A NEWSLETTER FOR NAVY LITHOGRAPHERS

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Litho NOTES

DESKTOP PUBLISHING

The term *"Desktop Publishing"* encompasses a number of prepress production steps such as art and copy preparation, page makeup, and graphic arts photography. Another term, *"Electronic Publishing,"* is also associated with desktop publishing and better describes the widespread use of computerized devices, and *"desktop production,"* which identifies where a number of productions steps are performed—the desktop of the originator of the printing job.

Desktop publishing appeared as a new computer application in 1985 and created a revolution in the printing industry. What the desktop publishers first saw was a bitter struggle wrestling control of their own destiny from those in power, namely the printer.

What the printer feared most was that desktop publishing offered corporate and professional publishers the ability to take over the means of production—page production that is. Established printshops and graphic design houses resisted the advances of desktop publishing and attacked them with criticism of their new technologies such as: desktop publishing programs did not offer "true" typesetting—they lacked sophisticated typographical functions like kerning, tracking, and hyphenation. They lacked a wide range of type styles for the professional user and photographic quality was gruesome.

The "quality" and "versatility" of desktop publishing software and hardware is steadily improving. One by one, the defenses put forward by the printer have begun to crumble. Programs like Ventura Publisher and Aldus PageMaker have added sophisticated typesetting features that rivaled the best dedicated typesetting systems. Digital font distributors such as Adobe Systems Inc. and Bitstream offer a dizzying array of typefaces and styles. Desktop scanners are now produced with image scanning devices that can produce computer-generated halftone images that are virtually indistinguishable from the traditional halftone.

Yet, rather than dethrone the printer, desktop publishing has created a new alliance between publishing users and graphic professionals.

Today, because of the revolution in desktop publishing, the printer and the graphic designer are flourishing like they never have before. Desktop publishing has make more people publishers which in turn causes more pages to be produced on the press. These desktop publishing programs expose more people to the concepts of typography and illustration that they never knew before and now are seeking higher-quality design and printing services. Since desktop publishing benefits both the printer and graphic designer as well as their customers, the printing industry is now much more productive that it used to be.

Instead of a classic struggle, the printing industry of today now enjoys peace and harmony with the growing masses of desktop publishing users.

SCANNING IMAGES

Desktop scanners represent one of the fastest-growing hardware devices in desktop publishing. These "electronic eyes" can convert images on paper and film into a digital format. They are used to "capture" photographs, line art, text, and other images than can be manipulated with computer software.

Scanners come in a wide variety of formats and capabilities. The type of scanner you use depends on what kind of images you want to capture. If your image-capture needs are limited to line art or text, you can get away with a relatively simple model. If you want to capture black-and-white photographs, you need a gray-sclae scanner. To capture color images, you need a color scanner.

POSTSCRIPT

One key development that has made desktop publishing possible was the introduction of PostScript, a page description language from Adobe Systems. PostScript is like other computer languages such as Basic or Pascal. But unlike other computer languages, PostScript does not run on your computer. Rather, it runs on an output device such as a laser printer or imagesetter.

It is not essential that you understand how PostScript works in order to use its power and flexibility. You need only use your publishing software the way you normally do to access the full range of PostScript functions. But, it is worthwhile to have a limited understanding of how the page description language works.

One important thing to understand about PostScript is that it is a programming language with all the power and flexibility of languages that run on computers. Unlike general-purpose computer languages, PostScript has one main function: to produce images in the form of dots on an output device. It uses English-like commands that can create almost any kind of graphic image or text a user may desire.

As a programming language, a user can theoretically write a PostScript program to produce pages. If I had wanted to, I could have written this newsletter as a PostScript program. However, it would not have been very practical; writing PostScript programs require considerable training and skill. However, most desktop publishing and graphic programs have the ability to generate PostScript files. Sometimes this is handled by the program itself. In other cases, it is handled by the general system software.

When printing a file on a PostScript laser printer or imagesetter, your software generates a PostScript program and directs it to the output device. There, a controller or raster image processor (RIP) converts the commands in the PostScript program into instructions that guide the printer as it produces the page. If you were to print the output to a disk file, you would be able to open it with a word processor and see the PostScript commands used to produce the page.

PostScript is particularly worthwhile for the printer. There are many reasons for this, including font quality, typeface variety, picture quality, device independence, and support for publishing software.

THE BENEFITS OF DESKTOP PUBLISHING

Potential cost savings plays an important part in the decision to use desktop publishing, these savings are not always the major benefits that are experienced after the system is in operation.

Control over typesetting and page-makeup operations is the most important benefit.

Reducing the time it takes to correct the type of errors that are introduced by the traditional typesetting and page-makeup processes. Errors like; spelling mistakes, omission of words or entire lines, poor work spacing, and undesirable hyphenation. Once these corrections have been made it is necessary to proofread the text again. Remember, careful proofreading and copyediting are still required in desktop publishing, but the proofreading is done on screen or with laser-printed proofs.

Text and numbers can be checked and double-checked at the word processing stage of production until most of the errors have been corrected. The corrected copy is then imported into the page layout. With the number of errors likely to be a few, proofing laser-printed pages is quick. Also, changes at the page layout stage do not normally create a problem. A new page proof takes only a few minutes.

Being able to view on screen what the printed page will look like gives the desktop publisher the opportunity to make improvements or to change the design without incurring typesetting and page pasteup costs (materials and time). Page proofs from your laser printer will give you a very close approximation of what the typeset version will look like, and in most cases the laser printed pages can themselves serve as the "camera-ready copy."

Fast turnaround time is regarded as the primary benefit of desktop publishing. With desktop publishing, fast turnaround is possible at a reasonable cost, or in some instances at no increase at all in the cost because desktop publishing does not require the coordinated efforts of a series of specialized workers such as typesetting, page layout and pasteup artists, and page-makeup specialists. All the changes can be accomplished by the operator of the desktop publishing equipment.

Finally, the cost savings can be significant, particularly the savings in typesetting costs. Desktop publishing is more than just typesetting text, it is complete pages of text. There are additional savings in the costs of page layout and the final composing of the page with text and illustrations.

THE PITFALLS OF DESKTOP PUBLISHING

The enthusiasm for desktop publishing was and still is contagious, and proselytizers gloss over the shortcomings and limitations. Almost anyone who can operate a personal computer can learn to use a desktop publishing system. Desktop publishing requires more than just the skill to operate a computer—it requires verbal and artistic skill to produce readable and visually pleasing printed pages. A major pitfall of desktop publishing is that it can give the user the false assurance that the hardware and software are adequate substitutes for skill and talent. Horrible examples of printing have been produced by desktop publishers who seem to be blind to visual aesthetics. Any organization that introduces desktop publishing into its operations should establish graphic guidelines and standards for using desktop publishing software in conjunction with their printed material. Otherwise, the desktop publishing system could lead to the creation of a typographical tower of Babel.

When setting up your desktop publishing system you must take into account the personnel that will be required to operate the system. Failure to staff a desktop operation properly will result in poor quality output, higher operating costs, and perhaps even lead to the abandonment of the investment because of the inadequate results of your desktop publishing system.

In choosing hardware and software, the primary pitfall to avoid is incompatibility. Some hardware will not function together, and there are application programs that will not work well together on a computer. So the key question when selecting hardware and software is: "Will it work smoothly with all the other components of my system?"

AS I SEE IT

LICM Robert D. Carr, USN

Instant pages—just add content. No design expertise required. Just blend in your text and graphics, and watch the fully formed pages take shape before your very eyes.

That's exactly what a brand new crop of desktop publishing programs can do. But can page create and design be really automated? Yes, say the manufacturers, and they are producing software packages that make the difficult decisions of page design and layout for you.

The idea of fill-in-the-blank design templates has been around for a long time, but the new crop of automated page makeup programs has made templates more than an option—they now serve a purpose. These software programs do not care if you are a page makeup novice or an expert.

What is the bottom line to all this? Advances in computer technology from desktop publishing software to the evolution of the Xerox DocuTeck Publishing system are changing the way we do business as Lithographers in the Navy. To stay on top, we, as lithographers, must also advance with the technology and teach each other as we go through this revolution that is occurring in the printing industry.

Just for thought.....

LITHO NOTES

Point of Contact

LICM Robert D. Carr, USN
Lithographer, SME
NETPMSA (Code 0316)
6490 Saufley Field Road
Pensacola, FL 32509-5237
(C) (904) 452-1022
(DSN) 922-1022