Mitchell Graphics, Inc.
Digital Pre-press Reduces Waste

Case Study

Mitchell Graphics, Inc. – Petoskey, Michigan

DECIDING TO GO DIGITAL

In 1990 Mitchell Graphics, Inc., a sheetfed lithographic printing facility located in Petoskey, Michigan, was at a turning point in its business. Mitchell Graphics had outgrown its current facility and needed to increase production capabilities in order for the company to keep up with increased sales and remain profitable in a highly competitive market. The company began investigating its equipment and technology options and found that the digital pre-press technology appeared to offer a highly efficient alternative to conventional pre-press lithographic printing. However, the digital pre-press technology was just emerging in the commercial printing industry at the time; and equipment investment costs were comparatively high.

After comparing overall operating and equipment costs to traditional lithographic pre-press, and considering their market share, Mitchell Graphics decided to start investing in digital (pre-press) equipment. Do they regret their decision? The answer is clearly "no."

Conventional Pre-Press Process

The conventional pre-press process consists of three steps — producing the negatives, creating proofs, and finally making the printing plates. The proof is a sample, made from film, of how the printed piece will appear once it is printed and is used to determine if all the elements fit and colors are correct. After all the artwork and/or color corrections have been made and the customer has approved the final set of proofs, the negatives are produced. The image is then transferred onto the printing plate. A separate printing plate must be made for each process color used in the job. If a change must be made to the artwork after the proof has been made, the technician must repeat all of these steps.

Digital Pre-Press Process

To create the images for reproduction, the digital process uses computerized imaging systems, which interface with other computer systems; i.e., the customer. Similar to desktop publishing, the

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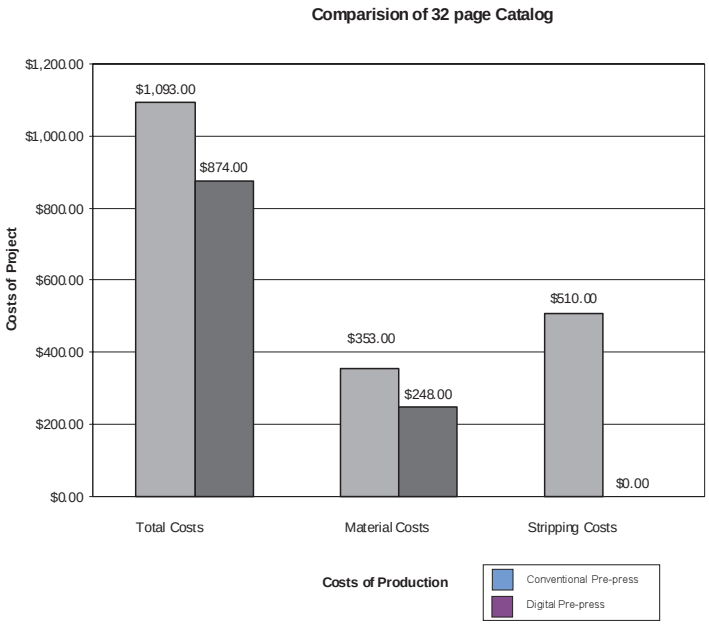
project can be manipulated on the computer screen to make changes or corrections before producing a proof. After the customer approves the proof(s), the printer then makes the film and printing plates. In changing to digital pre-press, Mitchell Graphics realized the following advantages:

- *reduction of photographic film;*
- *reduction of processing chemicals;*
- *reduction in waste negatives, film, and plates from incorporating customer changes; and*
- *reduction in press set-up time*

Cost Comparison of a Project (32-page catalog)

The following table and chart represent approximate costs (excluding initial equipment costs) of the production of a 32-page catalog.

Although the machine time is longer in the digital process, the overall process is faster when comparing labor time. Mitchell Graphics recognized a 64% reduction in labor time in the example below. In addition, all the conventional pre-press raw materials utilized in the stripping process were eliminated; i.e., tape, masking materials, etc. According to Mitchell Graphics, Inc., its overall efficiency improved dramatically by making the change from conventional pre-press to digital pre-press.



Source: Mitchell Graphics, Inc. 1998

Process	Conventional Pre-Press Printing	Digital Pre-Press Printing
Total costs of Project	$1093	$874
Material Costs of Project	$353	$248
Stripping Costs	$510	$0
Labor Hours	11.0	4.0
Machine Time	1.5	4.5

Source: Mitchell Graphics, Inc. 1998

The digital pre-press process, however, isn't for everyone. The high initial capital investment costs can sometimes detract from the overall waste reduction and cost savings. In addition to the high capital costs, there are training issues involved and the need to overcome resistance to changing to a new technology. However, the future holds great promise for companies willing to make the investment in the digital technologies. For Mitchell Graphics, the technology has reduced material costs, labor time, and waste generation at the facility. These combined savings have offset the costs of the initial equipment investments.

For more information, contact
Mitchell Graphics at 1-800-632-7184.