Digital Printing Applications for Packaging and Labels

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Abstract

Around the time that DPP '03 is held it will be almost exactly 10 years that the first digital colour press was introduced. Meanwhile the technology has matured, and a lot of the early adopters and later users have experienced that it is no longer the technology itself that drives the development of digital printing, but the innovative applications that are being produced using these presses. This paper will look at the types of applications that are successful in digital printing, and why. It also looks at some of the innovative business concepts and marketing approaches that make this possible.

Commercial Availability of Presses

Xeikon and Indigo introduced the first digital presses in 1993. Digital printing systems optimized specifically for labels and packaging came to market from 1996. Meanwhile other companies emerged on the digital landscape, but still only the digital pioneers (i.e. Xeikon and HP-Indigo) have commercially available and adopted solutions for the production of digital labels.

Digital packaging got available even later than that. Today Xeikon has a web-fed solution, and some inkjet players like Aprion and Inca, have cut-sheet products. The different products all have their specific advantages. The digital packaging applications are less developed up till now, compared to digital label printing, but the opportunities are without a doubt promising.
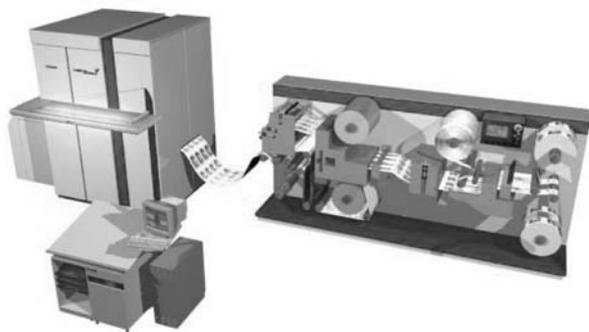

Figure 1. Xeikon Digital Label Solution

Technology and Applications

Although the technology underneath the digital printing presses is often brilliant, it should be taken for granted by the print provider. It is only enabling the print provider to produce print in a different way, bringing along specific advantages over the traditional ways of printing. The digital press is just a means of producing print in an inherent flexible way, directly from file to print on paper (or other substrate). In this way it appears to be a logical extension of LANs and Internet, of databases and computer servers, and it can be like that, but connecting digital devices seamlessly is a science in itself. Similarly producing labels digitally implies much more than just putting an image on a substrate from a file. Digital workflow, die cutting, coating and other finishing aspects, can not be underestimated. For this reason digital press suppliers provide consulting and integration services that help and support customers in integrating a digital press into their workflow and production facility.

For the end-customer ('print' buyer) it is not relevant how his labels were produced. Digital printing is only viable if it can add value for the end-customer. This is the key; the print provider should focus on added value and services he can deliver to his customer with the integration of a digital press into his business.

Smart customers see the digital press as a complement to the conventional printing equipment. Competing headson with the traditional way of printing labels (for instance flexo), for the mainstream label market is difficult. Companies that can exploit the specific advantages of digital presses, both in an organizational and commercial way, are successful. Typical advantages of digital presses are: virtually no job related set-up time of a press, low cost short run capability, short job preparation time, variable data printing capability. These advantages lead to cost efficient short run applications, JIT production or variable data applications.

Other successful printers built an application upon a specific advantage of a digital press, for instance true variable data printing, only feasible for a digital press. For example all the Euro 2000 Soccer tournament entry tickets were printed on a Xeikon digital color press. The tickets were personalized for counterfeit prevention reasons: a traditional label press could just not deliver these kinds of tickets.

Successful digital printers don't sell digital print. They sell a service that outperforms their traditional

competitor's, originating from the complement of a traditional label press and a digital label press, or originating from an application built upon a specific advantage of a digital press.

Digital Labels: Application Example

Print On Demand labels for hotel groups. This customer provides a service to different hotel chains in his country. The customer delivers customized hotel accessories: soap, shampoo, conditioner, body lotion…. The articles are personalized with labels for each hotel and may differ from season to season; they may even be adapted to special events.

With the digital press this company can print short run labels economically, they can personalize, they can guarantee a quick response time to his customer, and they depend only on their own printing facility. This example shows that by integrating the press in his solution concept, the customer built a quality service around the unique digital printing capabilities. It is important to note that this customer does not sell digital labels, he does not even sell labels. He provides a unique service, and in this way has an edge over the competition and can use relatively high margins.

The hotel group doesn't care how the printer does it. On the other hand this application could not have been developed economically without a true digital label press.

Digital Packaging: Application Example

Short run packaging. When the owners started the company, they had years of experience in the packaging industry, and recognized the capabilities and opportunities of digital packaging. With their solution, which consist of a digital packaging press, a coating and laminating device, and finishing equipment including a x-y cutting table, they can produce short run boxes.

Today they deliver a unique service to advertising agencies and the packaging industry. The company supports test marketing, event marketing, can produce mock-ups, personalized boxes. Again they are not selling boxes; they are offering a service/solution that is very expensive or even impossible with the conventional technology.

A cookie manufacturer developed a new product and wanted an appropriate box designed. Together with an advertising agency the digital packaging printer produced 4 different color scheme versions of the same box (5 boxes per color). These boxes were used to test market the new packaging designs at food fairs and retail shops. This could not have been done at a reasonable price with conventional packaging equipment. This is clearly another example of a successful digital printer offering a full service, more then only offering digital print.

Conclusion

Successful digital printers use digital technology as an enabler to provide a unique service to their customers, the 'print' buyer. These printers focus on services and added value they can deliver to their customers based on the integration of a digital press into their businesses.

Biography

Frank Jacobs received his Masters degree in Engineering from the University of Leuven, Belgium, in 1993. He joined Xeikon in early 1997, held various positions in Marketing and was responsible for interfacing technology and product information with the OEMs. Today, Frank Jacobs is responsible for the Product Management and Integration Services Group at Xeikon International.