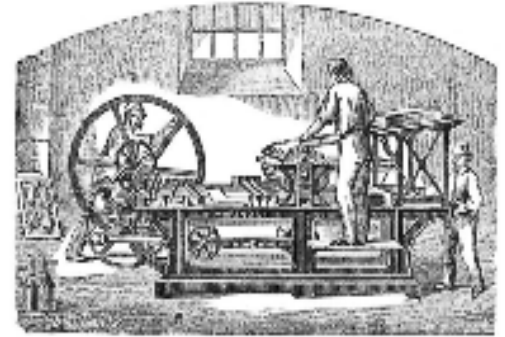




Digital Printing: *Design Tips*

The craft of a well printed sheet. The way the ink sits on the paper. A touch-plate of color in a well designed brochure. The detail of a matte or glossy varnish. Traditional offset printing has a feel and tactile response to the hand. This is the rich tradition of offset printing from its Letterpress beginnings.



The standard of traditional business introductions and company brochures, quality printing facilitates your message and can keep that sales door open a little longer.

It wasn't long ago that purchasing would send out a bid to 3 to 4 different printers. This system insured a checked and balanced system of good pricing. It would also sometimes bring wide-eyed shock in the price swings between vendors. Today's print market, driven by technology, positions the print product closer to a commodity with respect to expectations. Print technology levels the quality gap to the expected 'high quality'. Job management needs to be efficient and effective. This leaves pricing as a main variable. Wide gaps in pricing for the same bid are now tighter. Another wild card is your vendors customer service and dedication to their craft.

With the expectations of traditional offset lithography very high, and with a sophisticated buyer class in place, we can expect more of it going forward. We can also see the rise in quality of Digital Printing. With each new version of the digital press more aspects of the color printing market is embraced. In fact most standard 12" X 18" sized projects will benefit from digital printing. Some of those advantages are:

- Initial press proof from the printing press doing the edition
- Lower per piece start-up costs
- Print the quantity you need- cost ratios are flatter with small runs
- Easy changes to art and content on reprints
- Variable personalization for each market



Designing for Digital Printing

The printing world is going digital. A recent *Printing News* in-house printer survey stated that digital printing rose 6% during 2008 within traditional offset shops. The quality of digital printing is approaching parity with general offset. New digital technologies offer some very exciting opportunities, but they also have a few important limitations. If you now design for traditional print, be aware of these specific tips and your results will be more predictable.

Four color not spot colors

The most basic piece of advice is: design using the four color process. All digital presses produce color using the four inks, Cyan, Magenta, Yellow and Black. Although a few can also offer individual colors at the same time. Bright orange is just one color that is not simulated well using the four color process. Certain greens and blues can be disappointing as well.



The technology used to create digital color can also affect the design choices. Digital presses do not use ink. They create color without the precise ability to control the flow of wet inks. Digital printing machines use dry toners to create your image. (One notable exception is the HP Indigo press which uses wet digital toners.) The chemical difference between the wet trapping of ink and the application of dry power toners results in significant differences in the reproduction of color. This modifies the color gamut (how many colors) that can be reproduced.

Color matching systems that offer you a specific mix of inks to make a single spot color don't translate well onto digital presses. So forget the old notion that printing in black and one spot color is less expensive than printing in four color. These presses use these four colors, so go ahead and use all of them.

It would be best to ask your printer to review your design before trying to reproduce a large solid color area. Some streaking can occur on digital presses and this is most apparent in solid coverage areas. Often a screened background will look best on a digitally printed piece if the color gradually changes. An example of this could be a panel with a screen build that gradually changes from a light sky blue to a darker deep ocean blue across a screened area. Because digital presses do not use the same process to lay down a solid of a color as wet trapping inks, it's best to vary them. At the same time, digital presses are less likely to have difficulty with in-line ink depletion that can cause "ghosting" in a dark spot color on a lithographic press.



Another tip for screens is to be sure that black type surprints and is not "knocked out" of a background screen (a knockout is often the default for any type printed in a screened area). Surprinting black type can eliminate the "halo" effect of mis-registration.

Good quality but not for every design.

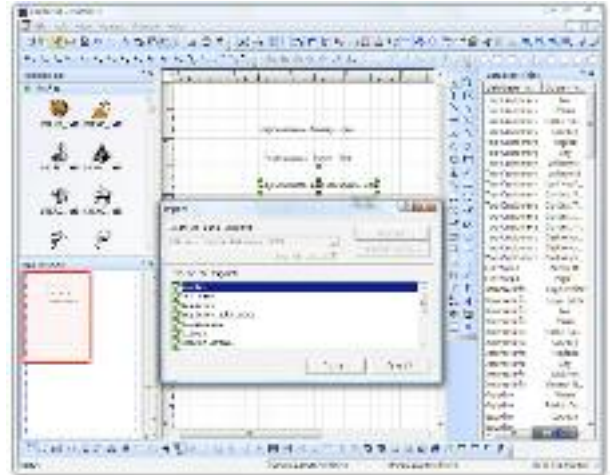
Digital reproductions get better and better with each new generation of presses. The faithful reproduction of flesh tones, reproduction of colors in shadow and in bright highlights have improved considerably. However, there are still significant limitations, including the lack of specialty inks (including metallic or Day-Glo inks). No varnish techniques are available on digital presses as yet.

Good paper choices but not every paper in the sample book

Digital presses allow you to choose among white offset, matte and coated paper, but not every weight and thickness. Most can not run light weight coated papers (70# text is often the lightest) or heavy coated board stock (100# Cover is often the maximum). It wouldn't make sense to use a colored paper on a digital press because the CYMK colors will change with the color of the paper, so don't select canary yellow bond. Toners will not adhere to all finishes and do not fill in uneven surfaces, so a pebble finish would not make sense on these presses. Here again, there are some significant differences between the papers and substrates that are acceptable on specific digital presses, so be sure to check with your supplier for the options they can make available.

Personalization – many more options

The use of personalization (variable) is another feature where digital presses afford new options based on this new technology. Personalization is not limited to one area of the printed piece, as is often the case with ink jet addressing of a mail piece. The personalization can be used on both the front and back of the piece. Laser personalization is often limited to one side of the paper. Go ahead and put personalization anywhere it will support the design. The personalization can include pictures and the text can be reproduced in color, Personalization is available on the entire image area of the piece.



Think differently and use the features technology has to offer

Although digital printing has made full color reproduction more affordable, especially in smaller quantities, the digital presses do not offer the variety that the best lithographic presses afford. At the same time, digital reproduction can facilitate some designs that are incredibly difficult to accomplish in any other way. No other printing equipment will allow you to economically design a piece that has a photographic image in four color that changes with the variable text. With digital printing, you can change the picture of a unique product for each individual that receives the mail piece. The best advice is simply put: If you are designing for digital print production, don't think in terms of printing with single inks. Design your image as if it were to be produced on a LCD monitor (but remember



to convert your images from RGB to CMYK before submitting your final files). Don't limit the variable nature of the piece. Change the person's name in black if you want, but change the background and the images on each individual piece as well. This way, you will get the most for your digital printing dollar.



These are exciting times in the print industry. As our consciousness of the material nature of spreading the message rises, how we do it matters more. A serving up of your message is a mix of print, web, email and even some unique methods of advertising like using social networking sites. In my college class I stress deconstruction of a design problem, analyzation of the parts, and then rebuild the design for reproduction in our world today.

For a new look at the material your sending out, contact me. Let's see how a shift in your marketing program can impact your sales curve.

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