High-Performance Fiery Digital Print Servers for Today's Print Market

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1 Production Performance for Today's Market

Today, service providers and commercial printers make little money by simply printing on a sheet of paper; instead, they increase profitability by expanding services. A more powerful digital platform allows printers to offer services such as variable data printing (VDP), to take advantage of the flexibility and customization options of hybrid offset/digital environments and to simulate the quality of offset presses.

However, many of these services require print service providers to process complex jobs in an environment in which more and more jobs have smaller print quantities. This means service providers need the highest processing power available for more demanding requirements, such as VDP, along with advanced job-preparation and workflow automation tools to maximize productivity and throughput.

In addition, today's print buyers require quicker job turnarounds and outstanding color output. Together, the combination of equipment and software — a high-performance digital front end (DFE), an advanced digital print engine, workflow automation software and color tools — allows shops to meet all these demands and remain profitable.

High performance DFEs, or print servers, give print service providers of all types the tools they need to meet both current expectations and future needs. The modular tools allow service providers to tailor the digital print solution to their particular situation, paying only for the functionality they need and adding additional capabilities as needs evolve and budgets allow. Investing in a high-performance DFE provides a platform for providers to be more competitive in an ever-changing marketplace.

2 The Speed Print Providers Need

In demanding print environments, operators must be able to perform late-stage edits easily. To minimize waste and rework during printing, they may need to adjust colors, impose documents into booklets, and preview full raster files to ensure the highest quality before printing.

For maximum productivity, users need to be able to perform all such edits through a high-performance digital front end. Not all DFEs, however, are the same. High-performance DFEs such as high-end Fiery® QX platform servers, can

process complex jobs faster and reduce the time it takes for the first page to print. Customer tests show differences in RIP speeds of fifty times or more on certain files. These faster DFEs process files fast enough that they can feed print engines with enough data to keep them running at rated speeds. Combined with high-performance print engines, these faster DFEs allow print service providers to maximize the use of their equipment and provide faster turnaround on jobs.

3 Keeping Up with Today's Print Market

A survey by InfoTrends and the North American Publishing Company (NAPCO) — *Emerging Trends Q2 2011: Run Length, Turnaround Time, and Print Volume* — shows that both in-plant and print-for-pay respondents report a number of trends:

- Run lengths of less than 500 document sets are steadily increasing

- Run lengths of more than 5,000 document sets are in sharp decline

- This has resulted in shorter turnaround times for printers

While this report covers the U.S. market, industry leaders report similar trends for equally mature markets in Europe and Asia.

3.1 A Shift in Demand

The largest increases in print volume were in the digital print market. Approximately 76.6% of survey respondents indicated that their digital color cut-sheet print volume had increased, while 38.9% saw increases in digital black-and-white volumes. This is due, in part, to an increased demand for variable data printing and customized communications. Digital print's flexible imaging and plateless production process provides cost-effective printing of variable data jobs that target specific individuals, replacing the shotgun advertising mailings of yesterday with precise, individually focused campaigns.

3.2 Shorter Run Lengths

Compared to a similar study in 2008 (see Figure 1 below), run lengths of 5,000 to 9,999 decreased by the largest percentage; 49% of respondents reported segment decreases in print jobs (up from 23% in 2008). This is consistent with trends for the last several years. In contrast, run lengths of less than 500 document sets are steadily increasing. With short-run print jobs dominating the market, customers require faster turnaround times than ever before.

Figure 1: Change in Print Jobs per Run Length

For the following run lengths (set of documents), do you see an increase or decrease in the frequency of printing jobs?
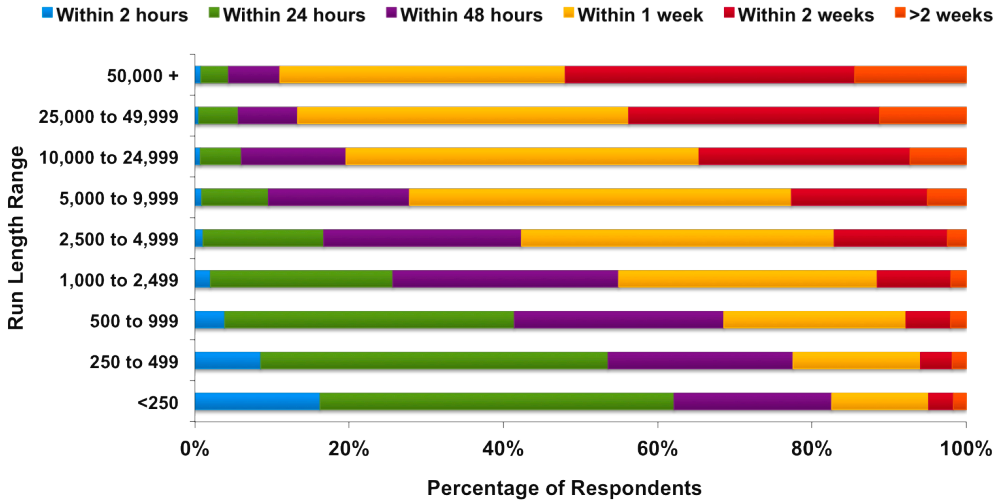

Today's short-run print jobs are steadily increasing, while longer-run jobs are continuing to decrease in number.
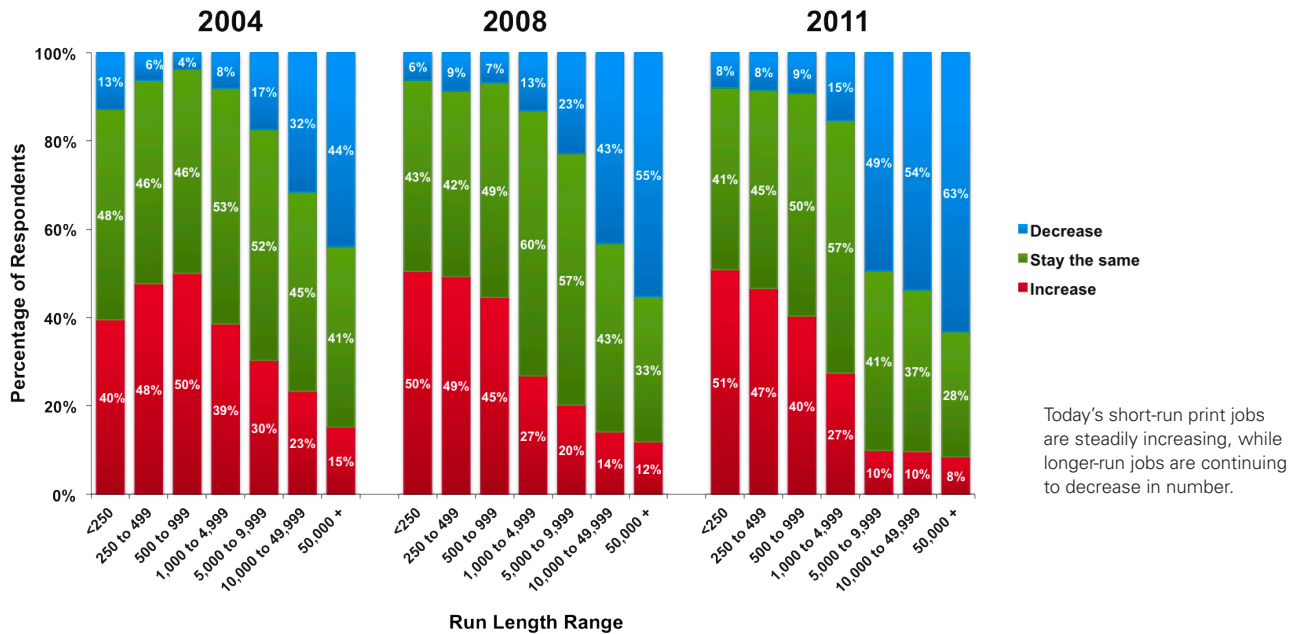
Source: InfoTrends 2004, 2008, and 2011 Print Service Provider Surveys

Figure 2: Percentage of Respondents

What are your customers' turnaround requirements for each of these run lengths—total?

With short-run print jobs dominating the market, customers are requiring faster turnaround times than ever before.

N = 478

Source: Emerging Trends Q2 2012 Run Length, Turnaround Time and Print Volume, InfoTrends 2011

3.3 Faster Turnaround Times

Shorter run lengths and digital equipment have created a downward pressure on turnaround times (see Figure 2 above). As more printers take advantage of digital on-demand printing, print runs will continue to become shorter. There will be no need for excess inventory storage, and the time to complete print jobs will continue to decrease.

As a result of these trends, the InfoTrends/NAPCO study recommends that printers should invest in technologies and workflow processes that allow them to maximize operational profits. However, to make short runs and fast turnaround jobs profitable, it's important to have equipment

that will RIP and print as fast as possible, along with workflow software integrated into the DFE.

While the length of the job and the type of file affect the RIP speed, a high-end DFE, such as a high-performance Fiery server, will show speed increases anywhere from double to more than 50 times the speed of slower models. In the example shown in Figure 3, the customer RIPped and held an A3 variable data PDF file that was 1,786 pages long. The RIP speed tested with a high-performance Fiery server was more than 50 times faster than other DFEs.

Figure 3: Comparison of RIP and Hold speeds

1,786 page, A3 Variable Data PDF, RIPped and Held
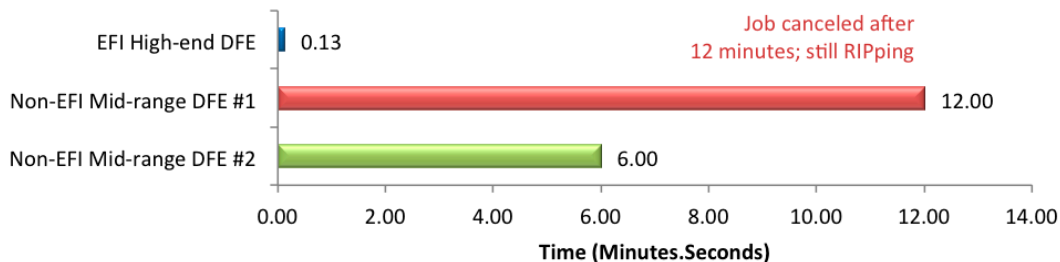
3.4 Digital Quality and Flexibility

In the past, offset printers used source files with multiple layers, transparencies, and overprints. But this method is time consuming and expensive for short runs because of the number of plates it requires. To produce these jobs on a digital press cost-effectively, print service providers require a DFE with enough power to rapidly handle the additional processing for color management and complex files with transparencies and shadows. High-performance Fiery DFEs running FS100 Pro meet this requirement. They now carry the VIGC PDF RIP Audit: Perfect label, the only DFEs in the market to achieve this Perfect score. This indicates they have passed an audit that shows they can render all features exactly as expected. They are also able to automatically process composite overprints correctly and have the best color out of the box — without requiring operators to make complex settings and without affecting DFE performance.

High-performance Fiery DFEs running FS100 Pro are the only DFEs to carry the VIGC PDF RIP Audit: Perfect label.

To achieve color consistency for reprints, the server and print engine should have the IDEAlliance Digital Press Certification for color. This way, the custom or logo colors shops print today can precisely match the colors they reproduce in the future.

Many Fiery Driven printers have achieved Digital Print Certification by the U.S.-based IDEAlliance organization. This certification signifies that these digital print systems comply with the exacting GRACoL reference standard. The high-performance Fiery servers have the highest number of Digital Press Certifications of any DFE manufacturer. For more information visit: http://www.idealliance.org/certifications/system-certification/digital-press-certification/certified-systems.

The IDEAlliance Digital Press Certification is awarded to digital presses that meet specific standards in the areas of color, print properties, and production.

For European-based certifications, many Fiery Driven printers have been certified under the Fogra Validation Print. This was the first ISO-based certification that ensures accurate and consistent color quality in digital printing. Certified systems and printouts lead to more efficient and reproducible workflows, a reduction in consumption of consumables and therefore lower production costs and higher productivity. For more information, go to http://w3.efi.com/Fiery/Products/FograCert-Validation-Printing-System.

Professional color management tools offer superior color output of the same high quality every time.

The widespread use of Adobe PDF print-engine (APPE) interpreters and other formats can also require higher processing power and print speeds. Other performance considerations include file size; VDP files can be as large as 8 gigabytes, whereas brochure and catalog files can be as large as 1 gigabyte when processed. A high-power DFE and high-speed print engine mean these large files won't hinder production. It is particulary important to be able to process and feed data quickly for short-run jobs on a fast print engine. A DFE that can simultaneously RIP and print the same file, as high-end Fiery servers can, keeps print engines running at rated speeds. By feeding the engine continuously with no cycling, service providers can use the press more efficiently.

In addition, a DFE that offers more automated workflows lowers touch points and errors. This also lowers costs for short runs, because operators spend less time working with a file and make fewer errors that lead to costly reprints. Automated workflows allow operators to easily use saved presets or other utilities to reprint jobs, making reprints even more profitable.

4 Versatile Enough for a Wide Variety of Uses

High-performance digital press systems are especially important in the following market segments and can save meaningful time and money, making high-quality digital color printing more affordable than ever before. Output is faster. Operation is easier. Finishing is automatic. Reliability will keep print service providers up and running. And color quality will keep customers coming back for more.

- **Commercial lithography**: These printers often have work that could be cost-effectively switched to higher-speed, heavy-duty, color cut-sheet engines and high-performance DFEs. A high-performance digital platform breaks the cost barrier of legacy equipment while maintaining the color quality and throughput power that keeps commercial shops competitive

- **Digital printers**: This segment continues to grow as quick printers and commercial printers move into the value-added digital arena

- **Quick or small commercial printers**: These shops need a solution that will enable them to transfer offset spot-color printing to digital. Cost-effective output and fast turnarounds will allow them to shift production to flexible digital print engines and DFEs

- **Print-for-pay shops**: These businesses were early adopters of digital printing. The most successful shops are the ones with differentiated and integrated marketing services, production efficiency that guarantees competitive turnaround times and high-quality output

- **In-plant commercial reprographics departments (CRDs)**: Corporate CRDs, government printers and educational, and health care shops will appreciate the wide range of paper handling, finishing options, and color management tools that match the needs of any application

High-performance digital platforms are useful for a wide variety of print jobs as well. These include:

- **Marketing materials**: Brochures, catalogs, stationery, direct mail and business cards

- **Corporate materials**: Newsletters, color presentations, reports, training materials, sales proposals, and human resource documents

- **Photo publishing**: Photo books, postcards and calendars

- **Book publishing**: Books and manuals

- **Packaging**: Boxes, envelopes, and proofs

- **Variable Data Printing**: Direct mail, catalogs, and transactional promotional material

5 A Wealth of Business Benefits

An advanced DFE, such as a high-performance Fiery server, matched with a high-speed print engine creates a digital press system that can handle the most complicated jobs with superior quality. This platform can help commercial printers, print-for-pay facilities, and corporate CRDs meet tight deadlines by significantly reducing the need for special training, as well as by eliminating the complex setup, make-ready and plate-change operations required with offset printing. And its digital workflow can accommodate last-minute changes, Web-to-Print job ordering, variable data printing, and cost-effective inline finishing.

For even higher value, these high-performance digital press systems provide benefits in the following areas.

5.1 Performance

Combined with its intuitive operation, a high-performance Fiery DFE empowers automated workflows to deliver finished jobs faster. Printers can meet their tight turnaround times and accomplish more by automating time-consuming manual tasks and by removing production impediments.

Imposition and make-ready tools reduce job preparation times and last-minute corrections by enabling users to do document imposition, composition, and content editing operations. To further reduce waste, operators can use the preview capability to display exactly how the job will print on the digital press.
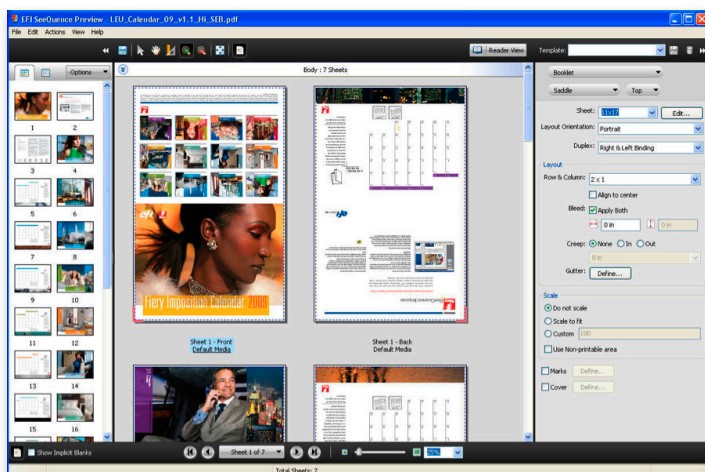

With EFI™ Fiery Impose, users can edit and preview exactly how a job will look before sending it to a digital press for output.

In addition, Fiery DFEs allow operators to proof before they RIP. This proof feature is especially useful for very large VDP files, which might take 30 minutes to RIP. A Fiery DFE with preview and imposition software allows operators to verify the data file and imposition before the entire file RIPs. This creates workflow efficiency and reduces correction time. Operators can also return to and reprint an exact record or range if there's a printing problem, such as a paper jam. All these features help shops save time and avoid expensive problems.

High RIP speeds allow shops to move more data to print engines faster, so they never have to cycle down and warm up again, losing valuable press time.

The latest Fiery technology in high-end DFEs with FS100 Pro, Fiery HyperRIP, is a unique, speed-enhancing technology that splits individual files so they can be processed simultaneously with multiple interpreters and reach the print engine up to 40% faster than with current systems.
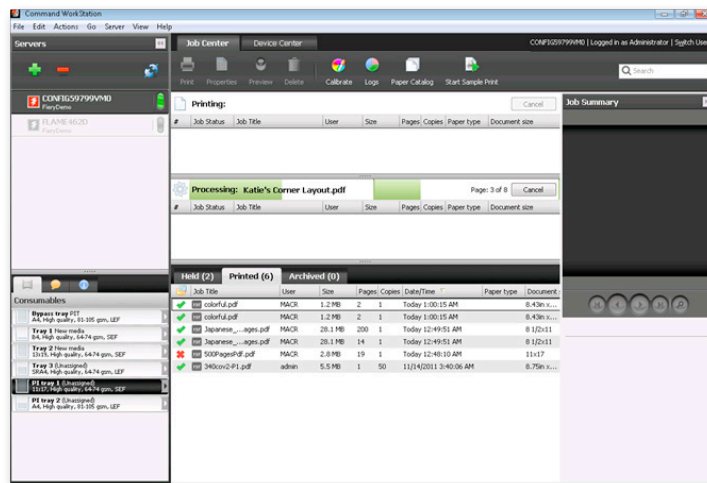

Fiery HyperRIP splits individual files so that they can be processed with multiple interpreters simultaneously.

5.2 Advanced Make-ready

Complex print jobs, such as manuals, tabbed reports, and catalogs, present their own set of unique challenges for print producers and often require expensive corrections. A high-end Fiery DFE can easily produce these jobs with Fiery JobMaster™, a flexible, advanced, make-ready tool.

With Fiery JobMaster, operators can completely customize documents with the ability to edit select pages, apply page numbers and stamps, and create tabs with a WYSIWYG preview. Fiery JobMaster operates directly from the DFE, providing the operator with a simple, intuitive solution that saves time and reduces costly errors.
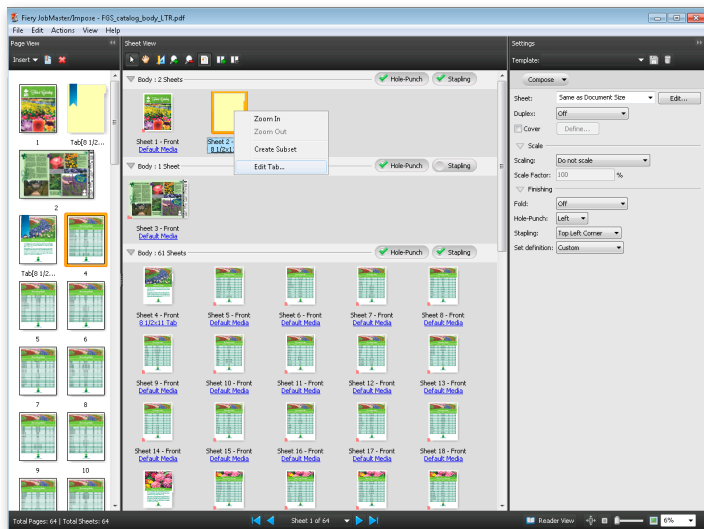

Fiery® JobMaster provides advanced PDF-based job-preparation functions such as fully visual tab insertion and design; media assignment, page numbering, finishing and scanning; and powerful late-stage editing features.

5.3 Color

The superior color from a high-end Fiery DFE gives shops the flexibility to use digital presses for high-quality results in high-value, color-intensive applications, and even to offer spot-varnish effects. Professional tools for managing color, proofing, and workflow give operators total control of color output quality. This allows them to meet the color requirements of demanding customers and guarantee accurate, consistent color.

Shops with a high-end Fiery server can achieve the best color consistency and accuracy and enjoy the ultimate in precision color with Fiery Spot-On™, Fiery Graphic Arts Package, Premium Edition, and Fiery Color Profiler Suite. They can also sharpen images, smooth flesh tones, and enhance the natural color of any photo in a document with the latest version of the fully integrated Fiery Image Enhance Visual Editor. Updated algorithms include a new Definition Control that locally enhances tonal transitions, and a new Saturation Control that independently saturates skin-tone and non-skin-tone regions.
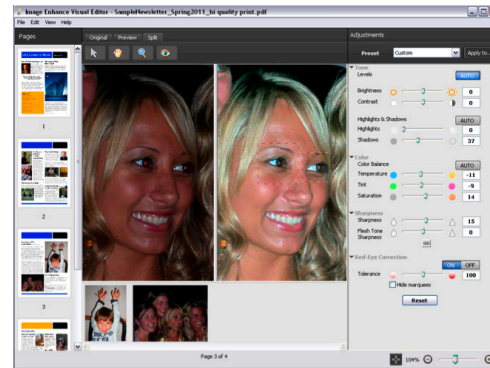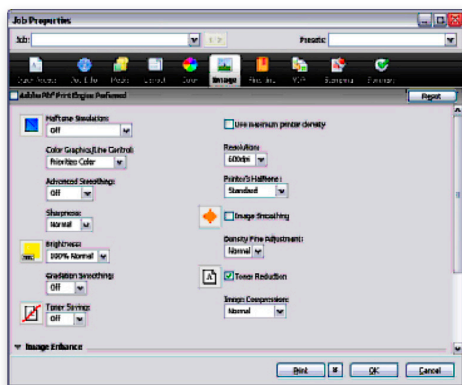

EFI Fiery Image Enhance Visual Editor provides users with interactive tools to optimize the appearance of any image without the native application.
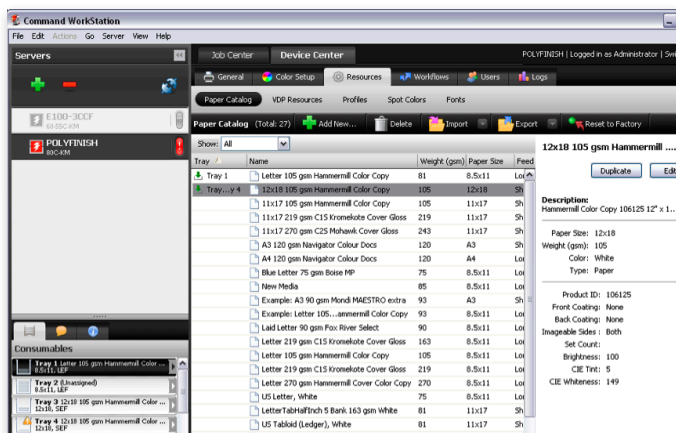
5.4 Usability

Modern DFEs allow users to interact with production tools directly from the print server or from other interfaces.

EFI Fiery Command WorkStation® job-management interface centralizes job management and connects to networked print servers. This reduces operator mistakes and waste, while the intuitive and flexible drag-and-drop operation can reduce learning curves. In addition, many print operators are already familiar with the Fiery Command WorkStation, because it is the most used digital printing interface in the industry.
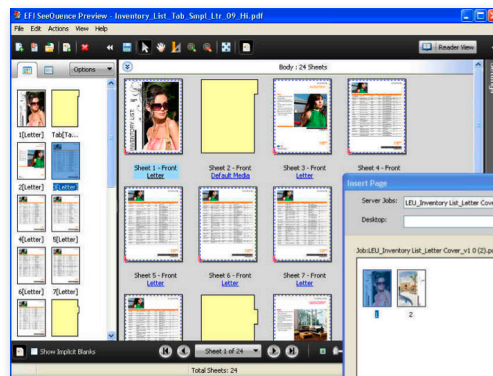

The preview capability of EFI Fiery Impose allows users to view exactly how a job will look before sending it to a digital press.

EFI Fiery Command WorkStation gives users full control over job settings to maximize both efficiency and output quality.

EFI Fiery Impose-Compose offers a unified, intuitive and fully visual imposition workflow for both VDP and non-VDP jobs.
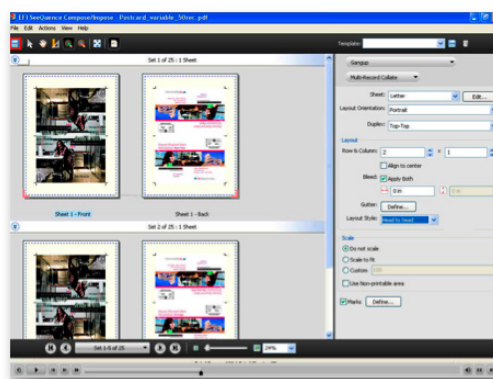

EFI Fiery Command WorkStation offers interactive media management tools that enable users to make stock choices that will optimize output quality for every job.

Fiery servers also allow operators to perform functions such as imposition, make-ready and late-stage editing all from the DFE without using standalone point solutions.

Image-editing features allow operators to edit and optimize images in a job without the need to return to the native design file, saving time and reducing costs.

5.5 Integration

Open-platform technology allows a DFE to integrate seamlessly with most vendor solutions. Technologies such as job description format (JDF) serve as a gateway to a variety of solutions that allow users to move job details, such as job numbers, descriptions, media, production counts, and start and stop times, through their systems faster and more efficiently.

For a list of DFEs that offer industry-leading JDF performance, check the CIP4/PIA website at http://www.cip4.org/global/v3/index.php?content=/certification/certified_products.php. For example, DFEs running Fiery System 9 Release 2 and newer were the first, and are currently the only, servers with the JDF 1.3 Integrated Digital Printing Interoperability Conformance Specification (ICS) certification. As a result, Fiery Driven™ devices from the leading digital print engine manufacturers are easier than ever to integrate with workflow systems from pre-press all the way to printing.

Fiery servers also have native PDF workflows to allow users to improve end-to-end consistency and flexibility of their printed output.

For example, the industry-leading Fiery servers from EFI use JDF technology to connect to third-party solutions, as well as to integrate to EFI's Web-to-Print and print MIS/ERP systems.

- Customers can submit their jobs through EFI's Web-to-Print eCommerce system, Digital StoreFront®, which then automatically transfers the file and instructions to the Fiery DFE. Customers can also view the progress of their project in real time and receive notification when the job is complete

- Operators can use Fiery JobFlow to preflight and send a job to the Fiery DFE
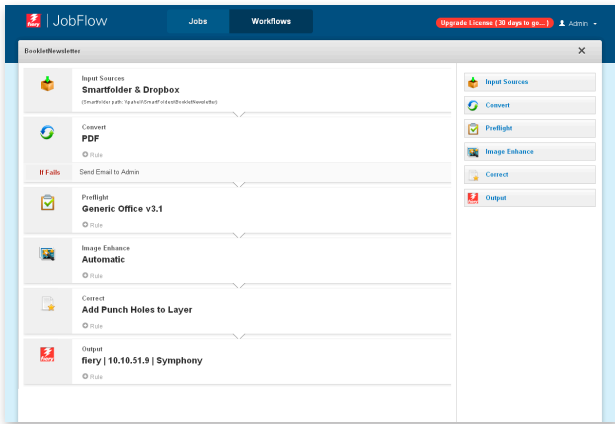
- EFI PrintFlow® scheduling tool provides the Fiery DFE with an exact sequence of jobs to print

- An EFI MIS system, such as Pace™ or Monarch, dispatches an invoice to the customer when the job is complete and provides a complete cost analysis

**Prepress Workflow Integration**

In addition, an integrated workflow with popular pre-press systems such as Kodak Prinergy or Agfa :Apogee can bring considerable benefits to a print provider, including the ability to meet changing market demands, serve new markets, and be more responsive to customers. By sending jobs from a prepress system directly to a Fiery DFE, service providers can achieve:

- Higher profitability for short runs

- Increased workflow flexibility

- Reduced administration overhead

- Protection of workflow investment

This prepress integration is especially useful in many common business situations in which a hybrid workflow can have a significant impact on production efficiency. In these situations, a hybrid workflow solution offers the flexibility to change the imposition on the fly and re-route the job to accommodate digital printing and the offset plate-making processes:

- Quick initial short runs

- Short-run reprints of a long-run job

- Quick digital proofs

- Mixed static and variable components

- Web-based job submission
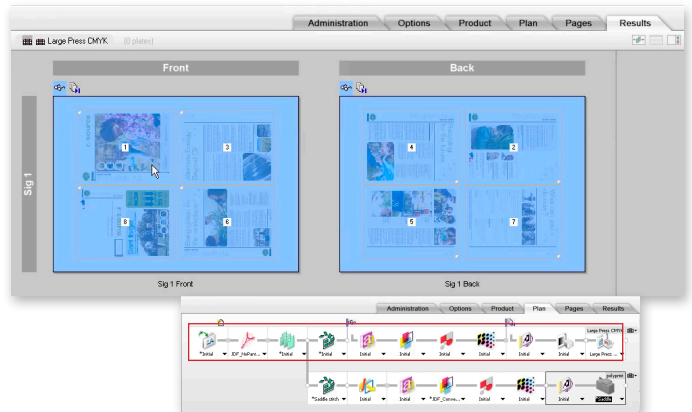
An example of a hybrid workflow. Agfa :Apogee sends jobs to conventional offset printing.
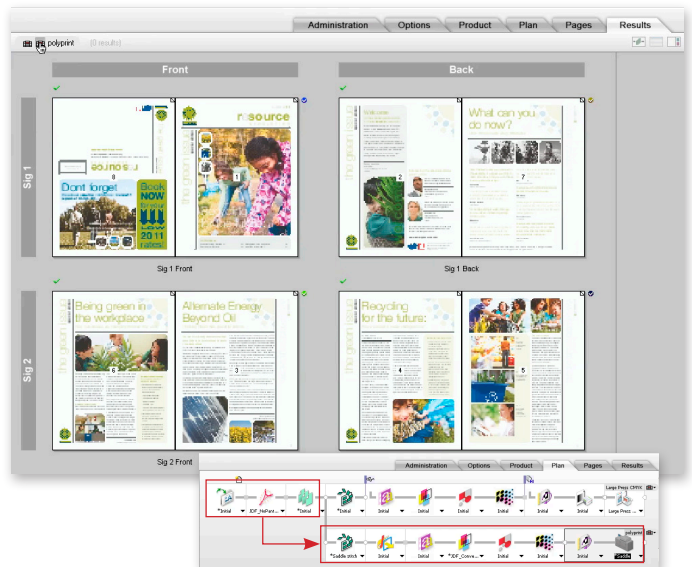
The hybrid workflow can re-route the same job to digital presses on the fly with the job re-imposed for digital printing.

5.6 Variable Data Printing

Variable data printing (VDP) languages specify a format for the data used in personalized printing. It is important for a DFE to support these VDP languages:

- Advanced Function Presentation (AFP): a language invented by IBM® that describes text and graphics

- Fiery FreeForm and FreeForm 2: from Electronics For Imaging

- Personalized Print Mark-up Language (PPML): the industry standard developed by the Print On Demand Initiative

- PDF/VT: an ISO standard for document exchange

- VI Compose/ VIPP: An open VDP language from Xerox®, used for the output of PostScript documents

- Variable Print Specification (VPS): a VDP language from Creo

The robust, open, flexible, and scalable Fiery VDP solution supports industry-leading VDP formats above and leading VDP composition software including:

- DARWIN VDP

- Fusion Pro VDP

- Print Shop Mail

- uDirect

- GMC PrintNet

- Proform Designer

- Persona Cross Media Suite

- EFI Fiery FreeForm™

Fiery Driven digital printers include easy-to-use variable data printing capabilities. Users can change data such as names and addresses, or even images and content so that every document can look as if it was printed expressly for each individual recipient.
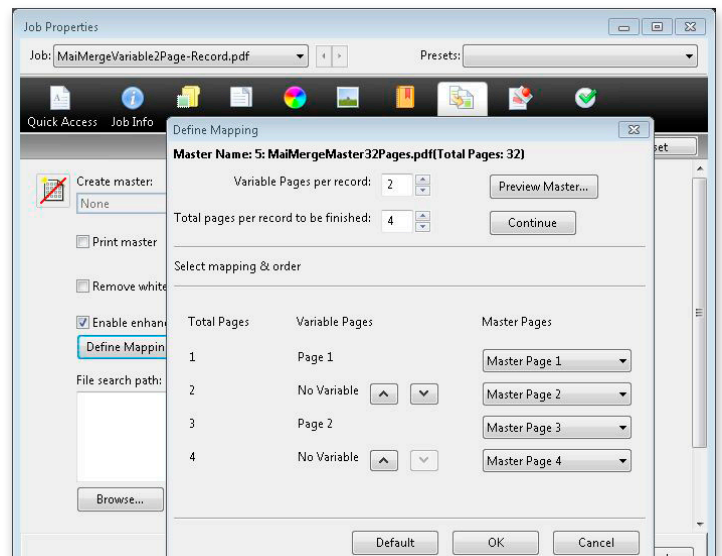

EFI Fiery FreeForm supports all leading VDP composition software, offering a seemless workflow for all VDP jobs.

5.7 Stock Choices

Today's high-performance print engines can handle the right paper for every printing need, maintain precise image position through long press runs and keep heavy, coated stock running smoothly from the first sheet to the final fold.

Integration with the Fiery Paper Catalog's centralized paper warehouse database improves paper management across the entire production process and enables operators to intuitively apply media specifications on a per-page or chapter basis.
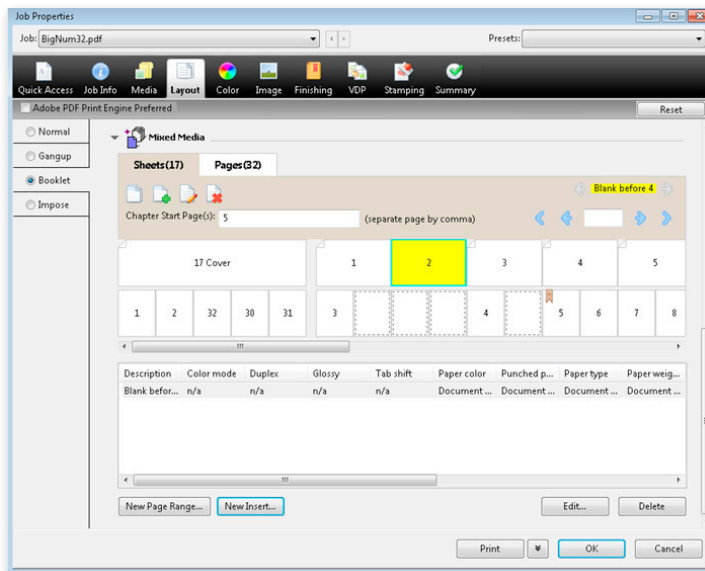
Mixed media viewer for perfect binding gives operators visual feedback of page-level operations such as duplex, media, insert, and spine settings for a perfect-bound job.

5.8 Inline Finishing Options

Fast, efficient inline finishing offers more options for the lowest-cost decision in any given situation, allowing users to choose whether to send a job to finish on the press, to send pieces to an in-house bindery department or to outsource it to an external bindery. The powerful Fiery DFE comes with all the options to facilitate inline finishing when economically prudent to do so.

Finishing components that are tightly integrated with the print engine and powerful user interfaces provide fast, flexible finishing capabilities and options that help increase output, lower costs, and improve profitability. For example, using a print engine with an inline perfect-binder adds value, and allows shops to offer the fast turnaround customers demand while keeping jobs onsite to help retain revenue. Customers receive high-quality documents faster, and shops can produce the documents with less manual work.

5.9 Print Resolution

Higher print resolution reproduces finer detail, both in images and in text. In the close-up view, curved lines reveal less jaggedness, giving letters and graphics smooth, clean accuracy.

Advanced dot screen and screen technologies provide color images with greater realism, eliminating moiré patterns and edge distortion. Optimized outline processing makes color characters look thinner, cleaner, and tighter against white backgrounds, and thickens the appearance of knock-out print characters against color.

The exclusive Fiery technology, Dynamic HD Text and Graphics, offers users the unique ability to print with the highest definition, RIP files at 1200 dpi to preserve high-detail content in documents, and reduce jagged edges for half-toned, non-saturated objects. Dynamic HD Text and Graphics effectively increases the engine's native resolution to produce crisp edges and sharp lines.
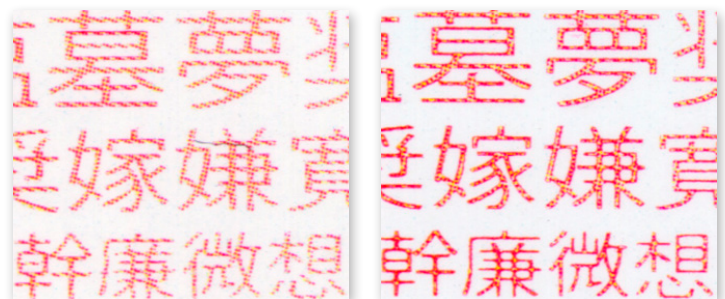
Printed without Dynamic HD Text and Graphics.

Printed with Dynamic HD Text and Graphics.

6 How to Get Started

To evaluate a high-performance digital press system, a good start is to conduct a study of how much time operators spend on various types of jobs. Examine the different kinds of tools available on a high-performance digital press system and see if they can save time, and reduce errors and waste. Be sure to look at the potential for integrated systems and automated workflows.

An ROI analysis should also include an evaluation of opportunities for reduced costs or new sales. Track jobs you could have secured if you had the ability to meet the turnaround times or profitably produce shorter runs. Measure output speeds or the number of pages printed, and then look for digital press systems that can match or exceed that measurement. Identify the additional profit potential of not having to outsource work.

In addition, you should consider what types of jobs you might need to do in the future. Today's trends may provide you with trends to prepare your business for the future. You may, as industry surveys show, find more demand for short runs, personalized printing, and increased use of color. You might be getting more complex jobs that require imposition, composition, tabs, and finishing. Demand could be increasing for documents that combine a variety of input sources and even hard-copy input. Or customers might be giving you more non-professional photography that requires enhancement. Analyzing the trends for your business will give you a good idea what capabilities you might need to make your business more competitive and profitable in the future.

Then calculate the cost of an hour of idle print engine time by dividing the lease rate by the number of total operating hours before exceeding the maximum duty cycle. The result will reveal potential savings with a higher performance DFE that drives the engine at rated speed. If you have an MIS system, determine whether the digital press system integrates with it so you can schedule press time more efficiently and price jobs more accurately. If you do not yet have a MIS system, check to see if the DFE integrates with industry-leading systems.

For a final test, select files you think might work on a high-performance digital press system. Have your vendor test them with the print engine and DFE you want to use and evaluate the speed and quality. Test a type of job you want to secure or one you have had to decline. Once you see the actual performance, you can conduct a cost analysis and determine if you can produce this kind of job profitably.

Page 16 shows results for three actual files that demonstrate the type of performance differences you might see in your own jobs. As you can see, the differences can be dramatic. For example, in a transactional printing job that included forms with some images and graphics, the high-end Fiery DFE was 5 to 14 times faster (see Figure 4) and as much as 3 times faster for a job with a large number of graphics and images (see Figure 5). In the large VDP job, doubling the speed saved 25 minutes on the total run time (see Figure 6). Testing your actual files will provide the base numbers for your own ROI analysis.

Once you have a new high-performance digital press system in-house, create a VDP invitation for your most loyal customers. Show them your new high-performance digital press system and its capabilities. Nothing explains the benefits better than actual, printed proof.

Figure 4: Transactional Printing Forms Including Some Images and Graphics
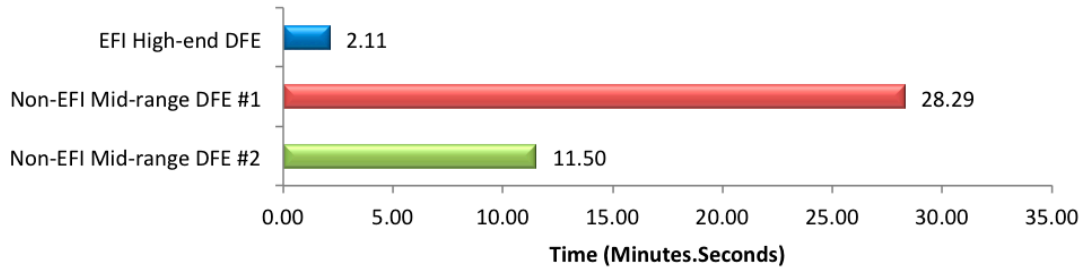
2,800 page, 15 MB PDF, RIPped and Held

EFI High-end DFE	2.11
Non-EFI Mid-range DFE #1	28.29
Non-EFI Mid-range DFE #2	11.50

Time (Minutes.Seconds)

Figure 5: Graphic- and Image-Intensive Manual

576 page, 3.5 GB PDF, RIPped and Held

EFI High-end DFE	4.42
Non-EFI Mid-range DFE #1	12.39
Non-EFI Mid-range DFE #2	10.04

Time (Minutes.Seconds)
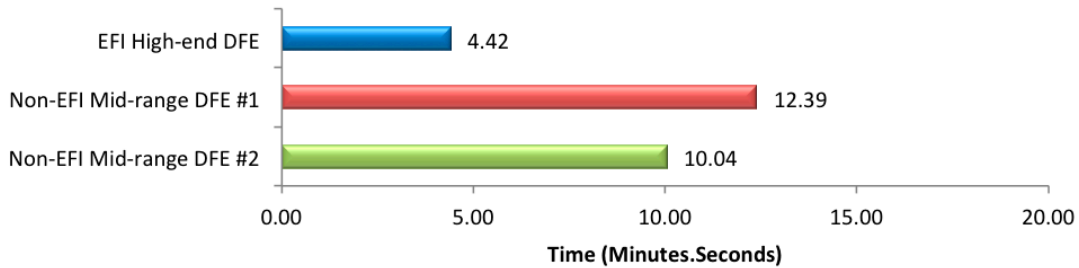
Figure 6: VDP 4-up Postcards with Images and Variable Text

2,000 page, 140 MB PDF, RIPped and Held

EFI High-end DFE	25.03
Non-EFI Mid-range DFE #1	51.39
Non-EFI Mid-range DFE #2	50.15

Time (Minutes.Seconds)
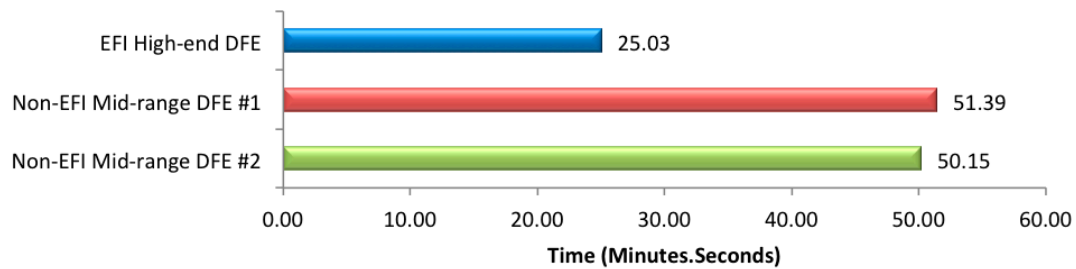
6.1 Future Trends in Digital Front Ends

In the 2012 report Understanding Market Dynamics and Customer Requirements, InfoTrends notes a variety of trends that you should look for to future-proof your DFE choice:

- Native PDF rendering and its variable data format, PDF/VT, have seen rapid adoption

- DFEs need to become print servers with more robust and flexible job ticketing as well as tight integration with other workflow solutions

- Respondents are asking for more robust prepress, make-ready, and job-management functions so that they can migrate point solutions to the DFE

- Users need DFEs to evolve with general developments in the IT landscape: mobile access, support for cloud computing, and increasing security and IT functions

- Color management and profiling mostly occurs at the DFE and will remain there

- Most respondents want to use DFEs as print servers by using job tickets

  » This is especially true in environments in which jobs tend to vary, such as commercial print and quick printers

  » This will further drive functionalities from standalone to Web-to-Print/MIS or DFE

In addition, you should evaluate whether a DFE has:

- Performance for demanding VDP applications, flexible capabilities and ease of use

- Compatibility with prepress workflow software for offset and digital hybrid environments

- Web-to-Print and MIS integration

The DFE you choose, combined with the print engine, should also give you:

- Color quality and consistency, comparable to offset presses

- IDEAlliance DPC certification or FOGRA compliance for color quality and consistency

- More speed and low make-ready costs to increase profitability for short-run jobs

7 Summary

Print buyers expect flawless color, quick turnaround on complicated documents and high-quality output on jobs from a wide array of sources — all at competitive prices.

High-performance digital press systems can help you make money in a number of ways. Automated workflows, for example, let you set up common jobs in advance or pick up settings from other jobs. Then just drag and drop the file for repetitive jobs and nobody has to touch it. With fewer touch points, cost and errors decrease. It's that simple.

Creating a color profile with color management systems is equally easy and fast. Then you can automate accurate, consistent color so you never have to sacrifice quality or performance.

A robust, open, flexible, and scalable variable data printing solution that supports all leading VDP formats provides printing at engine-rated speeds and works with all leading variable-data composition software and data formats for seamless workflows. In addition, when operators can preview and verify the job before the entire file RIPs, you gain workflow efficiency and save rework time. Finally, in a large VDP job, a high-performance DFE can increase the processing speed from 2 to more than 50 times.

These are just a few of the ways a combination of high-performance DFE and print engine, plus advanced, integrated tools, helps you meet the demands for faster processing, quicker job turnaround, and outstanding color output in today's market.

Modular tools, integrated in the DFE, also allow you to tailor the digital print solution to your particular situation, paying only for the functionality you need and adding additional capabilities as needs evolve and budgets allow. This helps you to be more competitive and meet both current expectations and future needs in an ever-changing marketplace.

Innovative Fiery technology drives digital printers to produce more than any other solution. Flexible and scalable Fiery servers integrate into any print environment; deliver amazing precision; RIP with blazing speed; produce perfect color every time; decrease set-up time, errors and costly reprints; and provide a high return on investment.

See how high-end Fiery DFEs can be key to your success as part of a high-performance digital press system. Find out more at http://w3.efi.com/Fiery/Products/Fiery-Digital-Print-Servers.