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Offset and Digital for Profitability

Written by John Zarwan

Although offset lithography was invented more than a century ago, it took more than 50 years before it replaced letterpress and became the pre-eminent method of commercial printing. It has barely been 20 years since the introduction of production digital printers. Yet, unlike previous printing methods, digital and offset presses often coexist in the same plant. Many printers have added digital print to their traditional offset business. For many printers, each serves a different need, application, or market. Others mix offset and digital in the same job.

It is often forgotten that, while the volume of commercial digital print is still dwarfed by conventional offset, many, if not most, Canadian printers have both offset and digital capabilities. In research conducted for PRIMIR (www.primir.org) on the small commercial and quick print market, we found that about 70% of printers with less than 20 employees—a category comprising more than 80% of Canadian printers—own a digital printer, with an overall revenue split of 40% offset and 30% digital. (The balance of revenue comes from prepress, fulfillment, brokered print, and other ancillary services.) Many large general commercial and specialty printers also have digital equipment.

While some printers run their digital and offset operations as two distinct businesses, increasingly these technologies coexist peacefully in the same location. Digital has clear advantages for short runs, where variable information is required, or for fast-turnaround work. The advantages of offset in range of applications and cost are well known.

An important reason to have both digital and offset is the flexibility that it provides. Kwik Kopy of PEI, which recently was named Kwik Kopy franchisee of the year for the second time, has a full complement of both offset and digital system. The 23-year-old company first added monochrome digital equipment in 1998 and added colour a year later.

Their digital production printers are predominantly Xerox and include a variety of colour and monochrome devices such as the Xerox DocuColor 12 and 240 and Canon 3200, and the Xerox Nuvera 120 for monochrome. They also have HP 5500 and Agfa Grand Sherpa wide format inkjet printers. Their offset presses include a Printmaster 52-5 and a Speedmaster 52-4, added with the recent purchase of

Transcontinental's local sheetfed operations. About 60% of their work is offset-related, 40% digital.

Shawn Mackenzie, who owns the company with his brother Troy, notes that "having both offset and digital provides flexibility. For example, we just got a job of 720 copies of a 36-page 2-colour [document]. We were able to run 20 digital copies right away, then provide the balance later. It bought us some time. Or, we may need to do 10,000 brochures, but do 200 digital to meet an immediate need, and then do the rest later."

The key factors in deciding whether to print a job offset or digitally are cost, deadlines,

and press scheduling. Mackenzie “always gives the customer the option between offset and digital [if appropriate],” explaining differences in turnaround and cost. Turnaround is usually faster with digital, as offset has drying and finishing requirements. Digital tends to be faster and easier, requiring fewer people and less skill.

Mackenzie believes that their offset work will increasingly shift to digital as the breakeven rises. “It was 250 [copies]. Now it’s 500. Soon it will be 1,000. The jobs are getting easier, and faster. Digital costs are falling. We’ll also do more variable.”

Another approach is the direct- or digital imaging (“DI”) type press, which combines aspects of both offset and digital printing. By imaging plates directly on press, the DI-type press offers many of the advantages of digital print, while retaining the inherent benefits of offset. Today’s DI presses have make-ready of less than 30 sheets; saleable sheets take about 10–12 minutes from job to job.

Because of their short make-ready, DI presses are particularly suited for short-run and quick-turn work. While they can run jobs as long as 15,000 or more, they are most appropriate in runs from as low as 250 up to 5,000 impressions, which make them very competitive with toner. Study after study shows a high level of owner satisfaction, and consistently high profitability. And, as it is offset, this technology is appropriate for a wide variety of applications and run lengths, using an equally wide variety of substrates and paper stock, pigment based and specialty inks, colours, metallics, etc.

Contact Printing & Mailing of Vancouver recently acquired a Presstek 52-DI to replace an older 4-colour offset press. Established in 1981 by partners David Brown and Bob Gibson, Contact is the largest full-service print shop on British Columbia’s north shore. With 90% of their business offset, Brown says the DI was a nice complement to their two Heidelberg Quickmaster 46-2 offset presses and Xerox DocuColor™ 5252 digital colour press.

Brown feels the quality of offset presses is still superior to digital. “There’s no comparison between offset and digital... They’re not the same.” DI presses are offset and have all the associated advantages: a wider variety of stocks, range of colours, bindery performance, and the ability to capitalize on the economic benefits of offset printing in short run colour applications. And while the quality of digital colour has improved, offset still better meets customer expectations for image quality and durability. Brown says the advantage of offset is particularly noticeable for work with a lot of finishing and folding, such as brochures. Compared to conventional offset, the DI provides faster turnaround. “With the DI, turnaround is so much quicker. With its fast drying time, we can print and deliver in same day,” Brown notes. “With offset, [we] have to leave it overnight.”

Brown uses the colour digital press for very short run colour jobs, particularly when price is a factor. The current “break-even” is less than 500 pieces, when the DI becomes more cost effective. Nevertheless, the DI has been used for even shorter runs, even less than 100, when “the client needed the quality.”

Having both offset and digital in the same location also means that offset and digital can

be mixed in the same job. Contact also mixes offset and digital on the same job. For example, Brown often finds it cost effective to print covers on the 5252 and simple black and white on a

QuickMaster for runs of 400 or 500. He also frequently runs covers on the DI and the body of the job on the QuickMaster. Alternatively, if the job has only a little colour, that would be done digitally and the rest offset for black and white.

On the other hand, Kwik Kopy of PEI's Mackenzie says that 95% of their book work is produced digitally, with offset covers. "Digital doesn't do as nice a job. [Offset covers] look better, and don't crack as much."

Bassett Direct, a \$10 million Markham, Ontario provider of direct marketing services, has taken a different approach. With a complete integrated offering for the direct mail of its large corporate clients, Bassett produces envelopes, brochures, and letters, as well as managing database, forms set up, personalization, and lettershop services. With its focus on personalized direct mail, its internal work is almost completely variable and thus produced digitally on an array of devices, including Xerox DocuColor 8000, Xerox iGen3, and Xeikon 5000 colour presses, as well as Xerox monochrome and 2-colour printers with MICR capabilities. While they own no offset presses, in order to offer a total service around printing and direct mail, they have aligned with sheetfed printers.

For Bassett, run-length isn't the major differentiating factor between offset and digital. President Rich Bassett comments, "[There's a] thin line where it makes sense to go conventional." Client campaigns range from a few hundred to a few hundred thousand pieces. If the job has only static colour images, and if the quantities are large, Bassett will print an offset shell and digitally print the personalization in black. Kwik Kopy of PEI also frequently uses an offset shell. In addition to common applications such as mail merge with a pre-printed letterhead or business cards, they have produced customized brochures and invitations to trade shows and personalized packages for season ticket holders for sporting and cultural events.

Bassett Direct will also split jobs between offset and digital. For example, a recent bilingual campaign required 100 000 pieces in English and another 12 000 in French. As the images were static, they printed the English portion with conventional offset but the French digitally. Bassett notes it was the more cost effective approach.

Digital presses have the advantages of being able to do variable data imaging and ultra-short run lengths. They are also particularly good for applications where there are multiple forms, especially if the requirements are immediate (timely information, quick-turn, short run). President Rich Bassett recalls a project with 2500 images being brought into mailing pieces from a data file—"you couldn't make that many plate changes using traditional offset."

Most of the attention paid to digital has naturally been focused on the equipment and the printing process. Typically, a different workflow was introduced for each type of

production process, as both traditional prepress companies focusing on offset and providers of digital presses provide workflows. But yet again, digital/offset combinations contravene this tradition. There are a number of possible combinations of offset and digital work, leading to multiple work processes for offset, colour digital, and monochrome digital.

These combinations are further complicated with the introduction of web-to-print solutions and personalized communications. Multiple workflows can lead to bottlenecks and errors in prepress and file preparation. It is thus imperative to understand and adopt processes and a workflow to insure smooth, efficient, and error-free production. Ideally, the experience, interface, and workflow should at the very least be comparable.

As a result, vendors such as Kodak and Xerox have developed workflows that are meant to be integrated or unified. According to Jon Bracken, Vice President of Marketing Workflow and Prepress Equipment (WPE) for Kodak in Vancouver, the goal is to combine traditional offset functionality and quality with digital print sensibility and cost structures. That means applying technology and automation to minimize requirements for operator intervention.

Bracken comments that the approach that Kodak is taking with its Unified Workflow is “not only the idea of a single workflow, but trying to identify the issues in colour, production, business, and data that affect the overall workflow.” Based on Prinergy and other existing Kodak products, it enables a printer to grow into digital print, including variable data, using the same workflow. Jeff Hayzlett, chief marketing officer for the Graphics Communication Group notes that Kodak’s goal with an integrated workflow is to provide consistent print quality, improve customer control, provide operational productivity and system output, and improve return on investment.

FreeFlow from Xerox takes a somewhat different approach. FreeFlow is also an umbrella that encompasses a number of integrated, automated, and modular workflow solutions from Xerox and partner companies. Deb Cantabene, Vice President Workflow Marketing for Xerox’ Production System Group (PSG), notes that FreeFlow can be added to existing offset workflows such as Kodak Prinergy and Heidelberg Prinect, without changing existing processes.

Files go from the prepress workflow to FreeFlow Print Manager, formatted and laid out correctly for the digital print. Integrating offset and digital print technologies with a single, unified workflow enables last-minute decisions about whether to send the job to the offset press or the digital press.

To be sure, it is possible to keep things simple. Contact Printing of North Vancouver uses Prinergy EVO, Kodak’s most basic prepress workflow. Kwik Kopy of PEI, on the other hand, uses different workflows for offset and digital. For those occasions when a job is split, they use the PDF created in their Agfa Apogee Prime offset workflow. Nevertheless, owner Shawn Mackenzie recognizes the need for a more integrated workflow and anticipates moving in that direction after purchasing a more capable and

sophisticated colour digital press next year.

It is clear that there is a place for both offset and digital production. Each has strengths that complement each other. Printers increasingly see the value of incorporating both in a unified production environment. Unlike the early days of digital print, where the vastly different economic models forced printers to adopt different manufacturing, administration, and sales processes, many printers find the key to success today is offering a seamless, integrated, and transparent offering to meet their customers' needs.

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