

# Total Solutions for a Productive & Flexible Variable & Personalized Digital Printing

*Christian Verbrugghe  
Barco Graphics  
Gent, Belgium*

## VIPLane

Barco Graphics Digital Printing introduces VIPLane, the reference point in variable information printing workflow solutions, guaranteeing the production of customized documents in the most efficient and profitable way.

VIPLane can handle today's fundamental requirements of profitable pre-press operations : high productivity, short turn-arounds, peak loading, quality and flexibility.

The unique VIPLane concept ensures efficient generation of digital printed documents with contents that can be up to 100% variable. VIPLane runs on Windows NT platforms.

VIPLane is a high production variable suite of data tools used for printing even the most complex variable data jobs. It processes and RIP's these jobs on powerful NT stations. The jobs can be created on any of the variable data editors developed by Barco Graphics (VIPLayout running on NT or VIPDesigner, an easy to use Quark plug-in) or by any other PPML producer and PS,PDF suppliers. VIPLane manages printing of even the largest variable data jobs and processes the jobs entirely automatically at the nominal speed of the digital printing engine. The VIPLane architecture is build out of the following in house developed technology modules : VIPDesigner, VIPScript, VIPBinder, FastRip, PrintStreamer. All of them will be explained in detail below. A flexible VIPLane workflow requires support for multiple data-formats at the input and at the output. At any moment in the workflow jobs can be exported for remote viewing, proofing or printing. Optimally integrated and tuned for high productivity, these modules offers you the industrial strength of what printers expect from their workflow solution.

The same concept of variable information printing is applicable in our Cartography and Security printing solutions, where personalization on maps (ATLASVIP atlas, maps on demand) or on security documents (SDVIP : passports, driving licenses, tickets, ... ) brings added value.

## Automated Document Creation

Barco Graphics Digital Printing has the ultimate prepress tool for the layout of personalized documents : it supports dynamic layouts where the position and size of the variable elements depend on the content of the other variables in the document. The automatic layout

manager balances the layout depending on the number of variables for each record and supports hierarchical document structure. Fast interactive verification is ensured due to WYSIWYG visualization on the screen. The high degree of automation guarantees an industry benchmark performance for highly variable jobs.

A variable information workflow guarantees the production of customized documents in the most efficient and profitable way. Using the VIPDesigner or VIPLayout editor, documents designed with any desktop package can be adapted to included variable objects. These Variable objects are driven by the contents of the digital database. There is no limitation to the variable content : a page can be completely variable.

## VIPLane Technology Modules

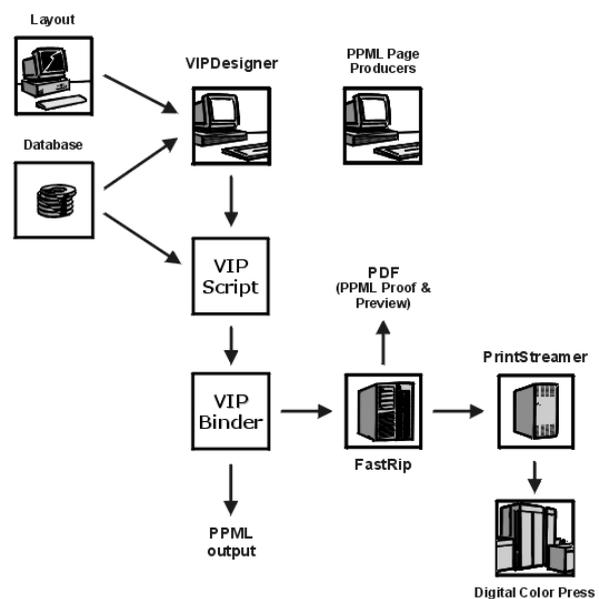


Figure 1. VIPLane technology modules

## VIP Designer

The VIPDesigner page producer tool is an easy-to-use QuarkXPress extension which permits you to do interactive variable page layout. VIPDesigner is an application written in Frontier, a powerful cross platform scripting environment based on AppleScript programming language. It supports all the basic features of page composition or personalized layouts in a Quark-

XPress document. Once the variable layout has been defined, VIPDesigner seamlessly integrates database information imported in ASCII format or through a direct link with FileMaker Pro to automatically generate all the files needed for Variable Information Printing.

The VIPDesigner package is uniquely positioned to provide benefits to direct marketers in terms of increased response rates and increased sales. In addition, VIPDesigner enables the digital color presses to offer the benefits of full-color, personalized, on demand printing to both current and potential users of variable data communication.

**Main Features:**

- Easy to use
- Unlimited number of variable data fields, records, re-usable objects per page
- Use FileMaker Pro as integrated database front-end
- Supports all Quark Typographic features also for variable elements
- Supports all PrintStreamer features such as step-and-repeat, imposition
- Outputs PPML, VIPLane or on-line to PrintStreamer

**VIPScript**

The variable layout is scripted in VIPScript, a description language to specify the variable elements of the layout. This script is interpreted by VIPBinder which generates the variable layout.

**VIPBinder**

VIPBinder runs on Windows NT and generates the real master and variable pages from the page layout files and the database objects. This process is performed completely in background, thus freeing up the workstation. Variable jobs can be regenerated fully automatically with a new or changed database without the need for a workstation. The VIPBinder concept has the capability of exporting in PPML format, making it fully interoperatable.

PostScript PDF interpreter	FASTRIP kernel	Screened Output	LEN
			Tiff G4 ...
			LP
PPML consumer	Color Management	Unscreened Separated Output	Tiff x N
			DCS
			Tiff IT
Barco interpreter	Color Management	Composite Output	Tiff CMYK
			Comp. PS
			PDF
		PrintStreamer Output	Compressed Objects

Figure 2. FastRip architecture

**FastRip**

The FastRip is a dedicated version of the Barco FastRip processor, which drives digital color presses. It is Adobe Certified with full support for Postscript 3, PDF 1.3 and ICC profiles. With its unbeaten speed and the implementation of Barco's screening and color technologies, it turns the digital color press into a highly productive printing device.

The FastRip architecture is one of the fastest in the world at an outstanding price/performance ratio. Due to the very fast on-the-fly RIPping the setup time for print run is drastically reduced. In this way, very short print runs become economical.

**PrintStreamer**

The PrintStreamer is an extremely fast buffer that eliminates the RIP bottleneck. Ripped objects are stored on the PrintStreamer and can be recombined into complete assembled pages at nominal speed of the digital color press. The buffer has the capacity of multiple thousands of pages and the operator can define any assembly or print sequence. While the next job is ripping, printing is sustained at full nominal speed and jobs are instantly switched without press downtime. Books can be printed in collated order and brochures or catalogs can be printed on demand. For variable jobs the FastRip delivers unbeatable performance due to the perfect integration of the object caching in the PrintStreamer. An intuitive user interface ensures ease of operation.

The PrintStreamer is a must for anybody who wants to achieve efficient production on a digital color press.

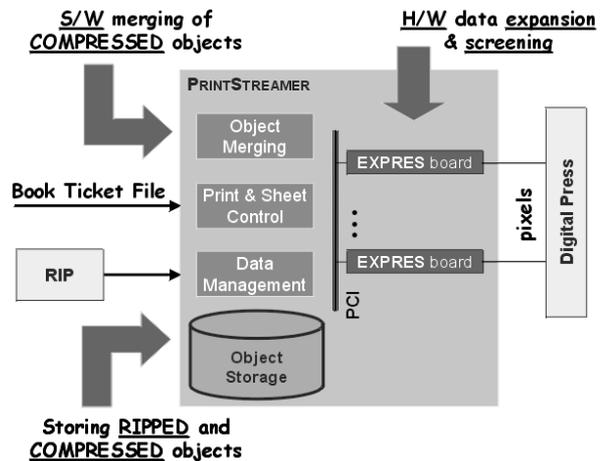


Figure 3. PrintStreamer architecture

**Main Features:**

- High performance digital color press server
- Standard NT system combined with dedicated data expansion hardware
- Object concept & efficient software compression
- Ready-to-print archive and retrieval

- Modular and scalable : unlimited number of variables/layers/pages and speed
- Step-and-repeat and imposition support allowing last-minute editing
- Open to industry standards

## PPML

Barco Graphics, advisory board member of the PODi organization, plays a crucial role in defining and developing the specifications of PPML. (Personalized Print Mark-up Language)

The XML based language was developed to improve productivity and interoperability for everyone in the digital printing community: designers, print specifiers, digital print shops and equipment manufacturers.

The PPML format combines content data, imposition templates and book ticket file. Recently PPML version 1.5 was announced, including important new details to enable graphic arts implementation. The Barco Graphics PPML consumer for example will accept page content in all the popular graphic arts file formats : Adobe Acrobat PDF, Adobe Postscript 3, as well as TIFF and JPEG images. Any application software that produces PPML documents can use those file formats and know it will run on the Barco PPML RIP, which conforms to the PODi graphic arts feature set.

The new 'TLC' architecture is the next step to pack the PPML file with the production instructions. The "TLC" architecture will define how Ticket, Layout and Content will be combined.

Barco Graphics PPML consumer is fully integrated with FastRip next to Postscript, PDF, TIFF and JPEG. It provides you a consistent workflow and guarantees you output integrity due to the in-rip integration.

The FastRip concept supports also multiple data formats at output, meaning that after consuming the PPML files, your output is independent from the output devices. A sub-set of PPML files can be processed in the FastRip towards PDF files, allowing you to pre-view proof, even at remote site. Due to the same kernel fastRip technology used, data integrity and output consistency is guaranteed.

Our re-usable object caching technique used within our PrintStreamer in combination with our in-rip PPML processing makes the FastRip/PrintStreamer concept one of the most productive and flexible PPML consumers on the market.

## Biography

Christian Verbrugghe has been active at Barco Graphics for 13 years. After having obtained a master of science degree in electronic engineering, he started his career with DISC in 1987 as International Instructor. At first he was only active in the Label and Packaging market, afterwards also in Barco CAM applications for the Printed Circuit Boards market. After the function of Order Process Controller he became Service Coordinator for the Barco Graphics divisions in the States. His career took a new turn with his appointment to International Service Coordinator, in which he took care of the follow-up of the distribution channels outside Europe. In his function of worldwide Service Program Manager, the quality of the services and customers satisfaction were brought to a high level. As from Drupa '97 on he became Sales Manager for the Barco Digital Workflow solutions and since a few months he is in charge of the Digital Printing department within Barco Graphics.