1-to-me, 1-to-you

by Dan Brill

You collect your mail (the kind your mailman delivers) and, glancing through it, you spot a familiar photo on one of the "junk mail" pieces in the pile. Maybe it's one of your favorite sports idols, or a colorful garden of perennials, similar to your own, or a family portrait of husband, wife, son and two daughters—just like your own family.

Normally this kind of bulk mail would go straight into the trash. But this time your attention is held long enough to open it and investigate the message inside—and, of course, that's just what the mailer was hoping.

Why does this particular piece succeed in catching your eye when so many others get tossed to the side? Was it because of brilliant design and layout? Good timing? Blind luck?

No, it's none of the above.

When most people hear the term "personalized" printing, they immediately think of the "individually addressed" junk mail that floods into our mailboxes every day. But the next generation of commercial print jobs will incorporate an entirely different approach to customizing printed pieces—the addition of full color variable imaging (VI).

Printed on a new generation of digital presses, this form of printing will be driven by powerful new RIPs capable of merging data and pictures on the fly and imaged digitally on new systems which can almost instantly re-image an entire sheet right on press. And controlling the entire process will be data fed to the press from comprehensive databases of information that catalog your personal profile, your location, your buying habits—even particulars about your personal preferences and lifestyle.

"Versioning" of short run color jobs through direct-to-digital plate imaging on press has been around for over ten years, beginning with Heidelberg's introduction of the GTO-DI ("DI" for Direct Imaging) in 1991. Since then Heidelberg has upgraded and expanded its DI lineup to include the newer Speedmaster models, including a 20" x 29" six-color version.

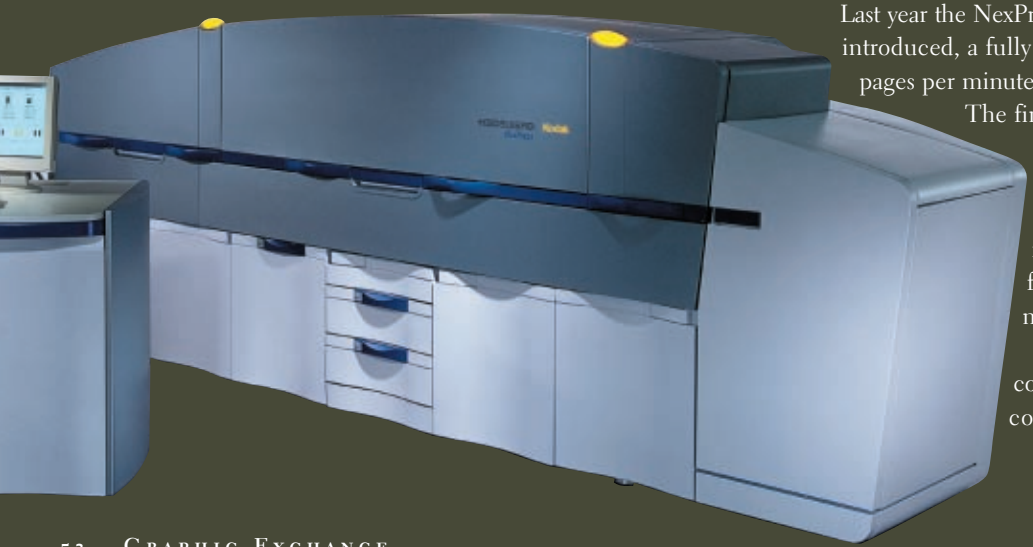
But for many years digital printing suffered from fundamental criticisms concerning cost (too expensive), quality (inconsistent and inferior to conventional offset), and production (too slow). It has been a tough market to develop—witness Agfa, which battled for years to promote its Chromapress, a variation of Belgian developer Xeikon's toner-based print engine, before finally dropping it two years ago; Xeikon itself has just recently emerged from a receivership and reorganization. Indigo, which completed its merger with Hewlett-Packard in March, brought out the first short run color press with variable imaging in 1994; it employed special inks to produce high quality color. Although Indigo's units met with initial acceptance by printers, expensive consumables and lack of customer support combined to force the company's sale to HP. But no digital color offset press has been able to take away even a modest portion of the commercial offset printing market.

The next generation of digital offset presses such as the *XEROX IGEN3* (top), which is due to hit the market late this year, and the *HEIDELBERG NEXPRESS* (bottom), which was released last year, will open up a whole new realm of one-to-one marketing possibilities for merging databases with full color variable printing. The challenge for graphic designers and marketing managers will be to develop creative concepts which can exploit the full potential of these new graphic arts technologies.

However, these technologies are now getting better, faster and cheaper. Heidelberg direct imaging print quality has already achieved levels equal to traditional offset (to see an example of DI printing, take a look at the cover of this magazine—it was produced in process color plus two spot colors on Canada's only six-color Speedmaster 74 DI at Astley-Gilbert Reproductions [*www.astley-gilbert.com*], a high end Toronto printer which began offering DI printing services in May of this year).

However, although the Heidelberg DI is ideal for short to medium run versioning in four colors or more and its plates can be imaged directly from files right on the press in as little as four minutes, it is not a variable imaging press. VI is a horse of a very different color.

Last year the NexPress (a joint Heidelberg-Kodak project) was introduced, a fully digital press using dry inks that prints 70 pages per minute with 100% variable imaging capabilities. The first Canadian installation, at Lowe Martin Group in Mississauga, Ontario, was completed in March. And later this year Xerox will launch its new toner-based iGen3 digital offset print system, capable of printing full color variable images at 100 pages per minute—with in-line finishing as well.



The NexPress has demonstrated process color printing which rivals its conventional counterparts; but Xerox promises that the

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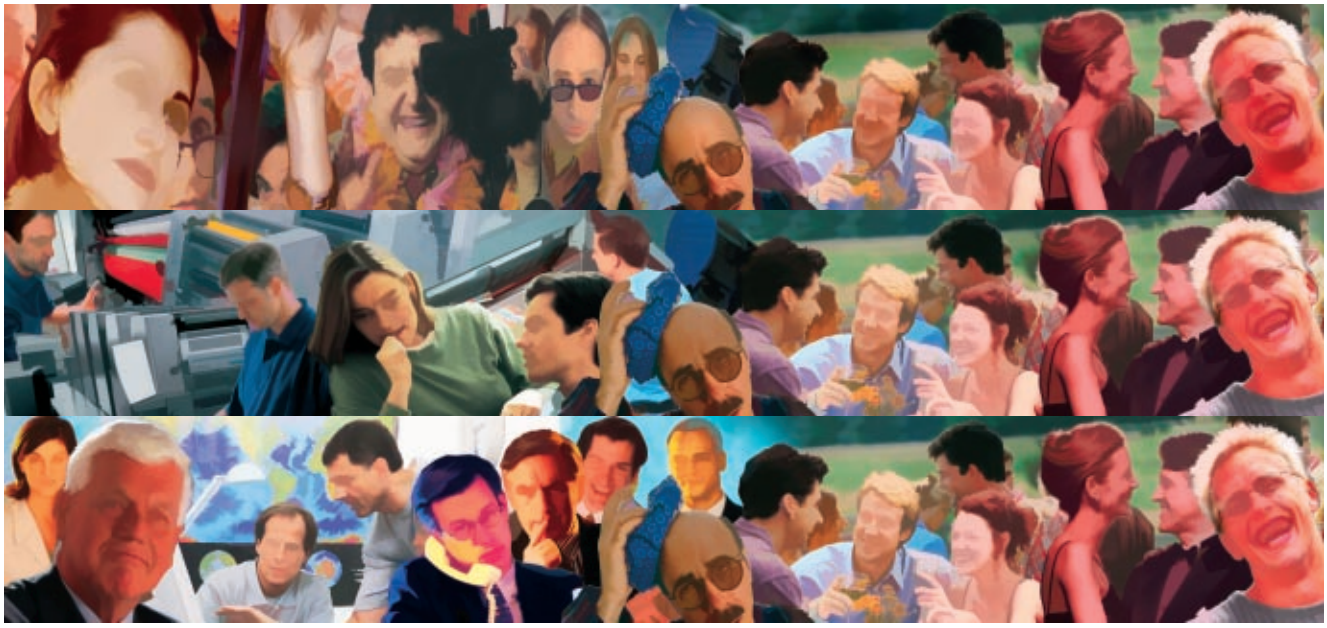

The intermediate stage between traditional offset printing and full variable data offset is *SHORT RUN VERSIONING*. In this issue of Graphic Exchange, we decided to experiment with our own concept of versioning by testing Canada's first (and only) Heidelberg six-color Speedmaster DI direct imaging press, installed at Astley-Gilbert Reproductions in Toronto. First we enlisted the cooperation of the Toronto office of stock photography supplier Comstock. Comstock kindly provided a selection of royalty-free images, from which we created three separate group shots, depicting people with three different "job profiles"—one each for "creative", "production" and "management and sales". Then we separated our mailing list according to these three categories. If you're on our subscriber database, check the mailing label on the front cover for your code. If we have you classified as "creative", the image at the bottom of the Graphic Exchange Digital Art Awards double page spread on pages 18-19 should be version 1 (top). If you're primarily a production person, you should have received version 2 (middle). And if you're in a management or sales position, your version will be 3 (bottom).

iGen3 will deliver even better output than NexPress. Yet there are still a few hurdles to leap before variable imaging enters mainstream print production.

The first is at the RIP. Processing data and color-separated images fast enough to keep up with press speeds has been a challenge for software and hardware engineers. Although images may be rasterized and pre-cached, ready to be dropped into position on a page, it still takes a lot of raw processing speed to assemble and image fully variable full color press sheets on the fly.

Proofing and verification is a second complication. How do you sign off on a press run consisting of thousands of press sheets, all of them different?

For designers, yet another problem is that most of the desktop solutions for creating layouts for variable pages are XTensions for QuarkXPress and are limited to Quark's toolset (for instance, certain key tools are absent, such as typography controls for "Title Case" for setting upper and lower case text—although Adobe InDesign has this ability). As well, creative options for page composition may be severely constrained—no polygon boxes, no text wraps around objects, no overlapping variable images.

There are a number of proprietary layout programs on the market which can handle variable image jobs, but they tend to be pricey. Because printers are the only ones who can justify the cost, most clients and designers may have to rely on their print suppliers to produce the final pages, relinquishing at least part of the creative control.

And most client databases are simply not well-maintained or detailed enough to generate accurate, effectively targeted, individually tailored pieces. Even if they are, clients tend to be sensitive about sharing their proprietary information.

But assuming these obstacles can be overcome (which they probably can), who's going to come up with the creative concepts that make the extra time, trouble and expense worthwhile?

The challenge for the future will be for graphic designers, direct mail specialists and corporate marketing managers to develop concepts that can capitalize on these new variable imaging technologies. These projects will have to be carefully planned, creatively designed and intelligently executed, and of course they must also yield better rates of response.

But if the experiences of early adopters of these technologies are any indication, the rewards will be amply worth the investment. Reports coming back from vendors on the results of test campaigns by various companies indicate that a well-conceived brochure or mailing piece built around variable imaging techniques can deliver a response rate of as much as thirty times that of conventional promotion methods.

Variable imaging could also be the kickstart that the print-on-demand market has been waiting for. When the iGen3 is introduced toward the end of 2002, look for the VI war between Heidelberg and Xerox to heat up considerably.