The Harlequin® Plugin Technology

The Harlequin® Plugin Technology provides an easy, modular approach to adding input and output "drivers" to the Harlequin Server RIP Input plugins provide mechanisms for bringing data into the RIP and for converting non-PostScript® files "on-the-fly" as part of RIP processing. Output plugins provide a mechanism to deliver pages of raster data to an output device or to a file.

Some plugins are supplied as complete modules with the Harlequin RIP. Even more powerful, however, is the ability for OEMs to develop their own specialized plugins using the Harlequin RIP Plugin SDK. The SDK includes detailed developer documentation on writing and integrating plugins, as well as examples of each type of input and output plugin supported by the RIP. These examples can be used by OEMs as a basis for their own plugin development.

Find out more by contacting: info@globalgraphics.com.

OEM Independence

OEMs are not required to contract with Global Graphics to provide plugins for their output devices but can develop their plugins as part of their own development cycle.

Modular Code

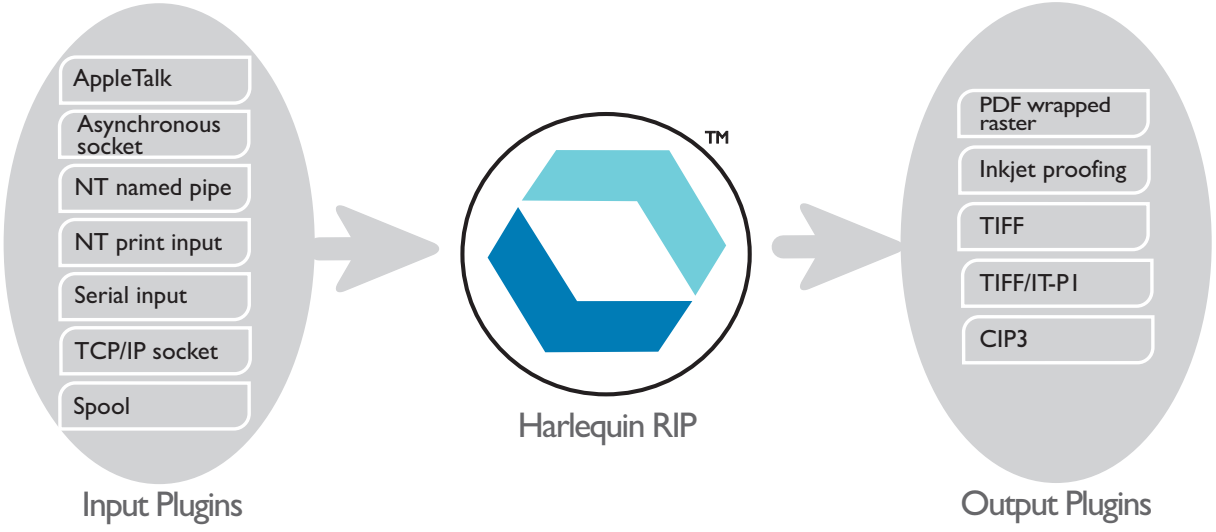
The interface between the Harlequin RIP and the plugins is well defined, and the RIP does not require knowledge of the internal working of the plugin as long as it adheres to the interface specification. This reduces the complexity of the page output process and helps to make the Harlequin RIP more robust.

Future Compatibility

The plugin interface retains backward compatibility, ensuring that plugins written to the published Harlequin RIP Plugin Interface specification will continue to function with future RIP versions.

Consistent Error Recovery and Reporting

The plugin interface provides a standard mechanism for classifying, reporting and handling errors that occur during operation. It hides the complexity of error recovery for each device from the RIP while still providing the flexibility required to recover from errors.



Plugin Types

Input Plugins

There are four main kinds of Input Plugin:

- Those providing the RIP with PostScript language jobs
- Those implementing PostScript language filters
- Those implementing asynchronous actions, providing the ability to run restricted jobs during the interpretation of other PostScript language jobs
- Those implementing progress devices,receiving and displaying information about jobs currently underway.

Output Plugins

These plugins provide output services for the RIP, passing rasters of pixel data to a printer, imagesetter, film recorder, or TV monitor. Output plugins may also simply write data to a file or transmit it elsewhere. There are two main kinds of Output Plugin:

- Single-device output plugins, where each plugin controls a single output device
- Multiple-device output plugins, where the plugin implements one or more classes of output device.

The Harlequin RIP Plugin SDK

The Harlequin RIP Plugin SDK is a collection of source and object code, documentation and examples, which enable OEMs to write, compile, and link plugins complying with the specification of the plugin interface. The SDK is available for all platforms supported by the Harlequin RIP. The Plugin SDK contains:

- Header files to be included in the plugin
- The plugin library object code
- Example source code with commentary, much of which can be used as boilerplate for the OEM's own plugin code.

Harlequin RIP Standard Plugins

The following plugins are shipped standard with every Harlequin RIP.

- **Spool:** Allows file input into the Harlequin RIP via hot folder.
- **TCP/IP TwoWay Socket:** A hardware- independent method of communicating across a network. The Harlequin RIP TCP/IP socket supports TCP IP on Ethernet for job transfer between any combination of machines running the Unix™ or Windows NT® operating systems. The socket also supports a smaller set of features on the Power Macintosh® (but not 680X0 based machines).
- **AppleTalk®**: provides print stream input via the AppleTalk protocol
- **NT Print Input:** publishes the HarlequinRIP as one or more printers available to the Windows NT print services
- **NT Pipe Plugin:** provides file input support via the MicrosoftWindows NT named pipe. A number of third-party applications, most notably Open Prepress Interface (OPI) servers, are able to communicate with PostScript compatible RIPs running under Microsoft Windows NT using named pipes
- **Serial Input Plugin:** handles jobs submitted to the Harlequin RIP over a serial line (RS232 or v24 standards)
- **Asynchronous Socket Plugin:** allows specialized bits of PostScript code in one job to be executed while another job is being processed for output
- **TIFF Output Plugin:*** provides standard TIFF (Tagged Image Format File) file output from any supported input file format.

Harlequin RIP Optional Plugins

The following plugins are available as options to Harlequin RIP OEMs.

- **PDF Raster Plugin:** this plugin creates PDF/X-1, PDF/X-1a or PDF/X-3 files containing the raster output from the RIP, to enable you to proof the RIP output remotely. The plugin supports compression and standard output profiles covering the USA, Japan and Europe
- **Inkjet proofing plugins:** the Harlequin ProofReady™ plugins provide OEMs with the tools they need to deliver "out of the box" color proofing quality to their customers. ProofReady plugins include those for HP, Epson and Cannon devices. Included with ProofReady plugins is top quality screening, pre-configured color management profiles, and the Harlequin SetGold Pro™ for device calibration and gray balance. (See separate ProofReady Plugins datasheets for further details)
- **TIFF/IT-P1 Output:**TIFF IT-P1 is a standard file format used widely in the electronic delivery of advertising content for magazine and newspaper publishing. The TIFF/IT-P1 Harlequin RIP plugin produces TIFF/IT-P1 files, made up of FP (Final Page), CT (Contone), HC (High res Contone), and LW (Linework) files, and compliant with the ISO Standard 12639.
- **Harlequin CIP3 Plugin:** This plugin enables end users to automatically include press-specific ink key setting data in a RIPped file. This data is then provided to the press operator as a PPF (Print Production Format) version 2 file (low resolution preview file). When the PPF file is read by a CIP3 reader (included with press control systems), it provides instructions for automatically setting ink fountains on press. It saves the press operator time, minimizes errors and reduces waste. (See separate Harlequin CIP3 Plugin datasheet for further details)

** The TIFF Output Plugin is not included with resolution limited Harlequin RIPs for driving low-resolution printers. It can be added to these RIPs as an added cost option.*

GLOBAL GRAPHICS® software

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