inks in them. The first line displays the inks count in the whole job. The **Job Ink Table** displays the inks of the selected (active) page. If the job first line is selected then all job inks are present in the **Job Ink Table**. When you remap inks the count in the right column can decrease and help you to control the resulting inks count. The page(s) containing more than 16 inks are highlighted in red. You will not be able to trap the whole job while any page uses more than 16 inks. When all desired inks are remapped press the **Remap Job Inks** button. Now the job will be closed and deleted from the Viewer and a control file created in the remapping folder. This PS file instructs the RIP to remap inks in the source job. If there is an input channel configured in the RIP to watch this spool folder and process its files to the interactive trapping queue then the remapped job will be again opened in the Viewer and you’ll be able to examine and trap it there. However you can also either print this control file to any queue in the rip or configure this input channel for automatic trapping.

Remapped job can be sent to any existing input channels in the rip. You should select the page setup for processing the remapped job in the **To Page Setup** combo-box. You can select the rip using **Select RIP** button as in the rip configuration dialog. The **Remap Folder** is information only.

Working with the Viewer in a stand-alone mode

The workflow used for stand-alone work allows opening, trapping, and saving job data in user-defined formats, such as TIFF/IT and Delta Document. Other formats can be easily added with new plug-ins.

When working in a stand-alone mode, the panels **Trapped** and **Traps Only** show in the display window if the selected output file format is supposed to be used to create these files (for instance, for PS traps data the panel is not available because the Viewer has no capability to paint it, and for the TIFF/IT output format both panels can be active). Then, the full or traps-only data on the output page can be examined in the user-defined format.

TIO data can be created by the Wizard in the Viewer and saved to a file, if needed, for further use, or obtained from a third party application. The TIO Wizard is called from the */File/New TIO* menu and presents a step-by-step process for selecting trapping parameters and source data files.

The **TIO Wizard** helps you create a generic TIO for the input page data. The following figures show the step-by-step process. Every Wizard page contains instructions.

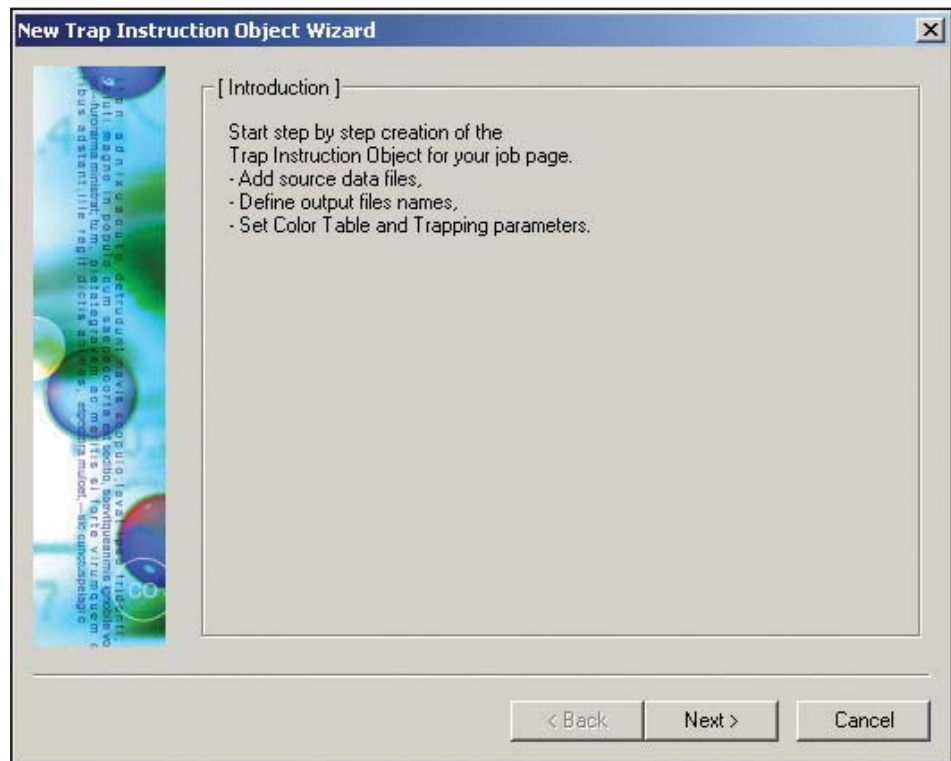


Figure 45

This screen is for information only, so press *Next*.

Working with the Viewer in a stand-alone mode

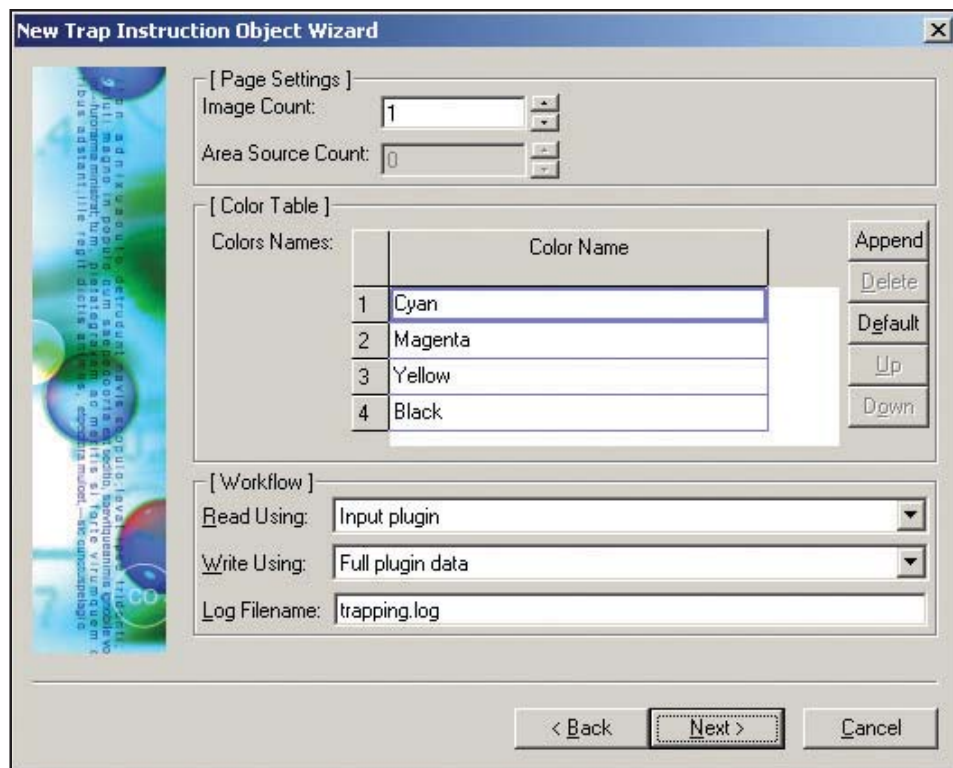


Figure 46

The Color Table defines the order and names of inks in the job. CMYK equivalents and other ink-based parameters will be assigned by default and then, if needed, edited as described in the Chapter 7, section “Setting trapping parameters” or using the Color Look-up Table editor.

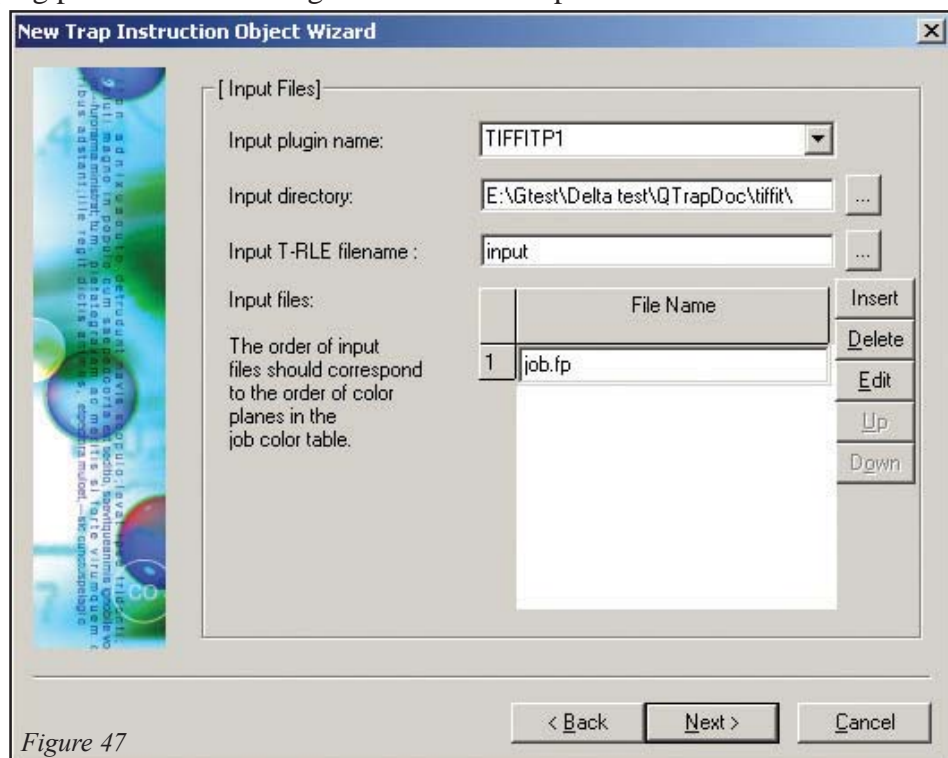


Figure 47

Select the input plug-in from the drop down menu that shows existing plug-ins.

Select the input directory with the source data files.

Define the temporary T-RLE filename or leave the default.

The input page files can be added with multiple selections and then ordered using **Up** and **Down** buttons. The order of files should correspond to the ink order in the Color Table defined in the previous screen.

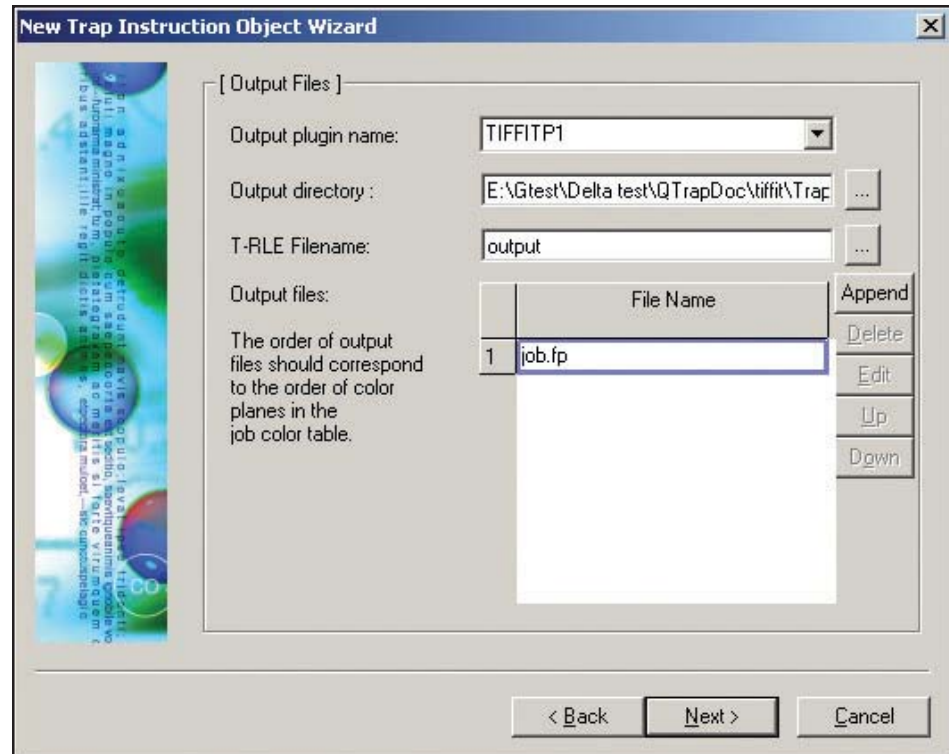


Figure 48

Select the output plug-in from the list of existing plug-ins. By default the plug-in will be the same type. Current interface does not support conversion of files data into other format after trapping.

Select the output directory. Normally a subdirectory would be defined by default. Select the temporary T-RLE output file name or leave the default.

Define output file names to be written by the output plug-in. The order of these files should correspond to the ink order in the Color Table. If the files don't exist, they can be created in the standard open dialog that pops up when the **Append/Insert** button is pressed.

Working with the Viewer in
a stand-alone mode

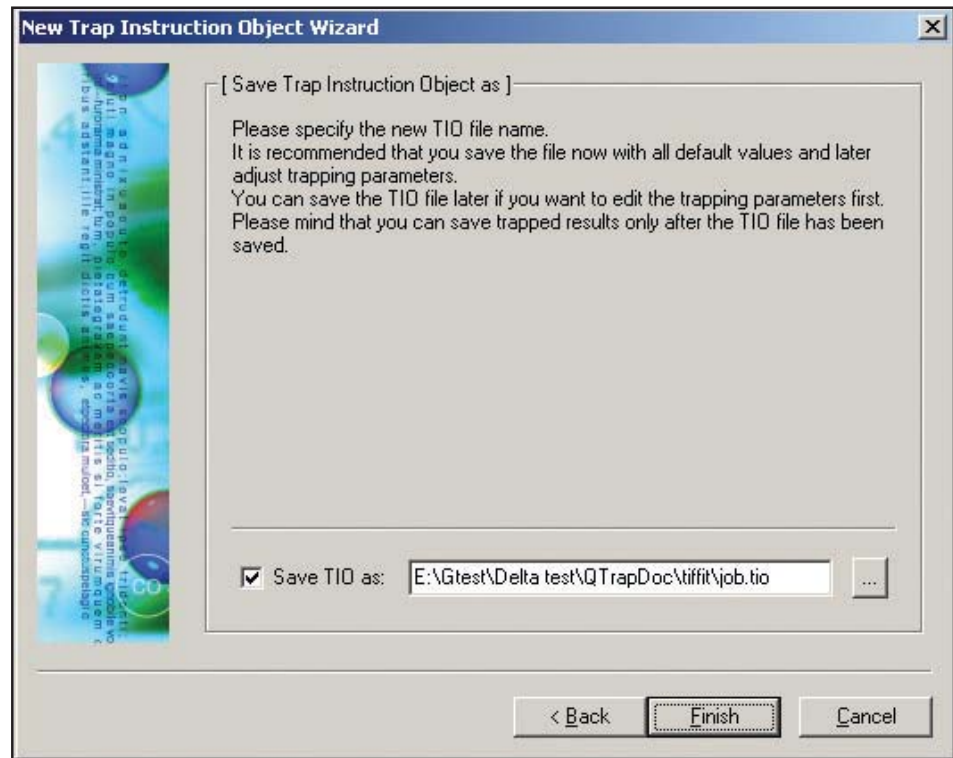


Figure 49

Select the TIO file name or use the suggested one. Click **Finish** to complete the TIO creation.

The edit panels will be opened to edit trapping parameters set by default.

The source page will be opened in the source view window.

Appendix 1

Shortcut keys table

NN	Shortcut	Action description
1	F1	Open the Help window
2	Alt-F1	About I-Trap™ Viewer
3	F2	Switch to the Information panel (left area)
4	F3	Switch to the Area panel (left area)
5	F4	Switch to the Job Settings panel (left area)
6	F5	Switch to the /Area/Brushes tab (left area)
7	F6	Switch to the /Area/Parameters tab (left area)
8	F7	Switch to the /Area/Color components tab (left area)
9	F8	Switch to the /Area/Image settings tab (left area)
10	F9	Switch to the /Area/TrapSets tab (left area)
11	F10	Switch to the Page Manager panel (bottom area)
12	F11	Switch to the Page Files Info panel (bottom area)
13	F12	Switch to the Log panel (bottom area)
14	Alt-X	Exit the application
15	Ctrl-N	Create New TIO (menu File)
16	Ctrl-O	Open TIO (menu File)
17	Ctrl-W	Close current TIO (menu File)
18	Ctrl-I	Import TIO (menu File)
19	Ctrl-S	Save current TIO to a file (menu File)

20	Ctrl-Shift-S	Save current TIO as... (menu File)
21	Ctrl-X	Cut active trap zone (menu Edit)
22	Ctrl-C	Copy active trap zone (menu Edit)
23	Ctrl-V	Paste trap zone from clipboard (menu Edit)
24	Ctrl-Delete	Delete active trap zone (menu Edit)
25	Ctrl-Z	Undo trap zone edit action (menu Edit)
26	Ctrl-Y	Redo trap zone edit action (menu Edit)
27	Ctrl-Shift-F	Add pages (TIO-s) to the Page Manager (menu Job)
28	Ctrl-Shift-D	Remove selected pages from the Page Manager (menu Job)
29	Ctrl-Shift-B	Trap selected pages in the Page Manager in silent (batch) mode (menu Job)
30	Ctrl-Shift-R	Send trapped pages to the Rip final output (menu Job)
31	Ctrl-U	Start/stop monitoring the watch folder (menu Job)
32	Ctrl-T	Trap-on-fly (menu Run)
33	Ctrl-Shift-T	Save traps on the current source page to the output file (menu Run)
34	Ctrl-G	Show/Hide the grid on the display windows (menu View)
35	Ctrl-NumPad /	Fit to box (window)(menu View)
36	Ctrl- NumPad +	Zoom In (menu View)
37	Ctrl- NumPad -	Zoom Out (menu View)
38	Ctrl- NumPad *	Actual size (menu View)
39	Ctrl-P	Show Split trap OnFly panel (menu View)
40	Ctrl-F5	Activate (show) Source view (menu View)
41	Ctrl-F6	Activate (show) TrapOnFly view (menu View)
42	Ctrl-F7	Activate (show) full Traps view (menu View)
43	Ctrl-F8	Activate (show) Traps only view (menu View)
44	Ctrl-R	Refresh current view (menu View)

Shortcut keys table

45	Ctrl-F12	Toggle full screen for the Viewer window
46	Ctrl-A	Select Area tool (menu Mode)
47	Ctrl-E	Select Rectangle tool (menu Mode)
48	Ctrl-M	Select Zoom tool (menu Mode)
49	Ctrl-H	Select Hand tool (menu Mode)
50	Ctrl-Shift-L	Color Look-Up Table (menu Options)
51	Ctrl-Shift-I	Plug-ins information (menu Options)
52	Ctrl-Shift-P	Preferences (menu Options)
53	Ctrl-Shift-G	Graphical Configuration tool (menu Options)
54	Ctrl-Shift-Q	Trapping queues setup tool (menu Options)
55	Ctrl-Break	Abort trapping
56	Ctrl-Shift-M	Start Ink Remapping Tool for a selected job (menu Job)