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Ringier Selects Fusion to Automate Its Prepress

BY KURT K. WOLF

Ringier AG, Switzerland's largest media firm, has invested 1.8 million euros in upgrading its facilities in Zofingen, Switzerland. A key part of the investment is the Fusion workflow, based on Fusion Systems' DigiPage workflow plus a few additional components assembled by the local distributor.

Ringier PreMedia, the prepress division of Ringier Print Zofingen AG, Switzerland, has stayed at the leading edge of technological development throughout the shift from proprietary CEPS systems to open PostScript-based systems. Along the way, it has grown to an impressive size, with all the complexity that entails.

The printing operation, which has two gravure and six offset web presses, each week produces six Ringier publications of 90–120 pages. There are six more Ringier monthlies of a similar size. Then there are 10 periodicals that Ringier prints for other publishers, as well as another 40–50 individual print jobs each month, ranging from 8-page flyers to 500-page vacation catalogs.

This kind of volume can only be handled by working around the clock, both in the pressroom and in the prepress division. About 100 Macs and PCs are connected to the prepress network. The SGI servers, now running the Fusion workflow, deliver pages to eight Epson printers and six Iris proofers, as well as three Lüscher Xpose 160 platesetters and four Helioklischograph gravure units.

Prepress manager Olaf Forte took us through his operation and told us about the demands on his division: "Around 70 percent of our production is supplied PDF page data. The rest is in the form of 'open' files, such as Quark XPress. We have to make sure that printing continues around the clock. Based on the production schedule, each 48-page magazine flat must be imaged to plate within an hour of the arrival of the PDF page files. To manage that, we use Artcom Impose for both offset and gravure."

The Fusion workflow

The workflow that Ringier had originally installed for the scanning and computer-to-film operations has left a lot to be desired in recent years. So Ringier undertook a year-long evaluation of all the prepress workflows on the market. In Fusion, it found a solution that, on the one hand, could integrate the existing infrastructure and, on the other, seemed suited to their large operation because it could be scaled up almost without limit. Hans Ruedi Keller, of the Zurich computer consulting firm Schwarzaufweiss ("Black-on-white") which distributes Fusion, worked hard to present the advantages of his product. One of the smallest workflow providers in Switzerland, he eventually succeeded in landing the country's largest workflow system order.

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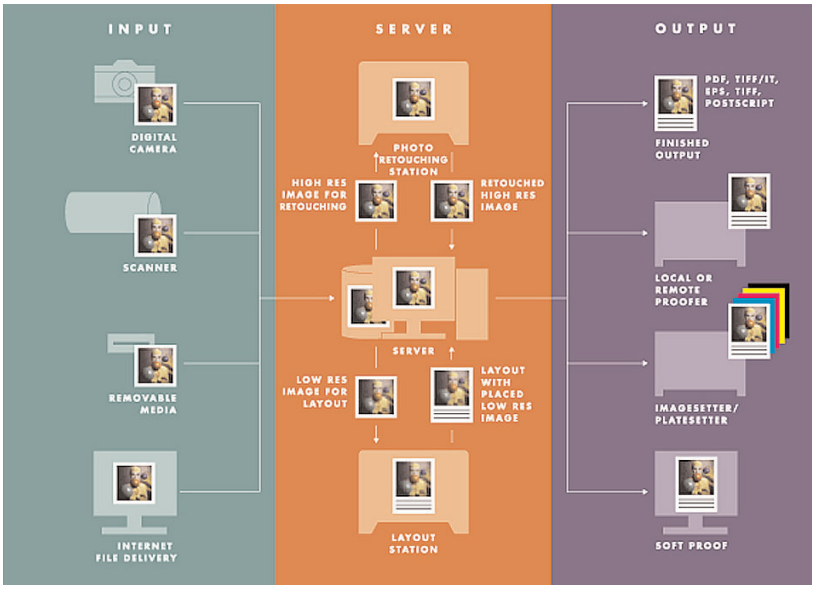
Fusion Systems International

12021 NE Airport Way
Portland, OR 97220
(800) 278-5123
(503) 255-5800
info@FusionSystems.com
www.fusionsystems.com



FullPress functions. Xinet's software accepts images from various sources and dynamically prepares low-resolution FPOs, so that edits to the original image are immediately reflected in the FPO versions. The high-res versions are automatically substituted during final output.

Today, the Fusion workflow consists of three main components: FullPress 11 and WebNative Venture from Xinet, the Harlequin RIPs from Global Graphics, and the FlashNet archive and backup system from Software Generation Ltd.

The Fusion workflow was created in 1997 when LDR (the prepress dealer based in Portland, OR) combined the Harlequin RIP with FullPress and got them running on multiprocessor SGI computers. It was extended with the FlashNet software on the initiative of Schwarzaufweiss in Zurich. In March 2002, LDR spun off the rapidly growing workflow business into its own company, Fusion Systems International (www.fusionsystems.com), also based in Portland. The international distribution structure was unaltered. (In the U.S., Fusion is distributed through #1 Network, www.no1network.com.)

Fusion arose from the requirement for a true, centralized, but scalable server for the professional publishing environment. The Fusion workflow interfaces are documented and the database structure is published. Data can be sent to any output device via standard bit- and byte-oriented protocols.

Xinet Fullpress

Xinet originally wrote FullPress for the Unix operating system for two reasons: It was the most stable and open operating system, and it offered unlimited scalability. Today, FullPress runs on the following operating systems:

- Sun computers with Solaris
- SGI computers with Irix
- Apple computers with Mac OS/X Server
- Intel computers with Windows NT and Windows 2000
- Intel computers with Solaris x86

We have examined other aspects of Ringier's operation in past issues. The company was an early customer for Lüscher's Xpose 160 platesetter (see Vol. 1, No. 19), and it developed MediaSpider, which lets print buyers work with printers via the Internet (see Vol. 1, No. 22).

FullPress is a powerful server program with workflow functionality. It stores shared documents on drives connected to a central server. Mac users can select these drives in the usual way and display them on their desktops. They can work with these drives just as they do with their local disks, and the access speed is just as fast.

The Xinet file-sharing technology allows FullPress to provide various views of a single high-resolution file. It lets several clients work with the same file, each in his own way. When high-resolution images are scanned in or transferred to the server, FullPress generates low-resolution (FPO) versions. Rather than existing as separate files, these are derived from the original data on the fly and presented via separate network-drive mappings. Those who want to work with the high-resolution data can get it from the "High-res volume." Simultaneously, others can work with low-resolution versions from the "FPO volume." Still other users can view the same images over the Internet in GIF or JPEG format.

Although these volumes appear to contain separate files, that is only because FullPress is working in the background to display different views of the same high-resolution originals to different users. The Xinet

The Confusion About Fusion

The Fusion workflow referred to in this article is now sold under the DigiPage name. Here is a bit more detail about the various products and companies involved in the workflow.

In 1997, when LDR decided to combine the Harlequin RIP with the Xinet FullPress file-and-print server, it christened the resulting workflow "Fusion." LDR later spun off the workflow business as a separate company, Fusion Systems International. Fusion Systems split the Fusion workflow into two versions. One, for high-resolution output in the prepress market, was named DigiPage. The other, for low-resolution and large-format applications, was named ColorRay.

Both are marketed through independent integrators. One such integrator, Schwarzaufweiss in Switzerland, sold the Fusion (now DigiPage) workflow to Ringier. Fusion Systems dealers also sell Xinet's WebNative (browser-based access to job information) and WebNative Venture (WebNative combined with a MySQL database).

Schwarzaufweiss was also responsible for getting Xinet and the U.K. firm SGL (which makes the FlashNet backup software) to work together, and the FlashNet package was part of the system Schwarzaufweiss assembled for Ringier. The cooperation between Xinet and SGL led to a closer relationship, and, since the beginning of 2003, Xinet has become the exclusive sales and support channel for FlashNet in the graphic arts market.

George Alexander

technology guarantees that changes to the high-resolution original are immediately visible in all views.

Easy image substitution. When users send files for printing via the FullPress print spooler, FullPress replaces the FPO versions with the high-resolution image data. All changes are passed along, just as though the user had been working with a full-resolution file. Because all the data for each job resides on the central server and doesn't need to travel over the LAN, the files are prepared extremely quickly, including pulling data from the database and executing the final RIP process.

FullPress supports more than 20 different image-file formats. That means high-resolution data doesn't need to be converted before being used in a layout. The formats include TIFF, JPEG, PostScript, EPS, PDF, Photoshop native, Alias PIX, Barco, Contex CT, Crosfield Studio 9000, DCS 1 and 2, Dalim CT/LW (including masks), Eclipse Tile, Eskofot/EskoScan, Scitex CT/LW and SGI Image Library.

Important functions. FullPress has attracted a loyal following, not just because of its stability, but also because of the variety of important functions it includes.

- *Picture Wrangler.* This Xinet XTension for Quark XPress is an alternative, optimized for the FullPress workflow, to the normal dialog window for using or getting information about images. It avoids the necessity of selecting each image and indicating its path name in order to have it updated. Instead, one just indicates in FullPress the top level of the FullPress volume where the images reside, and all the links are updated within a few seconds.

- *FullPress XT.* This module lets the user color-correct images within the XPress layout. In addition, the XTension permits every type of XPress layout to be reliably output to film or plate.

- *ICC color management.* The ICC-based color management in FullPress leaves the original RGB file unaltered and recalculates the image data according to the profile whenever the job is output. That means color information within FullPress remains independent of the output device and medium.

- *Unsharp masking algorithm.* As part of FullPress, Ringier can make use of an exclusive image-sharpening facility. This allows the unaltered image data to reside on the server, with sharpening taking place during output. The original files are not changed. Ringier is pleased in all respects with the printed result.

Distributed processing. Ringier's installation includes two application servers (the Zenith with 12 processors and the Zeno with 8) and a backup unit, the 8-processor Zulu. Mass storage, accessed via a separate network path, includes two TP9400 systems and an Ampex robotic tape library.

- *Placement of PDF files.* From PDF files, FullPress creates FPO versions that can be placed in a layout. During output, the original PDF data stream is sent to the RIP without conversion into any intermediate format.

- *Pre-separation and cropping of color separations.* In most applications, the creation of color separations is an integral part of the output process. In FullPress, by contrast, color separation occurs

Physical plant. Ringier houses the servers and storage boxes in one server room to simplify cabling and cooling.

prior to the RIPping stage. If you want to output just the cyan separation, FullPress sends only the cyan separation with cropped images, including any required trapping information.

The configuration at Ringier

Ringier chose to use the Silicon Graphics processor because of its modular construction, which allows components to be added when more performance is required, permitting the volume of work produced to rise in turn. Additional processors or memory, or an arbitrarily large increase in disk capacity, can be implemented quickly and with minimal work. System administrator Samuel Siegrist took us into the server room and described the functions of the various computers.

There are two main computers, both SGI Origin 3400 machines. One has eight processors, the other 12. There is also a secondary machine with four processors. All are equipped with 1 GB of RAM per CPU. Ten identical Harlequin RIPs run on the two main computers under the control of the FullPress software. These are the machines that send data to the various output devices. The Fusion workflow was implemented in collaboration with Schwarzaufweiss. The RIPs associated with the existing output devices (proofers, imagsetters, platesetters, gravure engravers) were replaced by the server-based RIPs. This means that all output will be identical, no matter which device it is imaged on.

The storage network consists of Fiber Channel switches and two SGI TP9400 RAID systems with a total of 2.5 TB of storage capacity. For archiving, there is an Ampex robotic tape system that can currently handle 55 cassettes of 300 GB each. The archiving process is controlled by the FlashNet package from Software Generation, Ltd., in Southampton, U.K.

Central data access. SGI's Clustered File System (CXFS) technology gives all three servers simultaneous read-and-write access to all data volumes directly over the storage network. This offloads most of the heavy network traffic from the LAN. In this respect, the CXFS solution is more than a consolidation of storage, as implemented in a classic storage network. Thanks to CXFS, the dynamic reassignment of disk storage is not necessary. When the amount of CXFS storage is increased, all the servers benefit directly. The ability of all three servers to access data over the storage network simultaneously makes a noticeable performance improvement.

Internet communication. Xinet's WebNative offering provides the printing company with an Internet connection to its clients. Clients, production partners and employees can all access parts of the FullPress file system using a standard Web browser. Following a password-protected log-in process, users can send or retrieve files. Thus, they can use the servers 24 hours a day, from any location.

Passwords and file-access restrictions safeguard the company's own data. They make sure that each of the WebNative users gets access to only that part of the file system that contains that user's files.

WebNative Venture combines WebNative with an SQL database, for even faster searching, structuring and categorizing of data. Ringier is using WebNative internally in order to test its usability with its own editorial operations, among other applications.

Company URLs

Fusion Systems: www.fusionsystems.com

Xinet: www.xinet.com

SGL: www.sgluk.com

LDR: www.ldr.com

Schwarzaufweiss: www.schwarzaufweiss.ch

Satisfied customers

At the end of our visit, Patrick Schmid, head of data management, emphasized that the FullPress user interface is easy to use, and Segrist pointed out that there had been hardly any system crashes since the conversion to the Fusion workflow in the summer of 2002. He also praised the support he got from Schwarzaufweiss, which helped to make the conversion simpler and quicker than anticipated.

Naturally, the stability of the software is an important consideration in Switzerland's largest pre-press operation. But other Fusion customers praise it as well. For example, Dr. Ralf Biering, CEO of Mediahaus Biering in Munich, comments, "FullPress solved all the problems that we previously had. While our workflow has not fundamentally changed, it is now more stable, more efficient and faster. We have used WebNative to develop better relationships with our customers through quicker turnaround times."

The unlimited scalability of the workflow means that even small prepress departments can take advantage of its high productivity and stable competence. Or, as Schwarzaufweiss's Keller said in all modesty: "Fusion is a great thing, but even a small business can benefit from it." **TSR**