Feathered traps

Instead of having a constant color across its width a feathered trap fades gradually from the full trap color to the background color. The protection against misregistration tails off gradually rather than disappearing abruptly. The visual impact of a feathered trap is generally less than a solid-color trap of the same width.

Non-Featureed Trap

TrapPro Full Featureed Trap

Small object protection

This feature stops traps from obscuring the objects which they are trapping and corrupting the look of the objects. It protects all object types including text.

Trapping without automatic small object protection

TrapPro Full automatic small object protection

Image Mask Support

Correctly trap masked images to avoid "lines" on mis-registration.

Conclusion

TrapPro demonstrates Global Graphics' commitment to delivering the highest quality in-RIP trapping technology. It was introduced with the new Harlequin® Eclipse RIP and offers one of the richest trapping feature-sets on the market. It is automated, flexible, efficient, and supports multiple digital workflows. A variety of trapping configurations can be preset to address a range of trapping requirements quickly and with confidence.

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TrapPro

Advanced Automated In-RIP Trapping Technology

FUSION

A Full Feature Solution

In the color printing process each color is laid down separately, one on top of the other. As each color is printed, the possibility of mis-registration occurs as the colors fail to line up correctly due to paper shift, paper stretching, an incorrectly aligned press, or other mechanical inaccuracies. To compensate for mis-registration, traps must be added to the areas where gaps or overlays are most likely.

Traditionally, a skilled press operator allowed for mis-registration by spreading or choking the ink in an attempt to make the gaps or overlays less noticeable. Also, the page designers played their part by attempting to 'design out' any potential mis-registration from the page design. Both methods require great skill and time to perfect.

This white paper describes the trapping technology now available from Global Graphics. Global Graphics Software's trapping technology handles trapping automatically, as the page is processed in the digital prepress workflow. This paper also highlights some of the unique features and benefits of the new trapping technology. Global Graphics integrates three of its main technology components into a single in-RIP trapping solution called TrapPro™.

Three Technology Components of TrapPro:

- **A New Trapping Engine** – Newly developed module integrated into the Harlequin® RIP Eclipse Version™ and later. It is based on the Device-Oriented Display List generated in the Harlequin RIP, which enables it to trap everything that the RIP renders.

- **Adherence to Adobe®'s in-RIP trapping standards**

- **Sophisticated trapping techniques** – The traps are drawn with a brush in a similar way to existing raster engines, instead of strokes which is used in products such as TrapWorks™. As a result of using this technique the trap joins are rounded which is visually appealing.

Benefits of in-RIP trapping

A good trapping solution must be flexible enough to support various digital workflows while providing impeccable quality, proofing and previewing. In-RIP accommodates the need for last minute changes of printing conditions without requiring time-consuming human intervention, and it allows users to be able to apply the same page content for multiple purposes. These increase the throughput in prepress systems, resulting in greater profitability.

In-RIP trapping is by far the easiest trapping method to implement since, once the trapping parameters have been entered, trapping occurs automatically without the need for further intervention.
TrapPro™

"TrapPro is an object-based trapping engine that uses the Device-Oriented Display List"

A New In-Line Trapping Engine

Trapping programs fall into the two basic categories: raster trappers and object trappers. Raster trappers analyze for traps on a pixel-by-pixel basis, where each pixel in the rasterized page is considered for trapping.

Object trappers work on the PostScript® language objects or vector objects that describe the page. This means they have considerably fewer calculations to make than raster trappers when deciding where to place traps, and are therefore considerably faster than raster trappers. Furthermore, object based trapping improves the quality and accuracy of the trap shape.

TrapPro is an object-based trapping engine that uses the Device-Oriented Display List that is generated in the Harlequin RIP. This allows the trapping engine to trap everything the RIP renders, with pixel accuracy, and with great speed. The traps are drawn with a brush and it maintains color fidelity and traps real device colors so trapping with extra grays is supported.

TrapPro is an option introduced in the Fusion Version 6.0 release of raster management (RIP) products based on the Harlequin® RIP Eclipse Version™.

TrapPro provides the following benefits:

- **Ease-of-use** - An easy to use Graphical User Interface (GUI) allows the user to quickly configure the trapping parameters. A user can create, edit, copy and delete trap sets using the Trapping Manager. A trap set is a collection of parameters that the user to easily manage diverse trapping requirements.

- **Automation** - Once the user specifies the parameters for trapping, the traps are automatically applied before the file is output to the media.

- **Preview traps** - After creating a trap set, a user can check that the traps are being generated as intended using the built-in Roam preview feature.

- **Monitoring in-RIP trapping** - You can use the RIP monitor window to verify that trapping is occurring in the job, and to see how many objects were trapped and how long the process took.

- **Speed** - The trapping performance is much faster since it dosen't use an intermediate raster just for the benefit of the trapping engine; making the whole workflow is very efficient.

- **Quality** - TrapPro uses the extra information in the Harlequin Display List which provides a significant advantage over using a pure raster. The traps are clipped to the objects from which they arose, elimi nating problems such as mushrooming (normally associated with brush-based traps).

- **Handling of spot colors** - Color separations are trapped according to their ink type that may be of the type Normal, Opaque, Opaque Ignore or Transparent.

  Normal ink type is trapped normally. Opaque ink type is not spread or trapped except to another opaque. Metallic is an example of opaque ink. Opaque Ignore ink type is never trapped. Transparent ink type is effectively an overprint so it is not choked or spread, except to another transparent. Varnish is an example of transparent ink.

  The ink type associated with each ink may be edited using the Ink Set Manager function. Spot colors can also be added to the list of colors and an ink type assigned, enabling the user to easily control how spot colors are trapped.

Sliding Traps

When adjacent colors have similar neutral densities, TrapPro automatically slides the trap position from spreading the lighter color into the darker color.

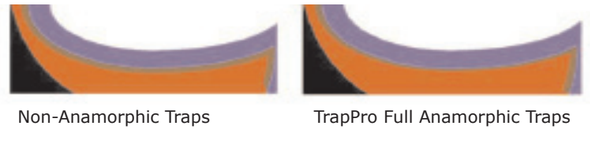
Trapping with no slides

TrapPro Full Sliding Traps

Anamorphic traps

Anamorphic trapping is a method of compensating for different degrees of misregistration in the x and y directions in the printing process.

Trapping compensates for misregistration in the printing process, but the physical factors influencing this will very often be different in the two axes, x and y. TrapPro compensates for different amounts of possible misregistration in both axes.



Non-Anamorphic Traps TrapPro Full Anamorphic Traps

Narrowed traps

There are cases where the full width of the trap does not fit into the available spread area. In this case, TrapPro automatically modulates the size of the trap to cover a proportion of the available area. The user can adjust the default value (50%), shown in the example below.

Mitered Ends and Joins

A trap end style is a parameter that defines how the intersection of traps are formed. TrapPro supports mitered trap ends for trap intersections.