Analysis

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The Opportunity in High-Speed Color Inkjet

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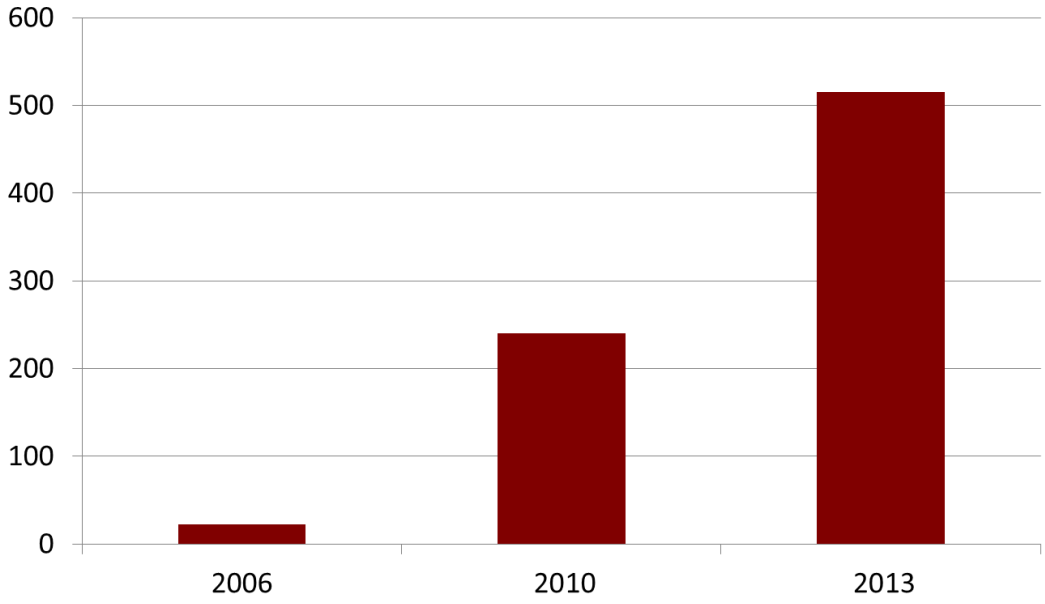
Introduction

Almost every show these days is labeled *the* inkjet show, and there are now so many color continuous feed inkjet printers on the market that it is difficult to keep track. A few years ago, the color continuous feed market barely existed. Today, an ever-increasing range of suppliers, often with multiple models, are battling for a piece of this rapidly-growing market. Consequently, the choices for users have increased dramatically from compact models to ultra-high volume printers with 4-up imaging width and top speeds. Installations increased from about 20 engines in 2006 to more than 200 in 2010. By the end of 2013, the number of installations is expected to be more than double those of 2010.

Figure 1: Global Color Continuous Feed Engine Installations, 2006-2013



A Growing Market Opportunity

With their high productivity, a compelling cost of operation, and quality levels that greatly exceed what was previously available from high-speed inkjet systems, today's color inkjet feed devices are creating new market opportunities. This market actually came into existence in the year 2000, but it has only experienced rapid growth since about 2007 when additional suppliers and model lines came to market. One company that was especially active in pushing the boundaries in ultra-high speed color continuous feed inkjet was HP. During drupa 2008, HP expanded the possibilities for inkjet productivity with its first presentation of the T300 Color Inkjet Web Press. HP was the first company to move into 3-up print width, and it remains the only manufacturer of 4-page wide printing systems. With 5,200 letter-sized or 4,926 A4 impressions per minute, its top-of-the-line systems also have the highest throughput in the market.

As the capabilities of the available devices expand, so do the opportunities. By 2015, InfoTrends anticipates that color inkjet will account for about 40% of digital color pages. In fact, color inkjet printing is the fastest-growing sector in the printing industry.

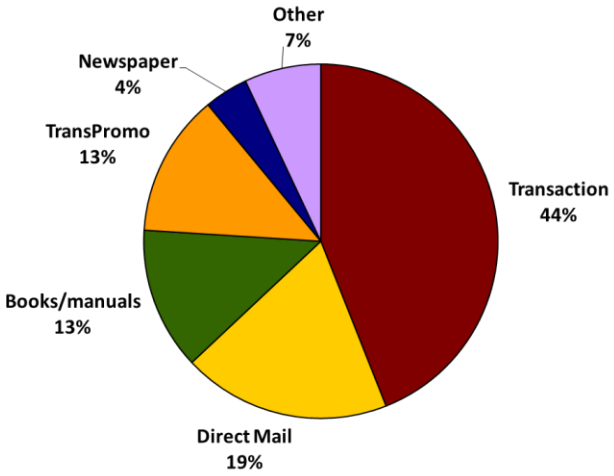
The shift toward high-speed inkjet color can be partially attributed to print technology advances that allow high-speed color printing at decent quality levels, combined with strong cost metrics. It is important to find the right applications that match the capabilities of today's technologies as there is no guarantee that an inkjet printer will fill the order books and create profit. It is also important to understand the evolution of the technology and what applications will be addressed by the next generation of devices. To obtain a better idea of the impact that these systems are having on the market, InfoTrends published a new multi-client study entitled *The High-Speed Continuous-Feed Color Inkjet Opportunity: Global Insights from Leading Customers*. This research includes interviews with 52 sites using this equipment in 15 countries around the world. The case studies record the responses of company Presidents, Senior Managers, and Production Managers who were interviewed through a combination of on-site (face-to-face) and telephone interviews. The information gathered provides a unique insight into the opportunities and challenges within in this rapidly-growing segment of the market.

To date, it has been difficult to quantify the actual application split produced on these machines. InfoTrends' research has clearly shown that the majority of installations occur at transaction printing sites or sites performing a combination of transactional and direct mail applications. Pure direct mailers are still rare in Europe, as are installations at book printers, commercial printers, and newspaper printers. Transaction is the leading application, accounting for 44% of all color inkjet prints. Direct mail is the second largest application as transaction sites are increasingly adding direct mail to the application range. Books and TransPromo tie for the third largest application. The share of TransPromo (statements with added personalized messaging) is substantial, and it is now estimated that every fifth transaction page is currently a TransPromo page. Now that

TransPromo is gaining ground, documents are increasingly becoming enriched with personalized messages. Book printing might not be the main application for many user sites, but it has gained popularity in filling up spare capacity. A number of diverse applications are produced on inkjet devices as well, but volume shares across the base are small.

It is no surprise that transaction is the leading market for color inkjet. Replacing offset color preprint and black & white variable data imprinting on toner printers with a clean sheet inkjet solution offers a strong potential for savings. These savings benefits stretch far beyond not needing to purchase pre-printed rolls. Having a white paper solution can offer savings in storage and logistics. It also reduces the number of paper rolls for inserters, allows better postal code pre-sorting, and enables faster throughput.

Figure 2: Application Shares of the Volumes Produced on Color Continuous Feed Inkjet Printers



So far, color inkjet printers have only had a small impact on offset printing. Respondents to InfoTrends' survey indicated that 10% of the volume run on their printers is replacing straightforward offset printing (without variable data imprinting). With the exception of on demand book printing, other applications are limited. This is because the printing quality and available papers for inkjet limit the use. In addition, high-coverage printing (required for many promotional materials) is currently cost-prohibitive. Successful applications like local newspaper printing and printing of inserts can feed directly into an inserting line, customized catalogues, and more.

What Does the Future Hold?

Many users are expecting further improvements in inkjet technology. One of the most pressing issues is lower costs for paper and the ability to easily use coated paper. Although there are a few coated paper grades out there, they are not suitable for all applications and most have a very high price point. A growing market will prompt paper manufacturers to offer more choices and reduce the premium for inkjet paper. Some manufacturers are also exploring the option of using in-line coating or laying down an ink receptive layer to help to overcome paper limitations. Although most transaction printers were already satisfied with the quality level that could be achieved, they did state that additional paper improvements would help because print results are very paper-dependent.

Although other directions for future developments are quite diverse, one user described his top three priorities as "speed, speed, and speed." A wider width was identified by some larger sites as a step to improve productivity, but most users—particularly within the transaction print industry—noted that the new printers primarily needed to match the width of existing finishing equipment (mainly for inserter lines). Still other sites prefer to have a second printing line as a backup. Space can be a limiting factor as well, driving the need for compact solutions. Environmental considerations also play a role—the demand for reduced energy consumption, less waste, and the ability to use recycled paper will drive the development of next-generation machines.

It should be noted that the feedback InfoTrends received was greatly influenced by the large share of transaction printers in the current user base. Outside of the short term, the commercial print and publishing applications represent a much larger market opportunity. In these areas, wider widths and the highest productivity are critical. Any improvements in print quality will expand the market opportunities and further necessitate additional improvements to the substrate ranges. Optimizing the whole system of inkjet heads, inks, transport, and paper will require considerable Research & Development. Those manufacturers who have strong R&D capabilities and control of many system components will have the greatest chances of reaching this goal.

InfoTrends' Opinion

Transaction printing applications, and to some extent direct mail, are the testing grounds for high-volume continuous-feed color inkjet printers. These markets are the best matches with the quality level and paper choice that color inkjet printers are offering. Addressing these markets is helping printer sellers and manufacturers to gain experience and scale up production in a controlled manner. On demand book printing is emerging as another big opportunity, but much of it is currently confined to black & white printing. Only in special cases have inkjet printers replaced offset printing volumes so far. That said, inkjet technologies have made impressive progress over the past four years, and it remains to be seen which advances will be delivered during drupa 2012. It will likely be at least a few years before inkjet carves out a bigger share of the total printing industry beyond variable data applications, but the shift will happen eventually. It's simply a matter of when.

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As Director of InfoTrends' European On Demand Printing & Publishing Consulting Service, Ralf Schlözer is responsible for all service-related publications and research in Europe. He is responsible for market trend analysis and forecasting, as well as creating research projects, presentations, and analysis reports.