Reviews and Table of Contents of FLAAR Report Series
on
RIPs for Wide Format Inkjet Printers

Different RIP products being evaluated at our facilities in Bowling Green State University

Introduction

RIP = Raster Image Processor. This is software which brings out all the capabilities of your wide format printer. If you limit yourself to only the printer driver, your printer's full range of options are left only partially activated.

If you print only photographs or art reproductions, with absolutely no text, no captions, then perhaps you can initially escape without having to buy a RIP. Some brands of printers can work okay with their on-board drivers, such as Epson.

But alphanumeric text requires a PostScript RIP to remove the jaggies. You also will eventually prefer a RIP to do nesting so you don't waste media when printing small images. But most of all, you will need a RIP to handle basic aspects of color management and ICC color profiles. We describe all this, patently, expertly, and with citations to sources of detailed information in the FLAAR series on RIPs. This series is dedicated to answering the questions that everyone is asking. Usually all users of wide format printers seek the same information.

That's because no adequate source of information exists. Besides, FLAAR concentrates all its facts, documentations, and tips in this basic introductory series. Why waste hours, days, or weeks getting fragmented half-answers by frantically searching the internet. Besides, you may have noticed it's mostly commercial hard-sell hype.

Since you will need a RIP sooner or later, you might wish to learn more about what you are getting into.

In years gone by, your options were "hardware" RIP (in past years an EFI Fiery RIP from Electronics for Imaging but that has gone out of style) or a "software" RIP. But hardware RIPs turned out to be a mistake for most users (such as us; we had two hardware RIPs and found they were overpriced and lacked crucial features).

Thus for the past several years hardly anyone uses hardware RIPs any more. Probably over 90% of the RIPs sold today are software RIPs. The exception would be the dedicated hardware RIP for ColorSpan printers. We have two of these so discuss them in the FLAAR Report Series on RIPs.

Basic facts on whether to use your RIP on a Macintosh or PC are all discussed in the FLAAR Report "RIP + Help." Actually these helpful tips by Nicholas Hellmuth are about the only introductory booklet on RIPs for wide format printers which exists.

I get the impression that some other wide format printers will indeed print, right out of the box, with no RIP. But I do not know any professional graphics studio that would ever even consider trying to save money in this ineffective manner. If you intend to sell the output from your wide format printer then you need fast output, which means you need an external RIP.

FLAAR currently has almost a dozen RIPs in house. We do not actively use them all because we run our two ColorSpans with their dedicated hardware RIPs. We run the Mimaki with a different RIP since that other RIP can also handle printing on textiles. At one university we use one RIP when we need quick printing (it starts to print after 11 seconds). But as we get more experience in color management we may need to move to a RIP which is more tuned to sophisticated color management.

Several RIPs have a sort of inadequate reputation, a polite way of saying they are not very popular. These tend to be one brand of low-cost RIPs which are most politely described as "lite." In reality they ought to be described as inadequate but I know the people who make them and they are all pleasant. Unfortunately their RIP is not many users' favorite. We provide tips, hints, and info on every brand of RIP known to man and woman in our *Annotated List of Raster Image Processor (RIP) Software for Large Format Inkjet Printers.*

Over the last several years we have seen our operating costs rise and thus are not able to give our FLAAR Reports away free. But since our goal is public education, we are at least maintaining these Abstracts at no cost along with about a dozen other reports which will always be free to our readers.

However over the years many readers have said that once they see the coverage of the FLAAR reports they want them all and they would rather just pay for them rather than laboriously filling out an Inquiry Form for every individual report. Actually many companies pay up to $3,000 per day for Dr Hellmuth to come to their print shops as a consultant and bring all the reports with him.

But you can save a bundle by buying the same reports on the Internet at www.wide-format-printers.NET. Besides, if you purchase five different series, then you get Nicholas in person on the telephone for follow-up support if you so desire. One hour telephone support at no extra cost. See order forms for details. Or you can drop in and visit him at the FLAAR facility for an hour and get a private tour along with your free hour of consultation.

In the meantime, the FLAAR Report Series on RIPs: everything for $142. If you are a member of the FLAAR Family (which means if you have filled out a Survey Form and participated in our follow-up information program by checking off "yes), then you get a discount this month, so the series on RIPs is only $120 for you.
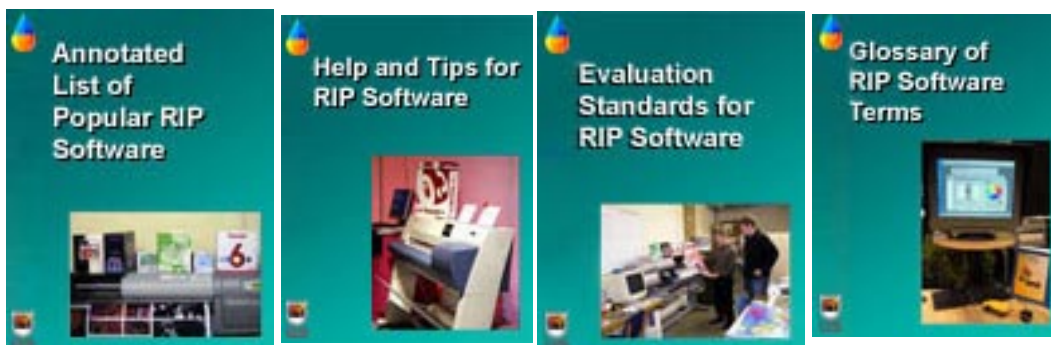
Many of the problems that people blame on the printer could be resolved with better knowledge of how to handle the RIP software and/or media. Handling the RIP software also implies knowing at least some of the basics of color management and ICC color profiles. For these reasons we have prepared an entire series of reports on RIPs. We have a separate additional series on wide format papers, canvas, vinyl, watercolor paper, and other materials.

Nicholas has attended digital imaging and printing trade shows in England, Germany, India, and across the USA for years. His own shelves are fully stocked with more RIPs than most million-dollar print shops. Plus, he has received thousands upon thousands of e-mails from end users who bluntly express their experiences with the RIPs they have tried to utilize in their own sign shops, photo labs, quick-print shops, prepress shops, and other printing companies.

One brand of RIP can never be updated, never run any other printer. We know since we acquired two of them by mistake. So learn from our mistakes; there is no need that you too waste thousands and thousands of dollars. Now that we know the true story about RIPs (which means we can see through the hollow hype which snuckered us into believing that hardware RIPs were so great) we feel this information should be shared.

So it seems that $120 to obtain Nicholas's experiences with RIPs for wide format printers is a good investment because it might save you several thousand dollars in deciding which RIP to purchase. This fee gets you the entire series of reports on RIPs: all the titles listed here, plus Fast Facts on Color management.

Annotated List of Raster Image Processor (RIP) Software for Large Format Inkjet Printers

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Annotated List of Popular RIP Software

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Introduction

FLAAR list of all known RIPs

Sources and Resources on RIPs

How are RIP sponsorships decided?

Acknowledgements

Advisory

3M Cactus RIP was one of the better RIPs between 1999 and 2000. But by 2001 it was clear that 3M was not a software company. They make Scotch tape and post-ems, so you trust their brand name. Yet if you bought a 3M Cactus RIP in 2001, it might have been a poor way to get rid of $3,000+ (it was an expensive, industrial-strength RIP in its heyday).

Yet if you had been armed with Nicholas Hellmuth's tips on RIPs from his reports this year, you would have been forewarned. So this one report could have saved you thousands of dollars.

Today there are over 80 RIPS available (the full list). But many are moribund, such as 3M Cactus; a few are bankrupt, some RIP companies have not updated their web site for over a year or more. Would you trust them to update their $4,000 RIP if you knew their track record?

Hellmuth's office overlooks seven Hewlett-Packard DesignJet printers, two 72" ColorSpan printers, several Epsons, an elderly Encad NovaJet, a brand new Mimaki JV4, and the Ixia version of the Iris giclee printer, the venerable Rolls Royce of inkjet printers.

Since many of the better RIPs come from Germany, he has checked out RIPs at DRUPA, Photokina, CeBIT. Sure helps to speak Deutsch and have a name like Hellmuth to learn about German RIPs. Naturally we translate all this into English, but you still get Dr Nicholas's Germanic efficiency, and bluntness too. When a RIP is a dog, no need to mince words.

Suggested Standards for Evaluation of RIPs for Wide Format Inkjet Printers

Standards should be independent of the manufacturer, visible (transparent), neutral, and fair both to the manufacturer and to the end user.

We feel a crucial feature of a review is the human experience with actually having to select one of those RIPs, and then use it in an actual prepress shop.

Additional ingredients of a review with Nicholas Hellmuth's philosophy are the emotions of, what if you had bought one of the expensive RIPs but it did not do what you expected?

Or what if you bought a low-priced RIP just because it was cheap; only to find out that you needed other features to make your inkjet printing business succeed in the marketplace? Then you would have to buy a second RIP. Hence your total expense of two RIPs would be considerable. That low-cost RIP could end up not being such a bargain after all.

Yet, to be fair, what if the low-cost RIP had everything that a professional pre-press company needed? Then why waste money with a more expensive RIP?

But back to the question of "being objective."

Who has to use the RIPs once they land in your facility? An object, or a person? A person has to use it, therefore Nicholas provides personal information that a real human being can understand. You can make an objective chart prove anything you really set your mind to do. Thus a totally "objective" review in some instances may be next to useless. This observation is necessary in order to clear up some posturing and political correctness up front. But when we ask inkjet printer operators what they themselves actually use, and what they recommend, that's the kind of information which will best assist other people who need to figure out what RIPs to consider.

The standards themselves should be objective, the judging objective and neutral. But if you are about to pay $3,000 to buy a CD disk with Raster Image Processor mumbo-jumbo, you want to know what an actual end user will really experience. You want a human reaction. That's subjective and that's why FLAAR reviews by Hellmuth are so popular with end users.

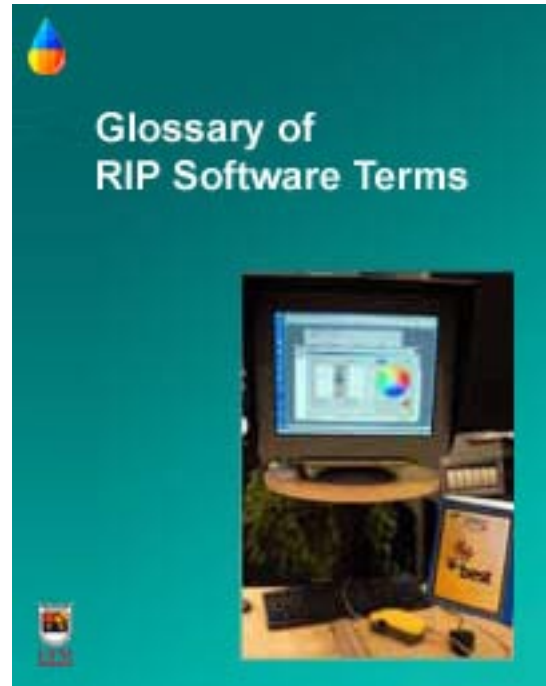**Evaluation Standards For RIP Software**

Contents

GLOSSARY
of jargon and other confusing terms associated with RIPs for Wide Format Inkjet Printers

This FLAAR Report by Nicholas Hellmuth and staff at Bowling Green State University is first of its kind, that is, a glossary specifically dedicated to RIPs for wide format inkjet printers.

This glossary is essential for the newbie and intermediate user, as well as for any new employee. Why struggle trying to understand the jargon when Professor Hellmuth has already organized things for you.

Below is what will be the complete glossary. The first edition covers the majority of these. All FLAAR Reports are constantly being updated, and the glossaries will constantly be expanded until all these terms are discussed.

You hopefully know a few of these terms already, but it is the few terms which you don't know that makes this report such a help.

Glossary of RIP Software Terms

absolute colorimetric
additive primaries
Adobe PostScript
Adobe RGB (1998)
anti-aliasing
Bezier curves,
bi-directional
bit map,
black from K only
black from CMY
blend optimizing
BMP file format
calibration
calibration bars
characterization
CMYK
color bar
color gamut
colorimeter
color model
color profile
Color rendering dictionary (CRD)
color separations
composite file (as opposed to separated file)
continuous tone,
contone
contrast
controller card (color controller card)
cyan
DCS, Desktop Color Separation, file type
densitometer
density
disabled features, see also lite RIP
dithering
dongle
dot gain, dot spread
dual processor
EPS
error diffusion, as in error diffusion as a screening option for printing
ethernet connection interface
FireWire connection interface
Floyd-Steinberg, as in Floyd-Steinberg

as a screening option for inkjet printing
gamut
GCR
GIF file format
Gray component replacement, GCR
gray balance
grayscale
GretagMacbeth
halftone screening, as in halftone screening as a screening option for printing
hot folder
International Color Consortium (ICC)
ICC (device) profile
ICC profiles, generating
ICC profiles, editing
imposition, means roughly the same as nesting
ink reduction (as in, maximum ink reduction)
JDF
JPEG
JFIF
LAN
LDR
Level 2, Level 3, see PostScript
Linearization
lite RIP
Look-up table (LUT)
magenta
mezzotint, as in digital mezzotint as a screening option for printing
multi-tasking, printing, ripping, editing all at the same time.
nesting
parallel connection interface
PCD, Kodak Photo CD format
PCX
PDF
perceptual
piezo electric printhead
pixel
PNG file format
PostScript,
PostScript compatible
PostScript Level 2

PostScript Level 3
PostScript emulation
PostScript interpreter
primary colors
print server
process blue
process colors
profile, as in ICC color profile
profile connection space
PCS (profile connection space)
proofer
PS, as in HP DesignJet 5000ps
queue
Raster Image Processor
Reference color space (RCS)
relative colorimetric
remote access via internet
remote proofing
rendering intent
RGB
RIP
RIP server
ROOM,
rotate
Scitex CT file type
screening options,
separated file (as opposed to composite file)
separations,
serial connection interface
server,
spectrophotometer
spot color
stochaistic
TARGA file format
thermal printhead
TIFF
tile, tiling
trapping
TWAIN
UCR
Under-color removal, see UCR
uni-directional printing
USB
vector base file,
X-Rite

Wasatch SoftRIP 4.5 Evaluation Notes.

If you are curious what it is actually like to set up, and use, Wasatch SoftRIP with a wide format printer, then this is a pertinent review for you and your company. New, August 2003.

Contents

Wasatch SoftRIP 4.5 Evaluation Notes
Evaluation Questions
RIP Features
        Adobe PostScript Features
        Platforms RIP Functions With
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        Supported Interfaces
        Printer Support
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        Comparable to Photoshop
        Comparable Filters or Imaging Features To RIP
        Page Layout Features: Comparable to Photoshop,
        PageMaker, and Others
        RIP and Printing Features
        Screening Options and Halftone Properties
        Color Management Options
        "Light" SoftRIP Version
        Evaluation of Documentation
Ease of Use
Technical Support
Evaluation of Advertising Claims including Press
Release
References
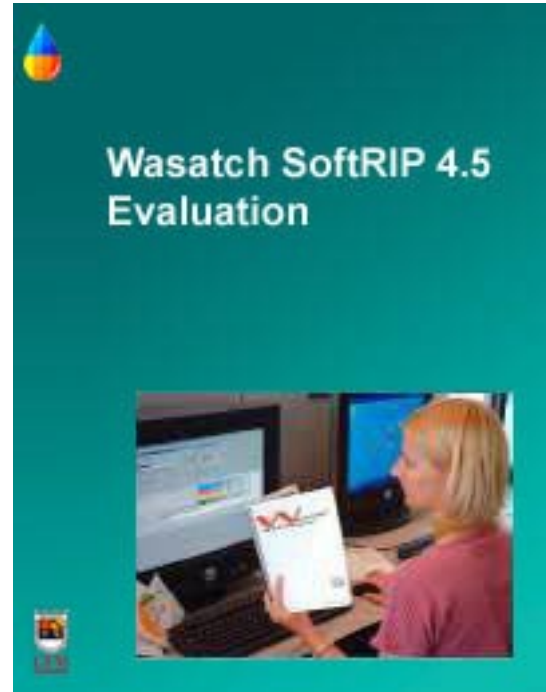
Scanvec-Amiable PhotoPRINT3 RIP Evaluation Notes.

We ourselves were surprised at the results of this comparative review. But that's what you get when a totally independent institute does the evaluation. New, August 2003.

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Evaluation Questions
RIP Features
Evaluation of Documentation
Ease of Use
Technical Support
Evaluation of Advertising Claims Including Press
Releases
Comparison of PhotoPRINT3 Server-Pro and Wasatch
SoftRIP 4.5
RIP Basics
Why Bother
Making a Choice
References

About 80% of the people who send in e-mails asking for help are first time users. Based on the most frequently asked questions we have prepared the following tips to help you face, and survive, the learning curve. If it makes you feel any better, even after six years in digital imaging we at FLAAR are still learning ourselves.

RIP (Raster Image Processor) is an unknown concept to newcomers to the world of wide format inkjet printing (even to Nicholas when he first faced it many years ago). RIP software includes, among many other options, Adobe PostScript that removes the jaggies from text.

We can understand why you may prefer to print without any PostScript RIP. After all, it adds up to $3,000 to the price of your system. Indeed if you get lured into buying Epson's (EFI Fiery RIP) you can be short $5,000 and if you unknowingly bought Xerox's version of the EFI Fiery RIP for their XES Xpress printer you may have been charged up to $7,000 (all for the identical RIP which you can get elsewhere $1,800-$2,400 with more features too).

This opus by Nicholas Hellmuth is a veritable primer on RIPs.

Contents

PosterJET RIP, not to be confused with PosterSHOP RIP from Onyx.

PosterJet is a German RIP, but has a distributor in the USA also. This report indicates why, when we could use any RIP made (over 70 brands of RIPs exist), why we use PosterJet.

New November 2003.

Contents

Comparative Prices for Wide Format Inkjet Printer RIPs.

Price watch chart for RIPs, both software RIPs and hardware RIPs. Also indicates different levels of RIPs, lite, full-strength but 1-printer, full-strength multi-printer, full and server based.

New November 2003.

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Source of the Prices

Do not buy on Price Alone

Recommended RIPs

Suggested Sources for RIPs

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Top Leading RIPs for Inkjet Printers

Advisory

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Onyx PosterSHOP RIP.

If you are a production shop then you have probably either heard of or are considering to purchase, Onyx PosterShop. This is one of the few independent reviews available of this software. We also temper this evaluation with results from what actual end users have written us, especially people who own Epson printers (the RIP works also on ColorSpan, HP, Encad, and most other printers).

Before you pay anyone between $2500 and $3800 (or more for a multiuser or server version), you need to get ahold of these reports. And if your RIP costs less than $2500, you might want to learn from FLAAR what such a cheap RIP may be missing (fortunately there are two or three at reasonable cost which are full-strength; but you may not really want a lite RIP).

New November 2003.

PosterShop Version 6 Evaluation

Contents

Introduction by Nicholas Hellmuth
Evaluating PosterShop RIP
Using the FLAAR Standards
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  RIP and printing features
  Screen options
  Color management options
  Printer support
  Photoshop-like layout features
  Photoshop-like filter features
  Page layout features
  Miscellaneous features
  Optional Features
  Evaluation of documentation
  Ease of use

  Technical support
  Versions and upgrades
  RIPPING and printing time
  Comparison of various RIP and printing times
  Overall evaluations
Editor's Conclusions
Suggested Sources for RIPs

ColorSpan's ColorMark Professional RIP

ColorMark Professional RIP further distinguishes itself from EFI in that the ColorSpan RIP can be upgraded. If necessary one ColorMark RIP can run several different models of ColorSpan printer.

Although FLAAR has nine software RIPs available in-house, for our two ColorSpan printers we selected the turnkey ColorMark solution from ColorSpan because this way we are assured of having software that can interact with the unique aspects of a ColorSpan printer.

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Introduction
What software are you evaluating?
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What file types are supported?
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Photoshop-like filtering or imaging features
Page Layout features (comparable to Photoshop, PageMaker, etc)
Miscellaneous features
Evaluation of documentation
Ease of use
Technical support
Upgrades
Optional features
RIPPING and Printing Time
Overall Evaluation

Final Observation

FLAAR has almost a dozen different RIPs in its facilities. However we only actually use three of them on a daily basis.

The list price of all the RIPs we have in-house and/or have tried out is about $36,000. Out of this experience we have selected the RIPs which we have found best for our needs (printing with nine wide format printers).

If you have enough time and money to try out a dozen RIP software packages in your facility, then clearly you don't need the FLAAR Report SERIES on RIPs.

Canon imagePROGRAF W7250 at the left, Mimaki Tx-1600s textile printer in the middle. On top are a few of the RIPs available at FLAAR+BGSU. Professor Hellmuth has several additional RIPs on-hand at his office at the other university (Francisco Marroquin University). With all these RIPs to choose from, which does FLAAR actually use in its day to day printing? That's Nicholas to the left, Anne Behrnes (evaluator for RIP software) in the middle, and Technical Lab Manager, Brent Cavanaugh, at the right.

But if you are in a hurry to buy a RIP, and if you would like to benefit from our experience over the years, then you may find that ordering our series of reports on RIPs is a good investment.

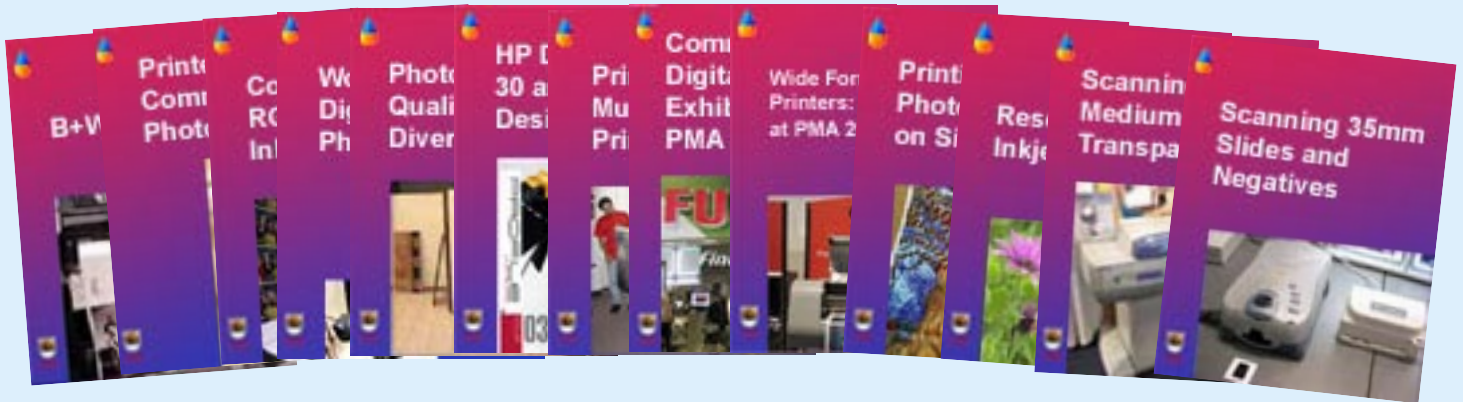**IF YOU WISH TO ACQUIRE THIS SERIES GO TO THIS LINK**

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Mutoh Fal

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