

## PDF/VT – The ISO Standard for Variable-Data-Printing (VDP)

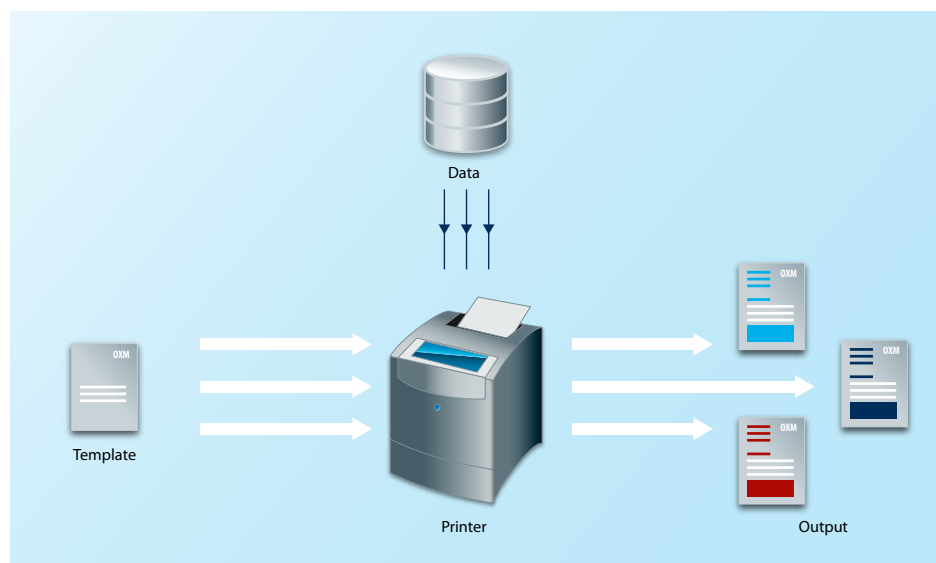
# An important Standard

In 2010 the International Organization for Standardization released the PDF/VT Standard with the number ISO 16612-2, which deals with the reliable document exchange for variable data and transactional (VT) printing. The new Standard offers useful new possibilities for Variable-Data-Printing (VDP) solutions.

The introduction states that the standard “specifies methods for the use of the Portable Document Format (PDF) for the definition and exchange of all content elements and supporting metadata necessary for printing tasks involving variable or transactional document content. It is designed to enable variable document printing (VDP) in a variety of environments from desktop printers to digital production presses. This includes hybrid workflows involving both conventional and digital printing.”

Transactional documents like orders, delivery notices, invoices, payment reminders etc. record business transactions. Billions of these documents are printed, enveloped, franked and sent out every day. The virtually endless stream of direct marketing mails can be added to these numbers. The high numbers of print jobs and the requirements for short through-put times have not only led to the development of corresponding hardware like high-performance printers. Applications like Variable Data Printing (VDP) have been created. In these applications, document templates with variable data from databases, for example the names and addresses of customers, are merged in the printer machine and do not have to be prepared in advance as print jobs. With large volumes of pages this saves both an enormous amount of processing time as well as memory space. This can significantly reduce the cost per page.

Technical advances in computer-supported customer relations (CRM) and in digital printing make the use of available empty spaces for up-to-date, targeted and personalized advertising messages possible. Market studies have shown that adver-



tisements via trans-promotion reach their target audience markedly better than accompanying pamphlets.

Trans-promotion has great potential.

But are print and preprint industries properly prepared for this?

- Transaction documents are still predominantly printed in black and white. The advertising messages require however a color reproduction.
- In addition, printer languages used like PostScript and AFP heavily restrict graphic possibilities. Designers who are used to desktop publishing with PDF/X do not want to accept compromises with respect to creativity.
- Production processes with highly differing formats like PostScript and AFP, proprietary metadata and missing caching and blending can no longer be easily optimized. Printing service providers require on the contrary cost reductions and improved interoperability, and pose clear demands on modern, automated printing processes.

These facts, and the huge demand for a universal and standardized VDP solution, have led to the development of PDF/VT.

## Why PDF/VT?

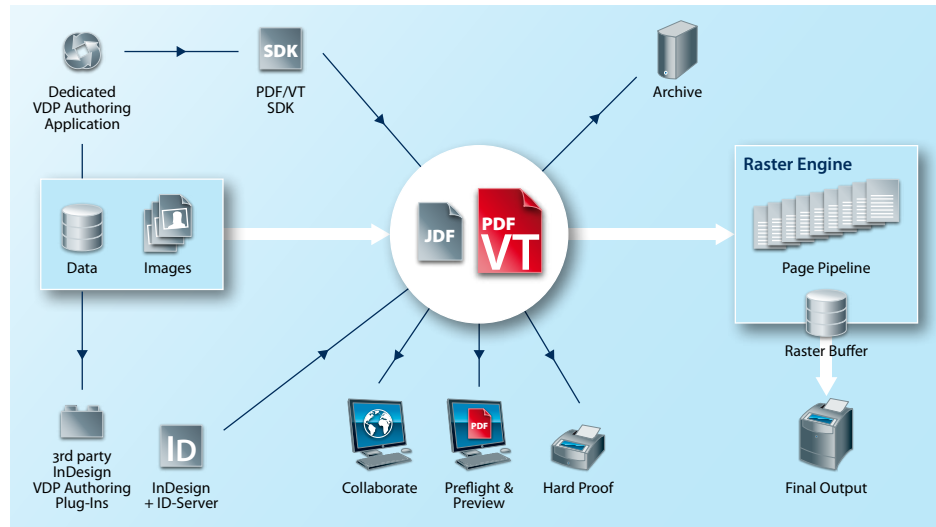
Compared with the printing process, which only support black and white, PDF/VT offers the printing of simple process colors like CMYK through to spot colors and multi-channel colors. Color printing requires that all stages in the process chain must more or less intensively deal with ICC color management.

The graphic model of PDF/VT is the same as for PDF/X. PDF/X content elements, including images, logos and page descriptions, which originate from common industry tools like Adobe InDesign, can be directly transferred into PDF/VT. Conversion processes like transparency flattening, that are necessary with PostScript and may result in undesirable artifacts, can thus be avoided.

The related standards PDF/X and especially PDF/A require that the document may not contain any reference to external objects. PDF/VT on the other hand allows for repetitive elements like images, logos, text blocks and entire page descriptions to originate from external sources. In this way it is possible, for example by personalized campaigns, to keep the size of a print job small by calling up data from an external database. If the print file is stored externally, sensitive data like credit cards and invoice details do not need to be saved with it, increasing the privacy protection notably.

## PDF/VT Applications

PDF/VT allows for a large flexibility when configuring metadata. With a bulk mailing it must be ensured that the content can be grouped by receiver, zip-code or gender for enveloping or dispatching. In doing so,



differences in the total number of pages or varying graphic elements have to be taken into consideration.

One of the greatest strengths of PDF/VT is the support of data streams which enables high volume transactional output (HVTO).

PDF/VT will be an elementary prerequisite everywhere that true hybrid workflows are applied and printing registers are drawn up with personalized content. VDP applications are used in a wide variety of publishing contexts:

- Business correspondence: Name and address of the receiver as well as other selected product information are integrated into personalized letters.
- Individual publication: Specific content is prepared for newsletters and newspapers, or incorporated into templates and published directly.
- One-to-one marketing: Graphic elements and variable text components are individually selected for each receiver based on simple rules.
- Multi-channel marketing: Multi-channel campaigns connect text, image and graphic elements that are tailored for each addressee. The selection is defined by rules, taking into account criteria like demographic factors and purchasing patterns.

Format conversions are eliminated in PDF/VT workflows

- **Trans-promotion:** With this type of business correspondence, individual content in transaction documents (for example account statements or invoices with name, address and account number) is supplemented with customer-oriented advertising. This is prepared in a superior graphic format, as is customary with advertising documents.

Further attractive uses PDF/VT offers for electronic communication like individualized communication over email or mobile devices like smart-phones with personalized URLs.

## A Glance into the Future

The demand for PDF/VT format is not very widespread at the present time. As with the change from PostScript to PDF technology, it will take a while before the new technology establishes itself in the market. The availability of appropriate tools for cre-

ating, processing, verifying, displaying and printing PDF/VT documents are necessary in order for PDF/VT to be a success. In addition, the end-customers who will use this technology will have to develop their own knowledge of it. The first comprehensive PDF/VT solution can be expected this year. However, it will probably take 2 to 3 years before they are implemented for business critical applications.

Based on the widely distributed and accepted PDF/X format, the PDF/VT standard format for VDP workflows will establish itself in transactional and trans-promotional print queues. VDP processes will benefit from the well-known advantages of PDF, like blind exchange, preview, pre-flight, transparency, device independence and calibrated color rendering. Parties involved in VDP processes, e.g. marketing experts, designers, prepress specialists and printing shops, will be able to easily and safely exchange, verify and process PDF/VT documents. ([www.pdf-tools.com](http://www.pdf-tools.com))



Dr. Hans Bärffuss,  
CEO of PDF Tools AG:  
„PDF/VT will be an elementary prerequisite everywhere where all the stops of true hybrid workflows with personalized content are pulled.“