

# PageMaker: Desktop Publishing on the Macintosh

Designed  
and produced  
using PageMaker 3.0

**Scott,  
Foresman  
Computer  
Books**



**Kevin Strehlo**

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**PageMaker**

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**Desktop Publishing on the Macintosh**

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**Kevin Strehlo**

**Scott, Foresman and Company**  
**Glenview, Illinois      London**

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ISBN 0-673-18764-0

1 2 3 4 5 6 KPF 92 91 90 89 88

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# Preface

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**T**his book will tell you most everything you need to know about how to use PageMaker 3.0 on the Macintosh to produce documents that are more effective than ordinary word processing documents yet much cheaper than documents produced using traditional methods of production. If you're shopping around for desktop publishing software and equipment, it will provide plenty of information about whether you should buy PageMaker or something else. Chapters Two and Nine were written with you in mind.

The book assumes little about you, other than that you have a desire to produce more cost-effective, attractive documents. Therefore, newcomers to the Macintosh are directed to the appropriate appendices at the end of the book.

That leaves the heart of the book free to assume you have basic competence in Mac-ese and graphic-ese. If you don't, check the reasonably complete glossary at the back of the book when you run into a word or concept you don't understand.

On, then, to the core of the book. Part One introduces PageMaker by showing examples of how it is being used in the real world in Chapter One, and then by touring it from end to end in Chapter Two. Chapter Three takes us through the hands-on use of PageMaker to create a business form and to lay out a mail-order catalog.

Part Two covers hardware and software that complement the capabilities of PageMaker. Chapter Four discusses laser printers, scanners, and large-screen displays. Chapter Five discusses graphics software.

Part Three moves quickly through two applications of PageMaker. Chapter Six discusses business presentations and reports. Chapter Seven concerns the preparation of long documents, with a focus on the book you're currently reading.

Part Four takes us outside the self-contained world of desktop publishing. Chapter Eight deals briefly with the kinds of services available to you from companies that specialize in PageMaker graphics, including typesetting, PageMaker instruction, design services, and rental of time on computers and laser printers. Chapter Nine talks about alternatives — about what to do when PageMaker is too much or not enough.

We've already touched on the appendices. Don't miss the discussion of PC versus Mac, the Mac tips, and the typography appendices. Then the book wraps up with a glossary and index.

Hope you like it.

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## Acknowledgments

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**T**his is going to be longer than most acknowledgements, and you probably think it's because I have so many people to thank for helping me get this book out the door. Heck no. It's because this is one of only a few pages in the book set on a Linotronic typesetter at 1240 dots per inch, and I need to get my money's worth.

Just kidding. I really wanted to thank my wife, Christine, who has put up with a tough schedule — again. Thanks, Chris — for not holding the disruption against me, and for copy editing the book under some tough time pressure.

I also have to thank the folks at Scott, Foresman and Company who didn't pull the rug out from under the book when it failed to come in on time. And to my agent, Bill Gladstone, who went to bat for me when other obligations kept me away from the Mac.

To Charlie Bermant, who helped index the book — thanks for not insisting on the co-byline.

And to Mary Lou Carlson. Or is it Carlsen? Where are the copy editors when you need them? Thanks for helping copy edit as we got into the crunch.

Going way back, I'd like to thank Richard Clucas, who taught me most of what I know about page layout, design, typography, and driving all night to get to the good stretch of the river.

Finally, to Jim Shaw, who taught me a bit about the discipline of production and that you have to keep smiling even when really inspired book ideas don't go anywhere. (Jim published the first "Baby's Memories" scrapbook sold on mainland China. Well, sold a few, anyway. If he had sold just *one* copy for every 100,000 Chinese babies born ... as it was, I think Jim recovered the cost of production, promotion and shipping.) Say, Jim, I bet you would have made money on that book if you'd used PageMaker.

For everyone involved, here's hoping this book does better than that.

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# Chapter One

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## PageMaker at Work

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**W**hat does desktop publishing have to do with you? Although you might not realize it, nearly every organization is in the publishing business. Most generate mounds of printed price lists, order forms, memos, posters, reports, internal newsletters, business cards, technical documentation, training manuals, catalogs, advertisements, and marketing materials. According to Inter-Consult of Cambridge, Massachusetts, publishing ranks second only to personnel costs as the biggest expense of doing business, consuming from 6 to 10 percent of a typical company's gross revenues.

If you know something about old-fashioned publishing methods, you'll quickly see the advantages of PageMaker, including increased control over the end product and reduction in the turn-around time to camera-ready art. If the term *camera-ready art* is new to you, that last sentence may not mean much, so here's PageMaker's most important advantage in terms everyone understands: PageMaker can cut publishing costs in half.

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How? By enabling you to compose attractive pages on your own desktop with a minimum of assistance from typesetting services or printing firms. The source of savings will be made clear when you consider how most businesses produce their printed material today and compare it with the way things are done using PageMaker.

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## Manual production versus PageMaker

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Most firms still assemble the components of business documents manually. The written part, called *copy*, is usually generated with a word-processing program running on a PC or a Macintosh. In some instances that copy is then transmitted directly to a typesetter, but usually the copy is printed out and re-entered manually at high hourly rates by your friendly neighborhood typesetting shop. And that's not the worst of it.

People tend to think of typesetting as *the* expensive component of producing high-quality documents and publications, but there are others. The labor-intensive cut-and-paste process by which type is combined with headlines, charts, diagrams, and other graphic elements isn't cheap. Nor are the inevitable last-minute changes: type must be reset, art redrawn, and headlines, type, and art shuffled around on a paste-up board. InterConsult estimates that a 10-percent revision can account for 70 percent of a document's production time—enough to make you think twice about making changes in the final stages of manual production, don't you think? This high cost of revision is one reason the price tag for manually producing technical documentation—which often goes through several revisions during a product's lifetime—climbs to \$400 per page or more by InterConsult's estimates.

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PageMaker 3.0, in conjunction with a laser printer, turns your Macintosh into a typesetting machine. But it doesn't stop there. As its name implies, PageMaker allows you to paste up pages electronically, emulating the manual process but eliminating much of its inefficiency. It is easier to draw a perfect box with a computer than it is to draw it by hand, and electronically undoing a mistake is far more efficient than using an eraser.

Perhaps the most important benefit is that PageMaker eliminates much of the pain of revision: the time once spent resetting type, redrawing, and redoing paste-up boards to take care of those inevitable last-minute changes is drastically reduced. When changes are made to an electronic PageMaker publication, the software automatically adjusts the text and makes it easy to adjust the other components of the layout as well.

PageMaker also saves money in terms of output, of course, by leveraging the ability of laser printers to combine high-quality type and images for far less per page than the cost of typesetting and manual paste-up. When the quality of laser printing won't suffice, PageMaker can produce fully composed pages on a Linotronic typesetter.

This chapter is about some of the work produced by individuals who have caught on to the advantages of using PageMaker to compose high-quality documents of every description.

There's a catch, though. This book is about PageMaker 3.0 on the Macintosh. But none of the documents shown in this chapter were created with PageMaker 3.0. Indeed, many of them were created with PageMaker 1.2, 2.0 or (gasp!) PageMaker 1.0 on the PC. That's right, on the PC. So it should be obvious that the new and improved PageMaker 3.0 can do a lot better. By the way, the other versions were used in these examples simply because PageMaker 3.0 hasn't been around that long.

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The newest version of PageMaker is considerably more capable than the versions of PageMaker used to produce the publications pictured in this chapter. I know: I have used versions 1.2 and 2.0 of PageMaker on the Mac extensively, and PageMaker 1.0 on the PC more than I'd care to admit. (Indeed, I wrote and produced a book on PageMaker 1.0 for the PC, and I'm absolutely delighted to say that the production part of the job for this book has been far less troublesome. Much of the improvement is due to the enhancements made to PageMaker in version 3.0, which are now available on the PC version of PageMaker 3.0 as well. But there's a certain amount of hassle on the PC that you just don't have to deal with on the Mac, a topic I'll explore a bit in Appendix C.)

Besides the improvements to PageMaker, there's been another major change since the publications featured in this chapter were produced: Adobe Illustrator and Aldus Freehand are now available, putting tremendous sophistication into the hands of desktop publishers who create their own illustrations. It all adds up to this: desktop publishing with PageMaker has more potential than this collection of publications shows. But never fear. This book will reveal the new untapped capabilities of PageMaker in Chapter Two and beyond.

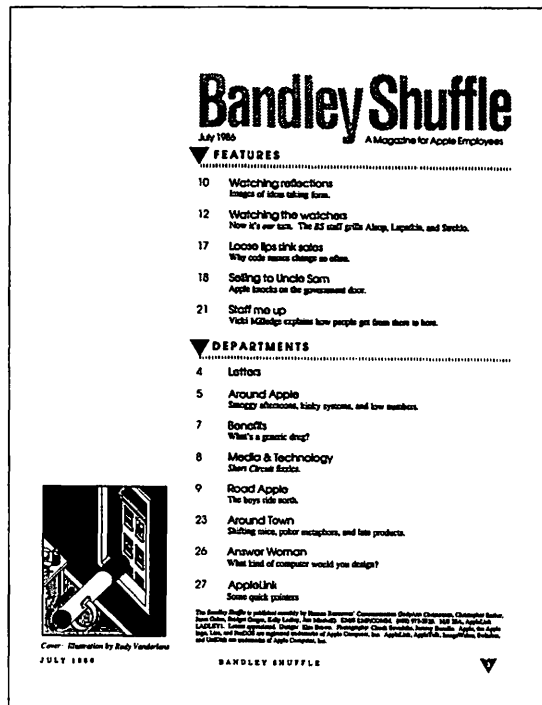
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## What it can do, what it can't

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In Apple's 1985 annual report there is a very telling illustration that puts desktop publishing in perspective. One person in the crowd of celebrities appearing in the report was Bob Ciano, art director for *Life* magazine. The illustration that accompanies his photo shows a preliminary layout for the contents page of an issue of *Life*. Note that Apple's annual report did not say desktop publishing would be used to produce the pages of a high-quality magazine like *Life*. Instead, the suggestion was that a talented graphic designer would find desktop publishing an incredible tool for producing rough concepts.

Apple, like many other companies, uses desktop publishing mainly for internal publications (*Figure 1.1*). For annual reports and the like, more traditional production methods are used to achieve the utmost in quality.



*Figure 1.1. Apple doesn't just preach desktop publishing – it uses it. Bandley Shuffle is just one of many publications produced by Apple using PageMaker and other desktop publishing programs. Camera-ready copy comes from the Apple LaserWriter printer.*

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The main thing preventing the new, improved PageMaker from producing the highest quality of magazine pages is the relatively low resolution of laser printer output. Dot matrix printers, laser printers, and typesetters all compose type from dots of ink. Laser printers generally use 300 dots per inch (DPI), a vast improvement over the 72 DPI of Apple's ImageWriter dot matrix printer. But the lowest quality typesetter uses more than 1000 DPI. Typesetters are as superior to laser printers as laser printers are to typical dot matrix printers, yet the difference is more subtle. A person with no graphics experience might not be able to articulate why laser printer output is inferior. Nevertheless, nearly everyone would without hesitation pick typeset over laser printer output as the more attractive of the two.

Thus PageMaker output from a laser printer is sometimes used only as a rough mock-up of a final publication. Kristen Ransom — a freelance designer based in Palo Alto, California who specializes in PageMaker work — is an advocate of this approach. Ransom often finds laser printer type satisfactory for final output. But she uses traditional paste-up and typesetting to achieve the highest quality possible for a client who is willing to pay the price. Even in those cases, however, she uses PageMaker to work up her initial design.

“It saves me time even when I’m doing production the old-fashioned way,” says Ransom. PageMaker allows her to complete an initial mock-up more quickly, and she spends less time communicating her ideas to clients. Instead of telling them, PageMaker lets her show them. And Ransom says that showing a reasonable facsimile of the finished product rather than a rough sketch has virtually eliminated those unpleasant occasions when a client says, unhappily, that a finished paste-up is not at all what he or she expected.

### Laser type may be fine

In many cases, however, Ransom is happy with what PageMaker can do on an Apple LaserWriter, and so are her clients. Several have had the pleasure of seeing work done for them appear in Aldus’s marketing brochures for PageMaker (including the Duck Inn brochure and business card, and stationery for Cook’s Headquarters shown in *Figure 1.2*).



*Figure 1.2. Aldus collects impressive work produced by customers with PageMaker. The company had such a hard time choosing which of Kristen Ransom’s stylish pieces to include that two made it into this brochure.*

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*Figures 1.3A and 1.3B* on the opposite page are from a brochure Ransom designed for an office complex in the highly competitive Silicon Valley area. Conveying quality was important. The office space vacancy rate in the area was very high and the client wanted to rise above the competition. The high vacancy rate had slowed business for the developer too, however, so budget was also a concern. Ransom used PageMaker to produce a design that satisfied on both counts.

The brochure was done in two colors, aqua and gray. The gray ink softened the look of the copy and successfully disguised the slight raggedness of the laser type. At the same time, it brought a suggestion of filtered light to the drawing of the two-story central atrium that black ink couldn't convey. The contrasting aqua frame around the drawing, and the use of aqua on the initial letters of the copy, kept all that gray from dulling the page.

Ransom balanced her design in *Figure 1.3A* with a distinctive touch — a gray rectangle that bleeds off the page. Similar use of gray rectangles on the other pages of the brochure served to tie all the pages together (*Figure 1.3B*), as did the consistent use of aqua for frames and initial caps.

PageMaker didn't produce the drawing in *Figure 1.3A*, although the program is capable of incorporating images of printed artwork that have been captured by a scanning device. In this case, Ransom used PageMaker only to draw a box that indicated placement of the drawing to the printer, who pasted it onto the page.

PageMaker can be a completely self-contained publishing environment. When artwork for a publication is produced by a compatible program, the production process using PageMaker becomes completely computerized. PageMaker places the artwork on the page along with the type and other graphic elements such as rules and boxes.



**P**recise balconies, extensive landscaping and natural lighting are just a few of the touches that distinguish this unique building.

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**D**esigned for businesses seeking a prime location with a prestigious image.

Our design objective was to find an elegant and fresh approach to professional office environments. Meticulous attention to the needs of growing businesses has created a building ideally suited for business and professional offices.

Individual tenant spaces are luxuriously appointed.

The features:

- Flush, cut-pile carpeting
- Solid oak floors
- Louver blinds on all windows
- Private wet bar

Each office opens onto a spectacular two-story atrium. Ceramic tile and extensive landscaping form a perfect setting for the central fountain. The skylight and many windows take full advantage of natural light.



The central lobby is designed as a spectacular two-story atrium with a skylight and central fountain.

**Figure 1.3A.** High-quality brochures can be produced with PageMaker, such as this two-color piece. Use of gray ink for copy softened the jaggedness of the 300-DPI LaserWriter type.

**Figure 1.3B.** The other pages of the brochure pick up the use of gray rectangles bleeding off the edge of the paper. Computer-generated drawings such as this floor plan can be placed directly on PageMaker's electronic paste-up board.

**We will custom tailor a space to fit your needs.**

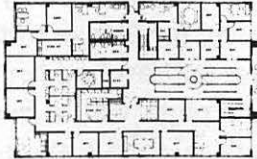
This exclusive new building offers 16,000 square feet of office space to be subdivided according to your needs.

Individual spaces will be finished to meet the precise requirements of each tenant. Tell us what your needs are and our designers will prepare a rendering for your approval.

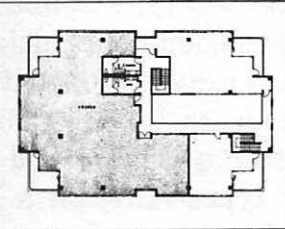
The entire first floor and portions of the second floor are still available. The shaded area has already been leased to PRIMA, a leading management consulting firm.

**For Information Contact:**  
Bob Rubin  
415/967-0900 or  
408/257-4727

Lower Level Floor Plan\*




Upper Level Floor Plan



\*Individual spaces can be subdivided according to your needs. Our designers will render plans to your specifications.

\*This is an example only. Actual spaces will be designed according to your needs.



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Some drawing programs — and all computer-aided design (CAD) programs I've ever run into — have optional libraries of often-used objects, such as architectural symbols for doors, tables, restroom fixtures, and other items that would appear in a floor plan or blueprint. If such a program is compatible with PageMaker, the libraries are also available to PageMaker and can be placed in publications.

## **The Art Institute of Chicago**

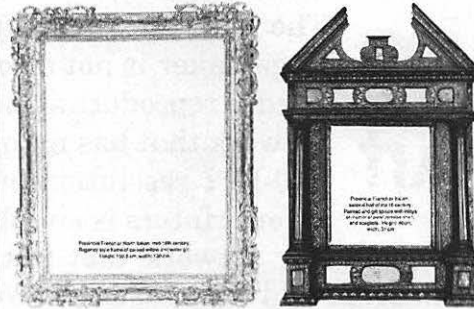
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While Ransom prefers working with PageMaker because of the ease with which she can create a rough design, other PageMaker users who have yet to tap its “quick comp” potential are nevertheless quite pleased. Ann Wassman Gross, graphic designer at the Art Institute of Chicago, hopes to use PageMaker some day for copyfitting and design. For now, PageMaker and a laser printer serve as a typesetting machine for smaller jobs.

Thus far, Gross is the most pleased with what PageMaker can do with exhibition labels. In the past, each label was typeset and silk-screened at high cost. She has saved enough just doing labels to pay for PageMaker and her hardware. But it hasn't stopped there. Gross also composes the copy for brochures and publicity photos with PageMaker and sends the disk to a service bureau for typesetting on a Linotronic 100 at 1240 DPI. “We saved seventy-five percent on our typesetting costs,” she says. The results are exemplary (*Figures 1.4A and 1.4B*).

It would be easy for Gross to take the next step. Doing a two-column format and adding the rules between items at the top of the page would require just a few minutes more than she's already spending in PageMaker, yet completely eliminate her need to do paste-up. Photos would still have to be inserted by the printer, however, to achieve the kind of quality Gross wants.

THE ART OF THE EDGE: European Frames 1300-1900  
The Art Institute of Chicago October 17-December 14, 1986



Portrait of Henry Bauer, 18th century.  
Reproduced by kind permission of the Art Institute of Chicago, 1986/1987.

Portrait of Francis Bacon, 17th century.  
Reproduced by kind permission of the Art Institute of Chicago, 1986/1987.

Portrait of Henry Bauer, 18th century. Reproduced by kind permission of the Art Institute of Chicago, 1986/1987.  
Portrait of Francis Bacon, 17th century. Reproduced by kind permission of the Art Institute of Chicago, 1986/1987.

**Figure 1.4A.**  
PageMaker can pay for itself even if it's used simply as a way to input type to a Linotronic typesetter as it is at the Art Institute of Chicago.

The Department of Museum Studies announces its Winter Institute of Art History for 1987. The course focuses on the 19th-century and 20th-century American and European painting. Each day is devoted to a lecture, a seminar, and a field trip. The number and length of the lectures, seminars, and field trips will vary according to the weather. To register, please call the department office at 773-937-1234. Registration fee is \$100.00.

Continuing education courses are offered with the Department of Museum Studies. These courses are designed for museum professionals and are available in a variety of formats. The courses are: *Introduction to Museum Studies*, *Introduction to the History of Art*, *Introduction to the History of Architecture*, *Introduction to the History of Design*, and *Introduction to the History of Landscape Architecture*.

For the latest news and information on the Department of Museum Studies, please call 773-937-1234.



**Survey Course**

*A Survey of 19th-Century European and American Art*

This season the staff of the Department of Museum Studies will offer a series of 19th-century European and American art to complement the John Singer Sargent retrospective exhibition to be held February 7-April 20, 1987, and the reopening of the European Painting galleries on or about the first of May. The lectures and weekly topics are listed below.

**Friday evenings, January 25**  
Mar. 22, 29, & 5 (repeated on Saturday evenings)  
January 24-Mar. 25 0153-4230

**I. Jan. 25, 29**  
*The Gathering Storm — Pre-Revolutionary Art in Europe and America*

**II. Jan. 30, 31**  
*The End is Nearer — Neo-Classicism*

**III. Feb. 6, 7**  
*Romanticism*

**IV. Feb. 13, 14**  
*The Fine Arts in the New Republic*  
Robert E. Koenig Lecture

**V. Feb. 20, 21**  
*The New York — American Landscape and Genre Painting*



**VI. Feb. 27, 28**  
*Experiencing Nature — A European View*

**VII. Mar. 6, 7**  
*The Academies — Paris, Rome, London, and Philadelphia*

**VIII. Mar. 13, 14**  
*The Early Camera and the Excursion to the Academies*  
Class: Nancy Rubin, Lecturer

**IX. Mar. 20, 21**  
*The Romantic Challenge — The Nation of the United States*

**X. Mar. 27, 28**  
*The New French Landscape*

Dr. Nancy Rubin is the author of *From the Camera to the Camera*, 1986, and *The Nation of the United States*, 1987. She is also the author of *The Nation of the United States*, 1987, and *The Nation of the United States*, 1987. She is also the author of *The Nation of the United States*, 1987, and *The Nation of the United States*, 1987.



**Figure 1.4B.** Ann Wassman Gross of the Art Institute of Chicago used Adobe Systems' ITC Garamond typeface for the Apple LaserWriter to produce the copy in this brochure.



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## Line

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## Art

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The most successful use of scanners with PageMaker is not overly ambitious. If you need to reproduce a photograph or a piece of artwork that has many shades of gray, the 300-DPI resolution of both scanners and laser printers is simply not going to cut it. For artwork that is composed entirely of black areas and white areas, however, scanned input may be the way to go. Such art is called line art.

The trouble with scanning right-angle lines into PageMaker is that the piece of art you scan will rarely be aligned perfectly. Thus the image of a line that should go straight up and down will actually go askew by a few degrees. As a result, your image will have jagged lines that actually should be straight. Worse, it will be tilted, and there is no way that PageMaker can adjust the image so that it's straight again. So make sure the art you scan is aligned correctly if it has right angles. This is easier on a flat-bed scanner than it is on a sheet feed scanner, as I'll discuss in Chapter Four.

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## **Butch Coyne and PageMaker on center stage**

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And then there is the other extreme from those who use PageMaker simply as an inexpensive alternative to typesetting — individuals who do *everything* in PageMaker.

Before Butch Coyne would come out from Indianapolis to manage marketing for the San Jose Repertory Company in California, the troupe had to agree to buy him a Macintosh and PageMaker. PageMaker had given Coyne the ability to produce slick direct mailings, posters, a newsletter, advertisements, and an award-winning season program on a very small budget for the Indianapolis Repertory Theatre (IRT). Coyne felt he couldn't succeed in San Jose without it.

Sometimes Coyne's use of PageMaker takes advantage of the speed it brings to the publishing process. Its do-it-yourself nature means you don't have to wait for openings in the schedules of a string of outside graphics vendors. Thus, when attendance at the Rep needed a quick boost — ticket sales to a show had fallen off drastically as it neared the last weeks of its run — Coyne and PageMaker effected a rescue.

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**“The theatre was practically empty and it was still eight days before the production closed,” Coyne says. “Using PageMaker, we designed and produced a two-color post-card in about forty-five minutes, got to the printer that afternoon, and mailed it out the next day. We saved a couple of days in turn-around time, and were able to attract quite a crowd for the last five days of the show.”**

**Note that Coyne says “we.” His graphic skills are passable, he says, not exceptional. At the IRT he learned a secret: to get professional results, apply professional skills. Despite the cost of hiring a graphics specialist to run his PageMaker publishing system, Coyne spent \$11,000 less than what the IRT spent the previous year on conventional typesetting and paste-up. And he produced more pieces to boot.**

**Thus it wasn’t hard for Coyne to convince San Jose Rep’s management of the wisdom of hiring a full-time PageMaker person, especially when he saved enough money from reduced typesetting and printing costs during his first two months in San Jose to cover the salary of a new employee. He convinced his PageMaker expert from Indiana, Scott Arendall, to follow him to San Jose Rep shortly after he arrived.**

One of Coyne and Arendall's recent successes was a five-piece holiday mailing consisting of a brochure, a matching envelope, a flyer on the upcoming production, an order form, and a Number 6 Business Reply envelope. Again, this was a spur-of-the-moment production; the ability to turn attractive pages around quickly and cheaply allowed Coyne to capitalize on his early December realization that theatre tickets would make great holiday gifts (*Figure 1.5*). On another occasion, it was late in the afternoon on the day of a special one-time production when Coyne realized that no program had been printed. Everyone coming into the theatre that evening received a PageMaker-produced program hot off the Apple LaserWriter.

**A Holiday Gift Guide**  
from your Professional Theatre Company.

San Jose Rep has two wonderful ideas to solve your holiday gift giving dilemma.

The Rep *Priority Pass* is the perfect gift for an individual or couple who need total flexibility in their entertainment. The *Priority Pass* allows you the flexibility to *attend any performance of the shows you want to see*. Simply exchange the coupons for tickets at the Rep box office or just show up at the show on the night you want to attend. We will guarantee you a seat to that performance or the Rep will give a FREE Gift Certificate worth \$15. Order yours today, for there are only 350 passes available.

Can't decide on which *Priority Pass* to give? Then purchase a *Gift Certificate* which is good for tickets to any show of the season. Gift Certificates come in a variety of denominations to fit everyone's holiday budget. It's the perfect gift solution for that hard-to-buy-for person.

**GIFT CERTIFICATES :**  
*The Perfect Holiday Gift !*

- \* Purchase them in \$10, \$15 or \$20 denominations.
- \* Good for Single Tickets, or Season Tickets.
- \* Easy, convenient, and the perfect entertainment gift.

**Charge by Phone (408) 294-7572**  
Visa, Mastercard, and American Express Accepted

**PRIORITY PASS :**  
*Ultimate Flexible Entertainment !*

**WEEKNIGHT PASS**

- \* 4 admission coupons for any Tuesday, Wednesday, Thursday, Sunday performance.
- \* Guaranteed Seats - Your *Priority Pass* guarantees you a seat to any performance of your choice or we will give you a \$15 Gift Certificate FREE!
- \* Total flexibility - Redeem your coupons at San Jose Rep Box Office or at the Montgomery Theatre.
- \* Use your coupons in any combination, for any shows through May 10, 1987.

Only \$54

**WEEKEND PASS**

- \* 4 admission coupons for any Friday or Saturday performance.
- \* Guaranteed Seats - Your *Priority Pass* guarantees you a seat to any performance of your choice or we will give you a \$15 Gift Certificate FREE!
- \* Total flexibility - Redeem your coupon at San Jose Rep Box Office or at the Montgomery Theatre.
- \* Use your coupons in any combination, for any shows through May 10, 1987.

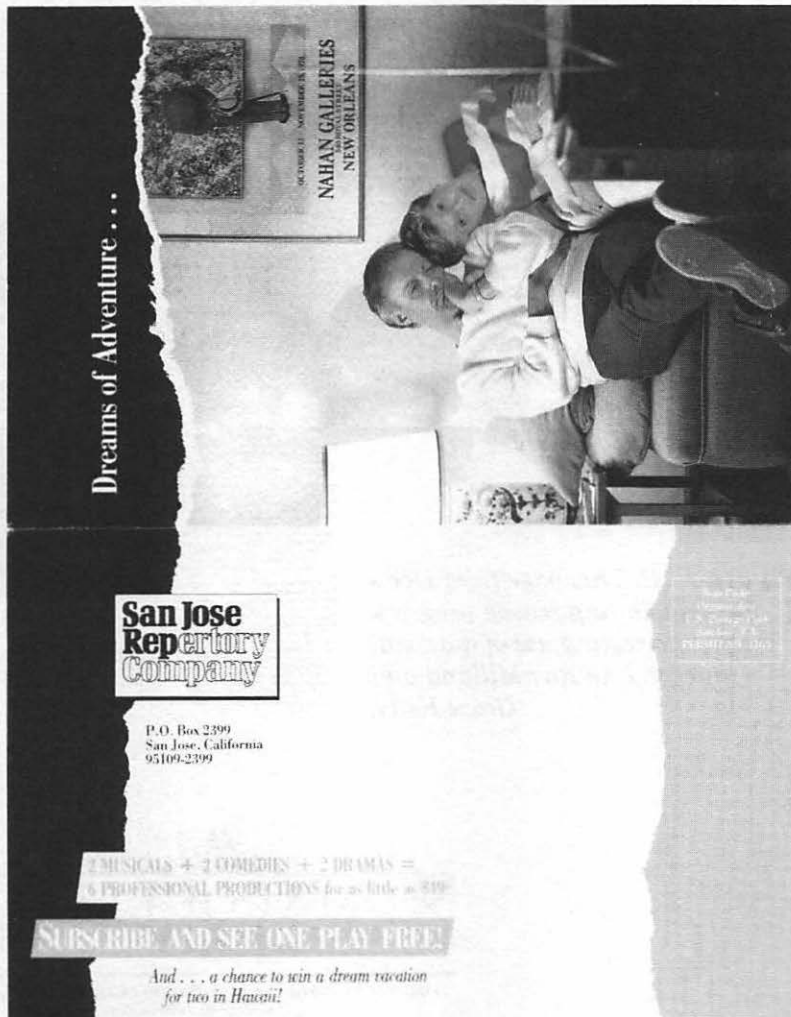
Only \$66

*Figure 1.5. When time counts, PageMaker can turn out simple pages such as this one in just minutes.*

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But not everything coming out of Coyne's office is a last-minute affair. The 1986-87 schedule, a four-color direct mail piece printed on coated paper, gave Arendall the chance to really stretch his designer's wings (*Figure 1.6*). PageMaker's ability to accurately mark a spot on the page with a ruler guide allowed him to handle the production of camera-ready material, including separations for all but the color photograph on the front.

All of this comes easily to Coyne and Arendall. They learned the ins and outs of PageMaker back in Indiana while producing the range of materials shown in *Figures 1.7A* through *1.7G* on pages 18-19. And their use of PageMaker has continued to expand in San Jose. Three machines are lined together on a network, and several more have been ordered. A variety of staff members write copy and send it over the network to Arendall's machine for design and layout. San Jose Rep does enough high-quality work with PageMaker to make a local printer's investment in a Linotronic typesetter profitable.



**Figure 1.6.** The San Jose Repertory Company uses PageMaker to produce some very effective direct mail pieces, such as the brochure pictured above.

**HOUSING BECOMES ELECTRA**  
by Eugene O'Neill  
February 14 - March 2

As the coroner of O'Neill's birthday party, IRT again celebrates a great American playwright. The set draws from the sea and with it a New England family.



**HOWE AND JULIET**  
by William Shakespeare  
April 4 - 26

The Bard's eternal lovers must defy the rivalry of their families to pursue their tender "star-crossed" love. IRT returns to the rich world of Shakespeare to present the world's most famous love story.



**TURCH SONG TRIOLOGY**  
by Harvey Fierstein  
April 11-27

Currently on Broadway, this Tony Award winning play tells the story of love, a gay man unceremoniously losing love and affection, often with comic results. **TURCH SONG** is a ground breaking work and yet still twenty millions universal human needs.



\* rights pending

**Figure 1.7A.** Nothing prevents you from using PageMaker to do four-color publications. Four-color separations of art, such as these paintings used by IRT, can be inserted by the printer.

**Figure 1.7B.** This page from IRT's award-winning season program makes interesting use of diagonal lines to link Ray Milland and Grace Kelly.

**IN THE WINGS**  
MAINTENANCE  
FEBRUARY 28 - MARCH 12

**Dial "M" for MURDER**

Alfred Hitchcock plays a cowardly furnished room. A shadowy figure comes of killing. A murder takes place and a body slumps to the floor. A distraught woman, nightmare scenes all over her face, comes to the dark so rain falls softly. These are familiar images which conjure up the world of the suspense thriller: a world where it always seems to be night, always foggy or wet, filled with dark and ominous, where lives are never allowed to become hard and women never in for pain. The suspense thriller, mystery or detective genre as they are variously called has proved a favorite with American audiences for generations. Prior to assuming a professional standing in a straight profession, the suspense thriller was perfected on the stage. **Engelmann Theatre's Dial "M" for Murder** is the last 40's and 50's, diverging from the standard "whodunnit" format into plot structures in which the audience sees who the murderer is but the characters must piece the truth together.

Alfred Hitchcock made a film of Knott's stage play in 1954 with Grace Kelly, Robert Cummings, Ray Milland, John Williams and Anthony Quinn. In keeping with his belief that a stage play should not be opened up to include outside locations, the film was shot almost entirely within the apartment for the Knott's play calls for.

Like many a good thriller, **Knott's play** is based on the act of greed. And of course, the rest of the story, like most thrillers, is that crime doesn't pay - even very well planned crime. **Knott's Dial "M" for Murder** is a world of conflict subtly labeled by mystery. It is a suspense that Hitchcock was drawn to the script as a vehicle for his own brand of "suspense effect," when something happens later in the heart of the most familiar and comfortable



Ray Milland in Alfred Hitchcock's **DIAL "M" FOR MURDER**



Robert Cummings with Grace Kelly

thriller. One of the favorite scenes of Knott's play is that although the murder itself happens, the darkest truth of the murder is nearly home out. Since we can't let you see more of the plot without giving the whole thing away, we'll let Hitchcock's picture provide your access to our upcoming production of **DIAL "M" FOR MURDER**.

View Health  
Information  
U.S. Passport  
Information  
Indiana, Ind.  
Home No. 3027

**MARQUEE** Volume 17  
Issue 8  
August, 1988

Artistic Director, Indiana Repertory Theatre • 140 West Washington Street • Indianapolis, Indiana 46204 Managing Director  
Tom Bass

**Dial "M" for Murder and Bullshot Crummond**  
thrills at the Indiana Repertory Theatre

**Figure 1.7C.** Newsletters are one of the most popular uses for PageMaker. IRT's Marquee kept past and current subscribers up to date on coming attractions.

The Suspense Thriller - what a great way to spend a March evening. Trying to guess "whodunnit", or better yet, knowing who did it, but trying to let the characters know so that they won't do something stupid - like get killed. Will the detective figure it out in time to stop the killer from striking again? Will the audience live through the exciting excitement of the second act? You'll have the opportunity to experience the spell-binding power of a mystery written thriller like **murder** at the Indiana Repertory Theatre when **DIAL "M" FOR MURDER** takes the Mainstage.

Having opened February 28, this acclaimed murder mystery by Frederick Knott will play through March 22. One evening of this expertly plotted murder that goes away will guarantee to keep the blood running for at least the week. **DIAL "M" FOR MURDER** will not only have you gripping your seat, but it will also keep you from answering your phone late at night.


Mary will know **DIAL "M"** from Alfred Hitchcock's famous 1954 film version which starred the beautiful Grace Kelly as Margot, the intended victim and Ray Milland as her husband Tony, the mastermind behind the scheme. Like many a good thriller, Knott's play is based on the sin of greed.

And just as there have been great thrillers and detective stories, so there have been great spoofs on the same, and **BULLSHOT CRUMMOND**, which will begin in the Cabaret March 18, may be placed among the great American traditions like **Dial "M"** and James Bond other spoofs of the detective genre.

"Bullshot" Crummond, our hero, is a hilariously ridiculous character - a bumbling Englishman who is a cross between Dudley DoRight and Peter Sellers' Inspector Clouseau. Crummond's nemesis is the equally absurd Otto Von Brunnson who hates Crummond (of course) and wants to conquer the world (of course).

Von Brunnson's sister, the lovely (but deadly) Lanya has a lively (but deadly) pet falcon. Add to this the grotesque, grotesque, there is Marovitch, the unapologetically ugly exterminator in the employ of the Von Brunnsons.

This play sets every trick in the book - and they work! **BULLSHOT CRUMMOND** promises to be an evening of side-splitting absurdity for anyone who ever read a detective story or saw **THE FUNKY PANTHER** or pretended to be James Bond - and anyone else who likes good spoofing fun.



Karen Nelson as Margot Wendice, fights for her life with John Herwig playing the hard murderer in Frederick Knott's **DIAL "M" FOR MURDER**.

**Figure 1.7D.** The care taken in matching the paintings for the season-roundup brochure (Figure 1.7A) paid off when those same paintings brought consistency to the cover of IRT Onstage.

**■ Indiana Repertory Theatre Season Program ■**

**• 1985 ADDI AWARD WINNER - EXCELLENCE IN DESIGN •**

Indiana Repertory Theatre presents professional live theatre in the strikingly renovated Indiana Theatre in the heart of downtown Indianapolis. Our 15-year production history boasts a wide cross-section of plays from the world repertoires, and the 85-87 Anniversary Season promises to deliver six magnificent productions on the Mainstage plus no fewer than four special events on the Uppertage.

As a 1985 Addi Award Winner for Excellence in Design, IRT Onstage, our program magazine, commands the attention of our audience.

- Over 100,000 persons will read the theatre each season.
- Over 57% of our patrons are professionals in the 35-64 age group who regularly support the arts.
- Over 57% are worth a total of \$95,000 annually.

• IRT Onstage has proven to be a profitable tool for advertisers wishing to reach these valued community members.

• IRT Onstage contains vital information for the patron, including cast list and biographies, photographs, director's notes and background features, which set the play in historical context.

Step into the spotlight with other prestigious businesses and organizations by calling the Indiana Repertory Theatre Marketing Department at (317) 635-5277.

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**■ Mechanical Requirements**

**Ad Sizes**

Vertical: 7" x 9"

Full Page (Two Sides): 2 1/8" x 9"

Half Page Vertical: 4 1/8" x 9"

South Page Vertical: 4 1/8" x 5 1/8"

Horizontal: 4 1/8" x 7"

Half Page Horizontal: 2 1/8" x 7"

South Page Horizontal: 2 1/8" x 7"

**Colors Ready for Reproduction:**

- Black & White Line Art (PMT's)
- 1-1/2" Trim Size (7 1/4" x 10")
- 1-1/2" Trim Size (10" x 7")

**Additional Charges:** Spotting, layout, proof-work or halftone reproductions, etc. are at cost to the advertiser.

**■ Season Advertising Rates**

**Premium Advertising**

Back Cover, 4 color: \$4000

Inside Front Cover, 2 color: \$3500

Inside Back Cover, 2 color: \$3500

**Priority Placement, Black & White**

Coverpage Inside Front: \$3000

Coverpage Title Page: \$3000

Coverpage History of IRT: \$3000

Coverpage Staff or Contributors: \$2000

Coverpage Theatre Credits: \$2000

Coverpage Board of Directors: \$3000

Full Page Ad: \$2100

Half Page Ad: \$1600

South Page Ad: \$750

Reference Ad: \$750

\*This brief format advertising lets our patrons know who, where and when your business is in 2 Lines. Ad reference ads set in 1/2 page columns without a border.

The above rates apply to manufacturing advertising that will appear in all six Mainstage productions plus no fewer than four special events on the Uppertage during our 1986-87 season.

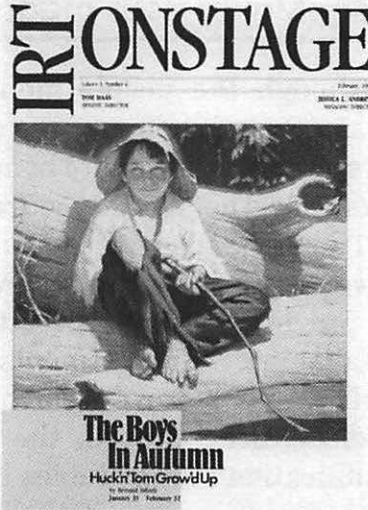
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**■ Deadlines**

Space Reservations: September 1, 1986

Camera Ready Copy: September 28, 1986

Publication Date: October 28, 1986



**Figure 1.7E.** The PageMaker-produced IRT Onstage won an Addi award, which was duly noted in the publication's rate card, also done in PageMaker.

**Figure 1.7F.** Producing postcards was a good way to inform IRT subscribers of special events.

**The World Famous  
COUNT BASIE  
ORCHESTRA**

**The most explosive  
force in jazz!**

August 14 & 15  
Thursday and Friday 8:7 & 9 pm  
IRT MAINSTAGE  
Tickets-\$10-\$15

**AND ALL THAT JAZZ...**

**The World Famous  
COUNT BASIE ORCHESTRA**  
The most explosive force in jazz!

August 14 & 15, Thursday & Friday  
Shows at 7 & 9 pm

"No one and no one band has contributed more to American music than Count Basie."  
-Henry Mancini

**THE NAPDOWN STRUTTERS**  
Dixieland at its best!

Final 2 shows-  
July 25 & 26  
Doors open at 7 pm

Dancing & Surprises till Midnight!

Tickets available at the IRT Box Office, at all TicketMaster outlets or by calling TicketMaster at 239-1000

**Indiana  
Repertory  
Theatre**

145 W. Washington Street  
Indianapolis, IN 46204  
(317) 635-5252

Address correction requested

Non-Profit  
Organization  
U.S. Postage  
PAID  
Indianapolis, IN  
Permit No. 3627

**Figure 1.7G.** PageMaker made it easy to turn the flip side of the postcard into a real attention-getter.







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# Cost Reduction

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The greatest savings in producing marketing materials in-house with PageMaker probably comes when you've been using an advertising agency. Ad agencies use highly paid professionals

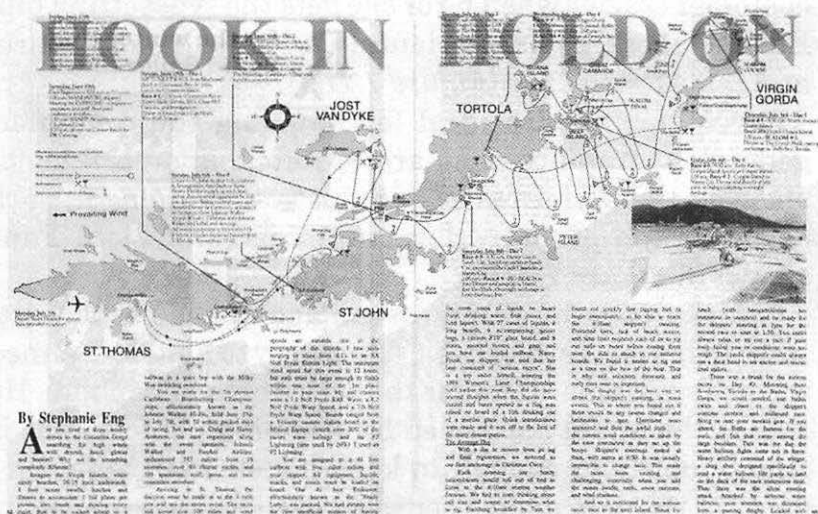
and tack profit on to their basic costs. PageMaker lets a capable person save a great deal of money.

Take the case of RTE Deltec Corporation. Susan Connell had convinced her boss to buy a computer and PageMaker in order to produce technical data sheets. He was so impressed with her initial efforts that he passed her the job of doing brochures and catalogs. Instead of sending copy to the ad agency for design, typesetting, and paste-up, Connell put her copy into PageMaker and spent about an hour a page doing the design and layout. An additional \$15 per page went to the service bureau that printed the PageMaker file on a Linotronic 100, plus \$15 more for the production freelancer who pasted the pages on boards and created tissue overlays for marking second color and screen placement on each page. Thus she saved \$470 a page.

Moreover, the hour Connell spent producing each page of these materials was less than the 1-1/2 hours per page she used to spend proofreading and coordinating with the ad agency. Finally, the time to produce camera-ready art was reduced from 10 working days to four.

The RTE Deltec case is nearly perfect from the Aldus point of view. Huge savings, nice end result, no hitches. It's not always this easy, as you'll see in the chapters that follow. But it can be. Hopefully, this book will help you avoid the pitfalls.

Other magazines produced with PageMaker are much more ambitious in page design (Figure 1.10). After years of producing *Northwest Sailboard* as a typewritten newsletter, Pete Fotheringham caught the PageMaker bug in Seattle and bought himself a Macintosh. Now, under the art direction of consultant Bill McGown, Pete churns out a magazine that approaches 100 pages a month during the six-month wind-surfing season.



**Figure 1.10.** PageMaker can build a spread that runs across the gutter between two pages. Bill McGown's double truck from Northwest Sailboard makes good use of that capability. McGown is yet another designer who doesn't limit his PageMaker work to a single color. This spread is splashed with the primary colors one often sees on sailboards in the Columbia River Gorge.

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## Enough arts and letters — what about industry?

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Tom Lapham heads Industrial Sales and Advertising Consultants in Bristol, Connecticut, and uses PageMaker to design and lay out product literature for a number of industrial clients. Much of his work consists of brochures that include charts of specifications, the kind of work that can drive a phototypesetting operator crazy — and the customer crazier when he or she gets the typesetting bill. But PageMaker's page orientation lets it handle charts and tables with ease (*Figure 1.11A*).

PageMaker is also ideal for handling the computer-generated graphics that are so often appropriate for showing the performance of industrial equipment, such as the graph of air performance curves of Ziehl Fans shown in *Figure 1.11B*.

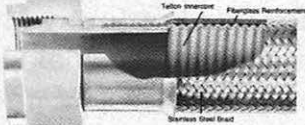
Lapham says he rarely uses PageMaker for the artwork in his pieces, however. The ability to handle scanned images seems more trouble than it's worth to Lapham. He thinks the quality achieved by scanning photographs is simply not high enough to keep his clients happy. Nor does he think it makes sense to use scanned images to show the printer the position of illustrations. Instead, Lapham draws boxes with PageMaker to show the position of graphics in his layout. Inside those boxes, he pastes photocopies of photos that he sizes with an advanced photocopy machine. Not only does this eliminate the need to scan photos and place large scanned image files within his PageMaker publications, he also doesn't have to calculate the percentage of enlargement or reduction required to make a photo fit a layout. He simply reads the correct number off the photocopier dial.

On the other hand, when Lapham formed those attitudes he had not yet seen what PageMaker 3.0 could do with scanned images stored as TIFF files (Tagged Image File Format). More of TIFF in Chapter Five.

## Convuluted Teflon Hose



### UNIQUE CONSTRUCTION



Innercore of virgin convuluted Teflon® externally reinforced with Teflon®-impregnated fiberglass. Reinforced with virgin white Teflon® innercore as a standard design, non-conductive. Also available with a conductive Teflon® innercore to provide protection against electrostatic discharge. Both construction have a low profile shape to promote easy cleaning.

### FEATURES

**HIGH FLEXIBILITY.** Convuluted Teflon® innercore provides great flexibility, the only truly flexible Teflon® hose in sizes 1-inch and up through 4 inches.

**TEMPERATURE RESISTANT.** Limits from -60°F to +400°F for most fluid and air applications.

**FLUID COMPATIBILITY.** Inert to all aircraft hydraulic fluids, fuels, lubricants, coolants and water systems. Non-toxic, odorless, and tasteless.

**RESISTANT TO KINKING OR COLLAPSE.** Higher kink resistance than that of extruded Teflon® hoses. Withstands negative pressure, except normally collapse a smooth bore hose.

**UNLIMITED SHELF LIFE.** Does not embrittle. Often or otherwise deteriorate with age or exposure to weather. Service life of Teflex convuluted hose can be expected to be several times that of rubber or other elastomer hose.

### TYPES TO SUIT DIFFERENT APPLICATIONS

Teflex convuluted Teflon® hose is produced with several types of reinforcement to meet the specific needs of different applications.

400/410 Series assemblies have stainless steel wire braid for applications in temperature range -60°F to +400°F.

310/320 Series assemblies have Nomex® braid for lower pressure applications requiring sound attenuation, resistance to high frequency radiation, electrical non-conductivity and light weight.

Variations of the 410 Series are available to order for special uses. The -32 size with axial aluminum braid for light weight is made to order for use in aircraft fuel systems. A variation having a spiral wire reinforcement over the innercore and under the braid is also available to order in size -32. Assemblies of this hose are approved for aircraft fuel by TSC C33a and have the advantage of not requiring an internal support coil to withstand vacuum.

### COMPARATIVE CHART FOR SELECTED SIZES FLEXIBILITY AND WEIGHT

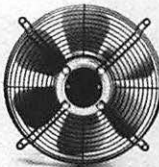
ASSEMBLY SIZE	MINIMUM BEND RADIUS (INCHES)				FORCE TO BEND (LB)				WEIGHT (LBS./FT.)			
	ALL TEFLEX	LIGHT WEIGHT	LOW	HEAVY	TOT. TEFLEX	TOT. LIGHT WEIGHT	TOT. LOW	TOT. HEAVY	TOT. TEFLEX	TOT. LIGHT WEIGHT	TOT. LOW	TOT. HEAVY
-08	8 1/2	3 1/2	2 1/2	2 1/2	1	8.30	4.70	4.70	7.70	14	11	12
-12	12	4 1/2	3 1/2	3 1/2	1	12.50	6.50	6.50	11.00	24	17	18
-16	16	5 1/2	4 1/2	4 1/2	1	17.00	9.00	9.00	15.00	32	23	24
-20	20	6 1/2	5 1/2	5 1/2	1	21.00	11.00	11.00	18.00	40	28	30
-24	24	7 1/2	6 1/2	6 1/2	1	25.00	13.00	13.00	21.00	48	34	36

Values for extruded Teflon are in accordance with MIL-H-20570 and MIL-H-27267  
1/8" Minimum Bend Radius

26

*Figure 1.11A. You couldn't get the data sheets Lapham does for his industrial clients straight out of a laser printer. They use color background screens that bleed off the page, lines in the second color, and logo art and photos that are put in place at the print shop.*

## TYPE FA High Pressure Die Cast Axial Fans

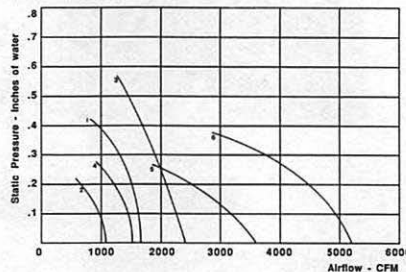


FA035-6E-W2C3-115

FA axial fans are designed to operate at high static pressures and air-volumes up to 5100 CFM for a 20" blade. The fan blades are die-cast aluminum and form an integral part of the motor rotor housing. The PSC external rotor motor forms the hub of the fan and is efficiently cooled by the passing air flow. The one-piece rigid structure provides long product life with efficient, quiet operation. Motor hub and set screw problems common to other fans are eliminated.

A variety of configurations are available to meet specific performance requirements and are shown in the following data. FA fans can be ordered with fan and motor only, or with fan motor and grill.

### AIR PERFORMANCE CURVES



*Figure 1.11B. Ziehl's data sheets are updated so often that they are distributed in loose-leaf binders for easy replacement. Lapham likes PageMaker for its ability to quickly revise documents.*

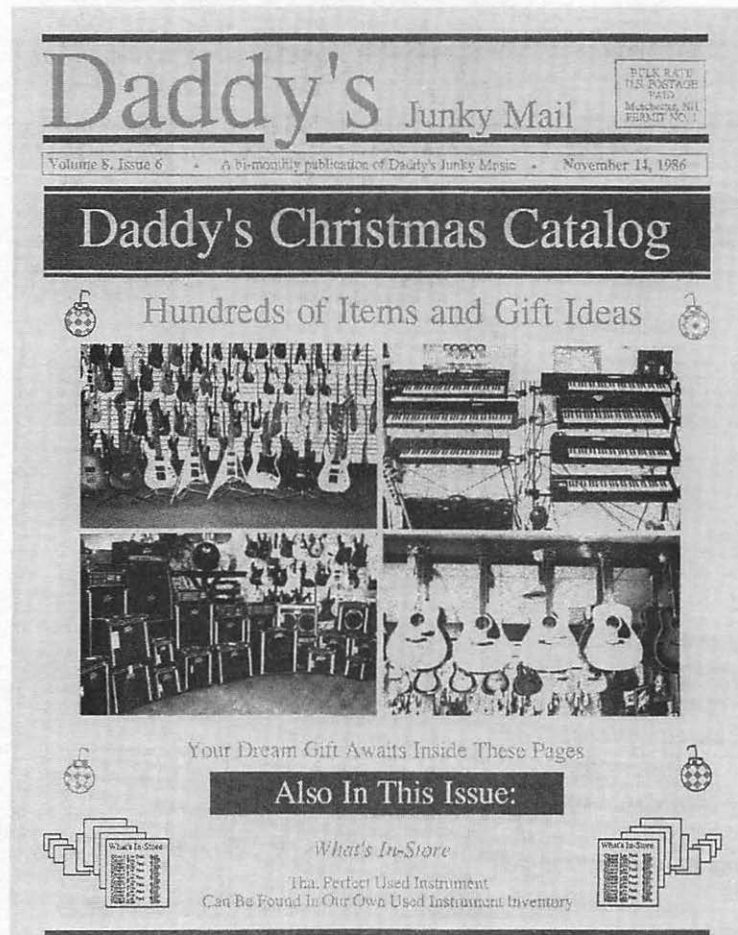
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## Even rock 'n' roll gets off on PageMaker

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Stephen Peterson, a rock music journalist turned assistant marketing director for Daddy's Junky Music Stores in Salem, New Hampshire, uses PageMaker to put together the chain's advertising catalog, *Daddy's Junky Mail*. The publication's banner is simple, consisting only of lines and type, yet Peterson manages to make the cover interesting with every issue.

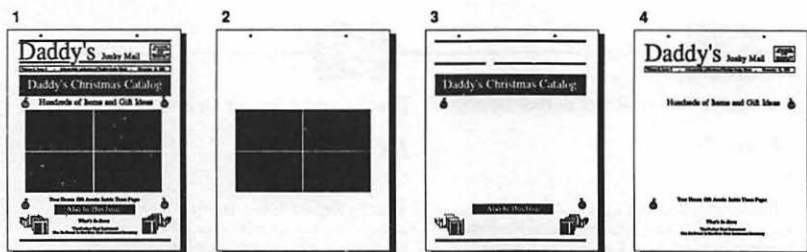
The Christmas issue shown in *Figure 1.12* is more effective than it may appear: Peterson used green and red ink on the cover, in addition to black .



**Figure 1.12.**  
PageMaker's design tools and laser printer output are all Stephen Peterson needed to produce this sharp catalog done on newsprint.

The thumbnail shown in *Figure 1.13* shows how the camera-ready art for this kind of simple multiple-color printing used to be prepared using PageMaker. On page one, Peterson composed the whole cover without regard to color. Page two shows the printer where the black ink will print – in this case, Peterson has drawn rectangles to show the printer where to position the halftones of his four product photos. On page three he showed only the elements that will print in green, and on page four he showed the red. What he had done, in the terminology of the trade, is produce *spot color overlays*. Although it seemed especially appropriate for the holidays, adding an extra color or two was so easy Peterson decided he could use color in every issue.

PageMaker 3.0 makes use of spot color in a publication even easier, and Peterson is excited. And now he wants a Mac II, because its color display allows graphic elements to be assigned colors and the end result previewed on-screen. PageMaker 3.0 can automatically print a separate overlay for each color involved in the final run on the printing press.



**Figure 1.13.** PageMaker's thumbnail capability is a useful tool for keeping your design unified from page to page. Here the thumbnail demonstrates how simple color separations are made with PageMaker.

Inside *Daddy's Junky Mail*, Peterson uses a consistent page layout that makes use of lots of shadow boxes and the 2-point line/hairline rule combination popularized by the most influential rock music magazine, *Rolling Stone*. The sample page shown in *Figure 1.14* shows that the "magazine" Peterson produces is really one big advertisement – but PageMaker allows Peterson to produce it in a graphic style that says both "rock 'n' roll" and "magazine" to the 19,000 people who receive it.

Daddy's Christmas Catalog

D  
rums




30

**Yamaha Power Road Series Drums**  
*From \$499*

*Power Road* from Yamaha. Deep shells for a sound that travels anywhere. Powerful, resonant, big. Select hardwoods designed, built and finished with Yamaha's quality. The kind of durability that stands up to the heaviest music with the response usually found in the most expensive drums. The Power Road outfit comes in dynamic red and deep gloss black. Each set is equipped with lean and rugged 4 Series hardware for maximum set-up, flexibility and long life. Start the music with Yamaha.

31

**Pearl Export Series Drums**  
*EX-22D-5 Kit \$499*

Pearl's *Export Series* features their popular and quality kits. Precision molded shells (from Pearl's Heat Compression System for perfectly rounded shells with no gaps) made from nine plies of selected woods are given the Export Series its special sound. And Pearl's Acousti-Coat sealer inside the shell helps project the sound while keeping out harmful moisture. The *EX-22D-5* is Pearl's "Deep Force" kit with extra deep shells for thunderous power.

**Figure 1.14.** In its heyday, *Rolling Stone* was extremely influential among graphic designers. *PageMaker* made it easy for Peterson to re-create the magazine's early look.

*Daddy's Junky Mail - Page 17*

One advantage of doing *Daddy's Junky Mail* on newsprint, besides the money saved using cheap, light paper, is that the somewhat jagged type produced by a 300-DPI laser printer isn't a drawback. The quality of the paper isn't good enough to let typesetting look much better.

Also, Peterson doesn't feel limited by PageMaker's maximum supported page size, 22 by 17 inches (also known as tabloid or "tab" size). To do in-store displays, like the statement of store policy shown in *Figure 1.15*, Peterson simply prints his PageMaker output on 8 1/2-by-11 paper, has it enlarged it to 20-by-24 at his local print shop, and spray-mounts the result on poster board.

## THE BLACK AND WHITE OF IT

When it comes to service, selection and dealer commitment, gray areas in the music business can be unnecessary pitfalls.

At Daddy's, we make sure that you get a clear picture of just what we can do for you. Like protecting your investment even after you buy it with our own *Price Protection Policy* and *Free Warranty Extensions*. Or helping to take care of your instrument or equipment with our *Lifetime Loaner Policy* and *In-house Repair Technicians*. Need we say more?

PLEASE COME IN...THE CHOICE IS CLEAR

**Daddy's**

junky music stores

WHEN YOU'RE READY TO ROCK

165 MASS. AVE., BOSTON - 247-0909

Salem Nashua Manchester Portsmouth, NH • Portland, ME

*Figure 1.15.*  
PageMaker is also handy for making point-of-purchase displays and other in-store graphics.

## Amateurs do okay, but professionals do it best

Unlike Peterson, who picked up design as he was getting *Daddy's Junky Mail* started, many of the people who use PageMaker are Designers with a capital "D." Ed Hughes certainly falls into that category. The only way you can tell his Roosevelt University annual report was actually produced using PageMaker would be to look at his costs. Using text transferred from the university's word processing system, he used PageMaker for the design and proofed his work on a LaserWriter. Photocopies of photos were placed onto his rough layout. The client was thus given a clear picture of the pages.

One of the pages Hughes passed to the printer is shown in *Figure 1.16*. It was printed on the Linotronic 300 typesetter at 2740 DPI. Hughes showed the printer where type was to be reversed out of the background color on photocopies of each page. And the printer positioned the photos inside hairline boxes above each caption.

*Figure 1.16. This is the main page as it went to the printer. A second sheet showed which pieces of type were to be reversed out of the background.*

The development of education

Roosevelt University, in the forty-one years of its existence, has been a pioneer of an independent urban university with a mission of education. As such, we are particularly sensitive to the major environmental changes affecting our metropolitan area and the educational institutions that have been their challenge. These environmental areas have included and experienced. The major problems are:

- 1) The increasing secondary school population of the population in general, and particularly of students from inner city schools.
- 2) High unemployment rates affecting students.
- 3) The increasing number of middle income families from the inner city suburbs.
- 4) The almost total disappearance of truly integrated high schools within the city area.
- 5) The reduced availability of adequate housing and facilities.
- 6) The alarming absence of even a basic minimum of qualified secondary faculty to serve as role models.

In the meantime, there is a great need for institutions such as Roosevelt University, but they must be adequately funded. If such funding is not forthcoming, the educational quality for the urban will remain as empty shell or will fall totally to the governmental sector - a potentially and administratively questionable situation.

Assuming adequate federal, state and private support, what are urban institutions such as Roosevelt University to do to help our society manage the organizational problems it faces? The challenges include the following:

- 1) Improving our system of secondary education, as recommended by the Carnegie Commission panel on schools and teacher unions in 1976.
- 2) Removing the obstacles to secondary development in the Chicago area.
- 3) Attracting individuals to the educational opportunities in downtown Chicago.
- 4) Increasing the availability of student aid funds in the form of grants rather than loans.
- 5) Providing more consistent support programs for traditionally prepared students with academic potential.
- 6) Expanding the pool of qualified secondary faculty.

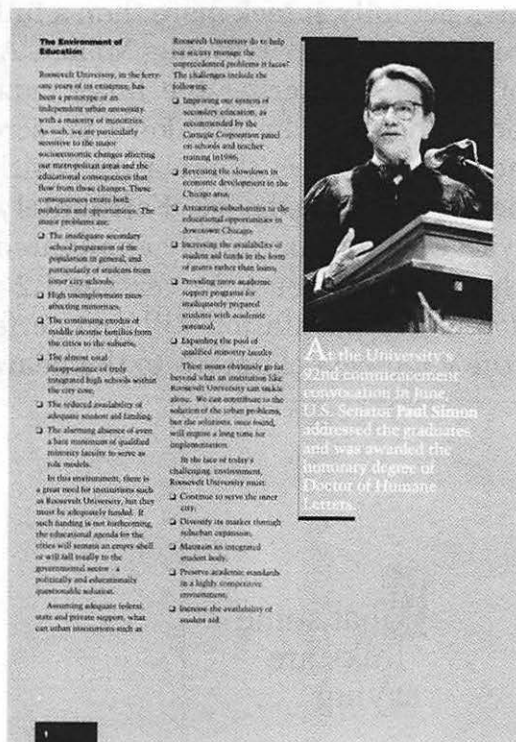
These issues obviously go far beyond what an institution like Roosevelt University can tackle alone. We can contribute to the solution of the urban problem, but this solution, most likely, will require a long time for implementation.

In the face of today's challenging environment, Roosevelt University must:

- 1) Continue to serve the inner city.
- 2) Operate as a teacher through individual experiences.
- 3) Maintain an integrated student body.
- 4) Provide excellent standards in a highly competitive environment.
- 5) Increase the availability of student aid.

At the University's 92nd commencement convocation in June, U.S. Senator Paul Simon addressed the graduates and was awarded the honorary degree of Doctor of Humane Letters.

Several typographic characteristics set the annual report apart (*Figure 1.17*). Hughes set the photo captions in 18-point type reversed out of a gray-green background that bleeds off the page. The body type was small with extra space or leading between the lines (*9 on 13* according to the jargon of the trade), which PageMaker handles with no trouble. The typeface for the body type is Adobe's Trump Mediaeval.



**Figure 1.17.** A reproduction of a page of the Roosevelt University annual report.

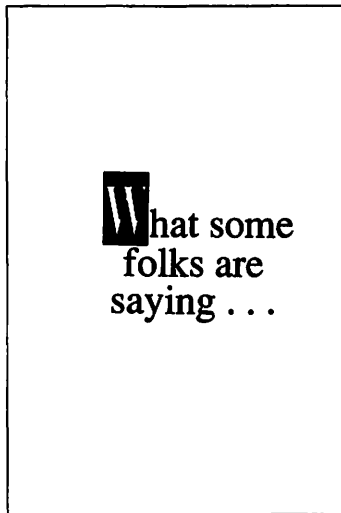
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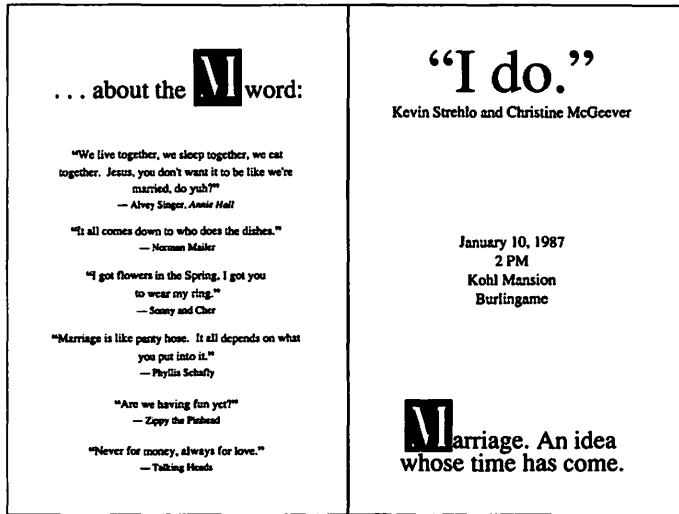
## Personal publications too

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Finally, PageMaker can be used for the most personal of business. When it came time to get married, I did the invitations myself using PageMaker (*Figures 1.18 and 1.19*). My fiancée Christine sketched the design on a napkin one afternoon during lunch, and I looked up quotations and whipped it out using PageMaker in ... er... actually, it took more than a full day. It was the first real job I took on with PageMaker. And I had a great deal of trouble centering the large capital letters over the boxes because PageMaker's on-screen display did not accurately reflect the relative positions of the letter and box in the printed page. Fortunately, Aldus soon came up with a patch that mostly eliminated the problem — and that was way back in version 1.2 of PageMaker. On-screen representation still isn't perfect, but it's very close (the engineers claim it's to the nearest pixel).

*Figure 1.18.*  
*Friends kidded us*  
*about doing our*  
*wedding invitations*  
*in PageMaker.*  
*Wedding invitations*  
*seemed a strange*  
*place to try to save*  
*money, one said.*  
*But saving money*  
*wasn't the*  
*motivation.*  
*The cover said:*  
*"What some folks*  
*are saying ..."*





*Figure 1.19. And the inside began: "... about the M Word." The motivation was to make sure the invitation was fun. We wanted to do the invitation our way: PageMaker gave us complete control. A comedian portraying Ronald Reagan married us. Maybe you had to be there.*

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# Chapter Two



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## An Overview of PageMaker 3.0

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**P**ageMaker 3.0 is deceptively simple. There's a lot of power there, but it's presented so gracefully, and in terms of such an elegant metaphor, that the program isn't intimidating. The metaphor is the layout board of a graphic artist; all you see when you begin to work are an empty board and eight tools that allow you to arrange the elements of a page by dragging them into the desired shape and position on your computer's screen. Conceptually, it's simple. Yet it will take an entire chapter just to tour PageMaker's menus, dialog boxes, and tools.

This chapter will give you a feel for the scope and depth of PageMaker 3.0. PageMaker 3.0 offers a great deal that was missing in previous versions, particularly for the production of long documents. PageMaker 3.0's new features—the automatic flow of text from page to page, style sheets, support for spot color, automatic wrapping of text around objects, control over scanned images—will be given special attention.

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In this overview I'll try not to go into too much detail. Nor will I linger on the more troublesome aspects of desktop publishing and how PageMaker 3.0 helps you deal with some of them and suckers you into others. That will come later, after I've passed along a bag of tricks, a set of defenses. Once your courage is up, you won't mind the dark, treacherous alleys I drag you through.

This chapter is a quick guided tour, then, of desktop publishing with PageMaker. Consider it the kind of tour you might get from my friend, Hunter. Hunter is a tour guide in San Francisco who covers the whole city, Pacific Heights to the Tenderloin, twice a day. You see more of the good and the bad sides of the city in half a day with Hunter than most people see in a week on their own. It all goes by quickly through the window, of course. That's okay — some of what you see is scary enough to make you think the metal walls of the bus are a fine idea and wonder if the windows are bullet-proof. As Hunter says: "Let's just get one thing straight. Nobody gets off the bus — we don't have the time or the liability insurance."

A quick tour may not appeal to you initially. After all, you buy a book about software for tips on how to wring the most from the program. You want to make it do things nobody thought it could. You want to learn the program's deepest secrets, its nittiest gritty. Nobody buys a book for a quick tour, right?

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Wrong. A lot of smart people plunk down \$21.95 for a book in order to avoid spending \$695 on the wrong program. And who am I to argue with a lot of smart people who want to buy this book?

What if you're not one of those smart people? What if you already own a copy of PageMaker 3.0? Don't worry: this chapter is still for you. Perhaps you're so immersed in the trees you haven't seen the forest: this chapter is about the forest, and it may lead you across some ground you've never trod. And more than likely, this chapter and the ones that follow can save you from grief.

Don't get the wrong idea. PageMaker is an impressive, powerful package for the painstaking creation of polished document pages. I sincerely believe that PageMaker 3.0 on the Mac is the most well-rounded and elegant desktop publishing package available for under \$2499—that's the price of Interleaf Publisher, which needs a Mac II with 5 megabytes of memory to run. This judgement comes after working with much of the competition: PageMaker and Ventura on the PC, Quark XPress and Ready-Set-Go on the Macintosh. There's nothing wrong with PageMaker—using it is like driving a fine automobile. Everything *feels* right. It's just that there are a number of pitfalls in desktop publishing in general and in the use of PageMaker in particular that you should avoid. It's even possible that taking on desktop publishing yourself is one of those pitfalls. Reading this chapter on the scope and flavor of PageMaker, and Chapter Nine on when PageMaker may be too much or not enough, will help you make that decision, if it is at all in doubt.

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The intent of this chapter then, is to steer you toward a pleasant experience with PageMaker 3.0. Even though this chapter is a quick tour, it includes a number of practical, useful suggestions. Even if you already own PageMaker 3.0 and are fairly competent in its operation, I bet you'll learn something. After all, 69 pages isn't that quick. And I venture to say that the tips alone—the boxed text marked by icons in the margin—will more than pay back the effort of skimming through the chapter.

But enough book talk. Let's talk about PageMaker.

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## The Mac as paste-up machine

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PageMaker is an electronic version of the graphic artist's design and paste-up tools. When you use PageMaker to create a publication — anything from a single-page price list to a corporate report to a monthly newsletter — you begin with a reasonable facsimile of blank paste-up boards. Publications are limited to 128 pages, but you can link two or more publications if need be. For example, the camera-ready pages from which this book was printed were created using one publication for each chapter and appendix (more on laying out books in Chapter Seven).

When you create a new publication, you specify a few details about those paste-up boards and then place type, graphics, boxes, and lines on them according to some coherent scheme of your own design. PageMaker makes it easy to set up guides and rulers to define that scheme; page elements actually “snap” to guides to insure quick, accurate placement.

Let me repeat, for this is an important point: *you* provide the design. PageMaker cannot insure that it will be a good one, anymore than a spreadsheet program can insure that the logic in your capital budget worksheet file is financially sound. A spreadsheet applies the formulas you devise to the numbers you enter, but the logic and the numbers are yours. On the other hand, just as spreadsheet users can make use of templates, so can PageMaker users. And PageMaker 3.0 comes with templates to guide you in your initial designs.

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Except for the kinds of lines and boxes that a graphic artist would add to set off various page elements, and the occasional headline, subhead or caption, the elements to be arranged on a page are usually created in other software packages.

PageMaker imports text from a variety of word processing programs and turns it into the electronic equivalent of typeset galleys. That is, it lets you assign any type font your printer can produce to any text, and then you arrange that type interactively in columns on the page. For example, you could write the copy for a newsletter in WordStar on a PC, move it across to the Mac with DaynaFile or the TOPS network, and place it in a three-column box on page 1 of an eight-page PageMaker document. PageMaker could then make the main body of your text 10-point Times Roman, captions 10-point Times Roman italic, and headlines 30-point Helvetica Bold. The available type fonts depend on your printer (see the glossary if any of this terminology is new to you).

PageMaker also accepts graphics from virtually every drawing and painting package that runs on the Macintosh, and even some that run on the PC. Paper artwork can be captured with an optical scanner and incorporated as well. PageMaker 3.0 is much improved in its ability to handle graphics that include a range of tones, such as

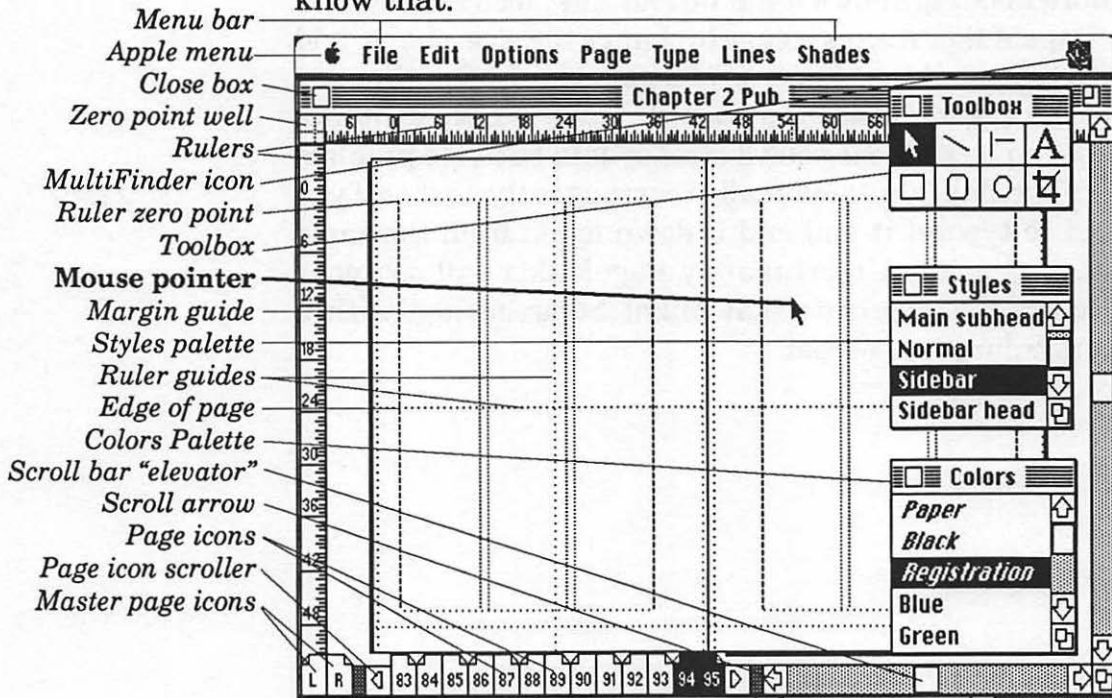
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photographs, through control of line screens and shades of gray. If you are using a gray-scale scanner and printing on a Linotronic typesetter, you may find yourself relieved of the need to have photographs halftoned and stripped into the page. If you are using a laser printer, you will find that scanned images print far better than they did with first-generation desktop publishing software, but probably not well enough to be acceptable for your finer work. More about graphics later, but for now, let's move on.

PageMaker makes it easy to change the size, shape, and location of all the elements of a page, even after they are on the electronic paste-up board. Have to cut a sentence from a piece of text you've already laid out? No problem — PageMaker automatically rearranges the text as if you had re-typeset it and laid it down again from the same starting point. Unfortunately, PageMaker will not move the graphic elements that might be associated with a particular piece of text.

## A typical electronic paste-up session

Figure 2.1 shows what PageMaker looks like after you've created a publication but before you've placed text or graphics. This is your layout board. You can begin any PageMaker task by pointing at a menu, tool, or other implement with your mouse pointer and clicking the mouse button. But if you're a Macintosh user you already know that.



**Figure 2.1.** The mouse pointer can activate all the PageMaker features shown above. For example, clicking on a particular page's icon takes you to that page. Clicking the "A" in the toolbox puts you in text edit mode. PageMaker 2.0 users will notice that the tool box has been joined by Style and Color palettes.

You don't have to face a blank paste-up board if you don't want to. Aldus PageMaker 3.0 includes 18 templates to guide

# PageMaker Templates

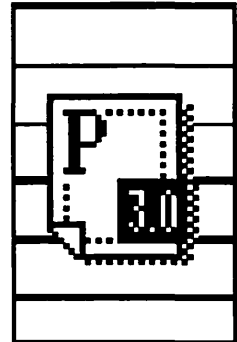
the creation of a variety of documents including business report, newsletter, executive summary, overhead transparency, price list, product specification sheet, phone directory, and name tag.

You can see a half-dozen or so documents built from these templates on a magazine spread I designed (see *Figure 6.12* on page 241). You can also take a closer look at the business report template in *Figures 6.10A* through *6.11C* on pages 239 and 240.

Aldus also sells the Portfolio series of templates. I've seen two so far: one for newsletters, the other for a variety of business documents.

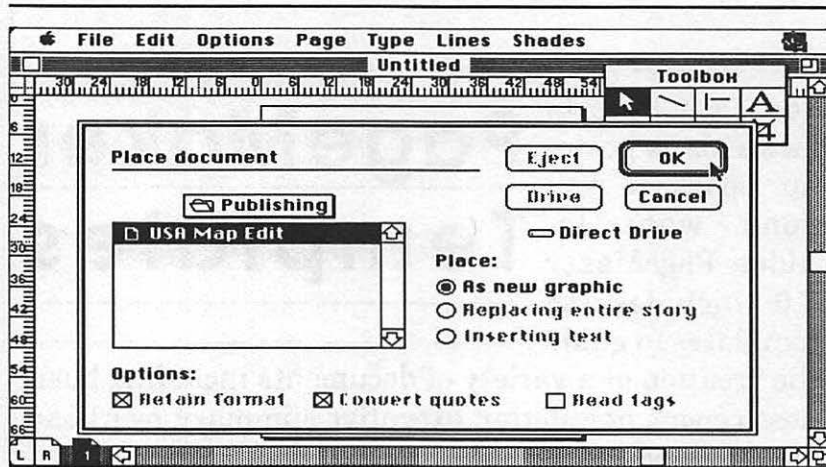
Finally, there are templates in the public domain. One good source for these is the Aldus Special Interest Group Forum on the CompuServe Information Service.

So don't be concerned if the thought of a blank paste-up board scares you. There are templates aplenty.

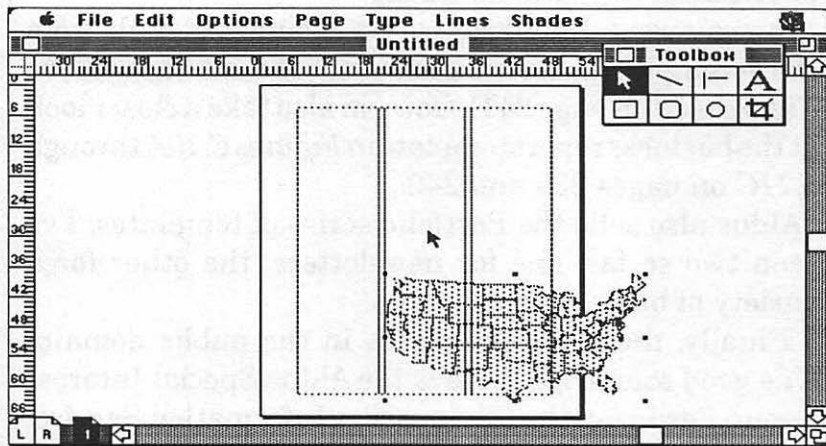


The most efficient way to paste up pages in PageMaker is to first prepare the text and graphic files you're going to use in the programs of your choice. Then, after you establish a basic page grid, you're ready to begin placing files: graphics first, then text. Last, make fine adjustments in positioning and add whatever lines and boxes might be called for. A simplified layout sequence is shown in *Figures 2.2* through *2.7* on pages 44 and 45.

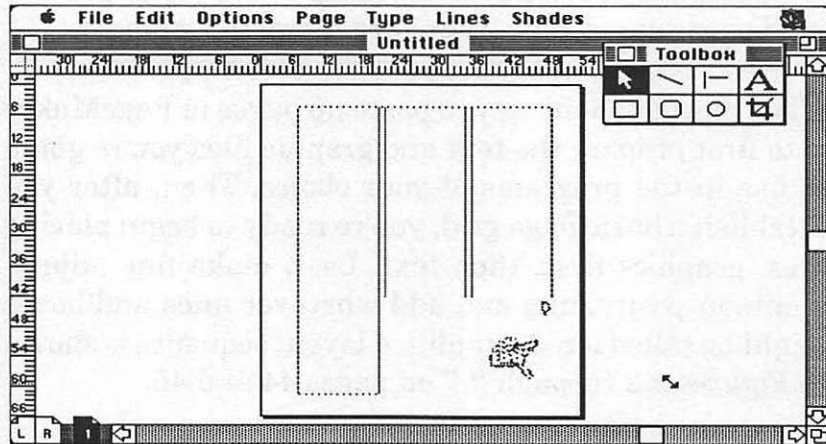
**Figure 2.2.** I have set up a simple 3-column page. First, I'll place my graphic. Since there's nothing else on the page, all options except As new graphic are gray to indicate they aren't available.

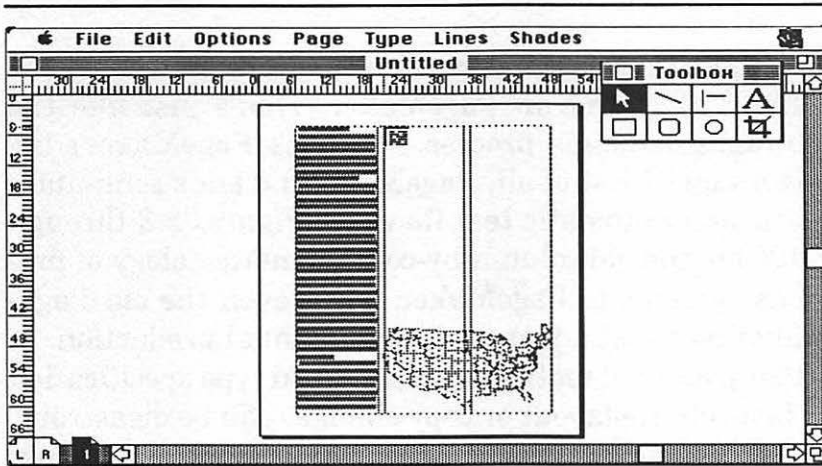


**Figure 2.3.** The map is too big. I wanted it to be two columns wide. Fortunately, it's an object-oriented or "draw" image. I know I can resize it without losing quality on the final printed page.

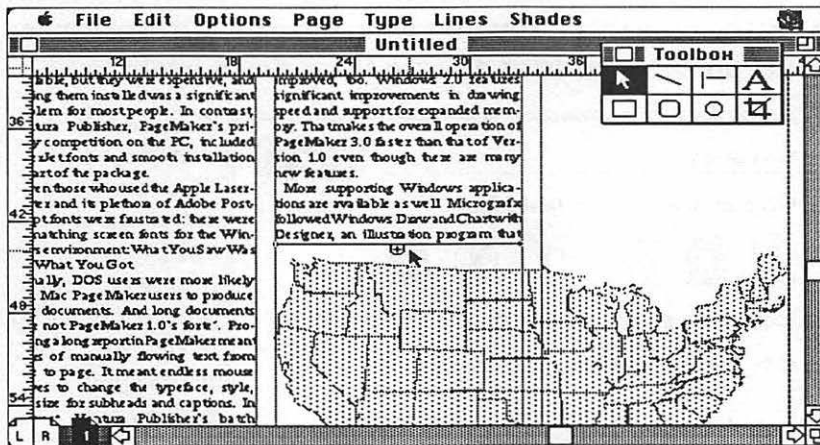


**Figure 2.4.** I've clicked on one of the map's handles to resize it proportionally. Notice that the map is being redrawn as an "object" (state) at a time.

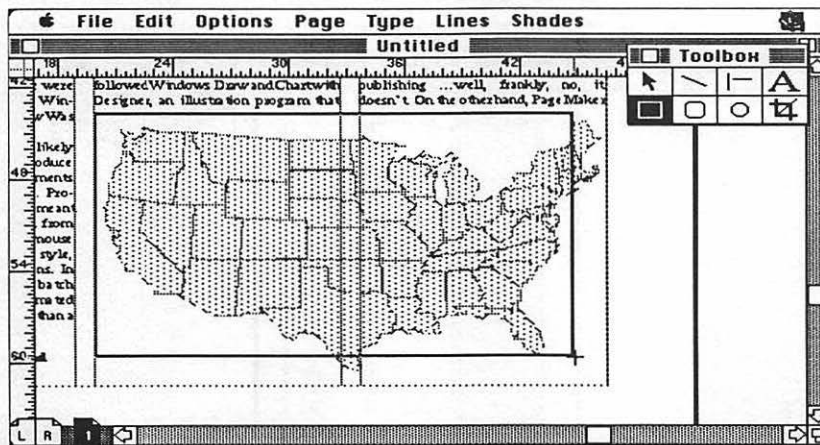




**Figure 2.5.** I've begun placing a text file. With text flowed into the first column, I've "loaded the cursor" and am ready to flow the second. In this page view, type is too small to render as individual letters; PageMaker represents it instead as blocks.



**Figure 2.6.** I've changed the view to Actual Size — we're in closer now. You can make out the text. I've flowed the second column of text; the "+" indicates more text remains. I'll click on the "+" to load the pointer and flow the last column.



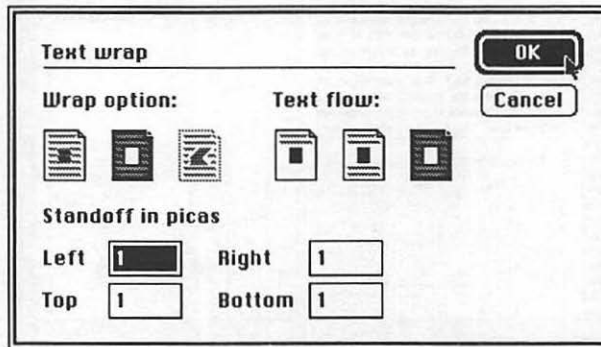
**Figure 2.7.** In close now at 200% size, I apply the finishing touch by stretching a 1-point box around the map to set it off from the text.

As those figures show, type is sometimes laid down one column at a time in PageMaker. That's just like the manual production process, so what's PageMaker's big advantage? First of all, PageMaker 3.0 adds semi-automatic and automatic text flow (see *Figures 2.8 through 2.10C*) to the old column-by-column methodology of previous versions of PageMaker. But even the old PageMaker had vast advantages over manual production.

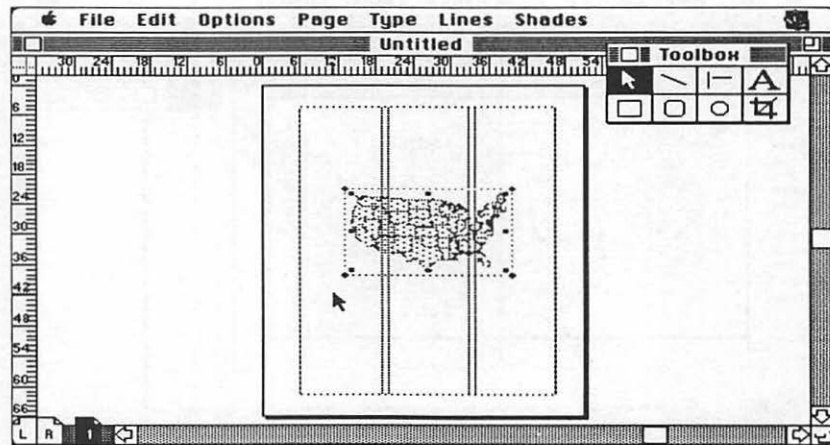
Using manual methods, a mistake in type specification or last-minute layout or copy changes can be disastrous. The fix is neither quick nor cheap at as much as \$100 per hour with rush charges added. Nevertheless, you must have the type reset. You may even have to pull every piece of art off the boards and paste them down again.

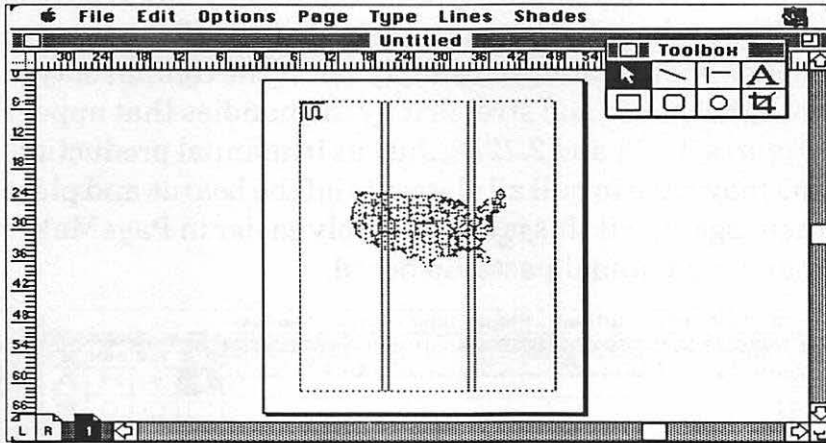


*Figure 2.9. The handles and dotted box around the map indicate Text wrap is on — the graphic will “repel” text, causing text to flow automatically around it.*

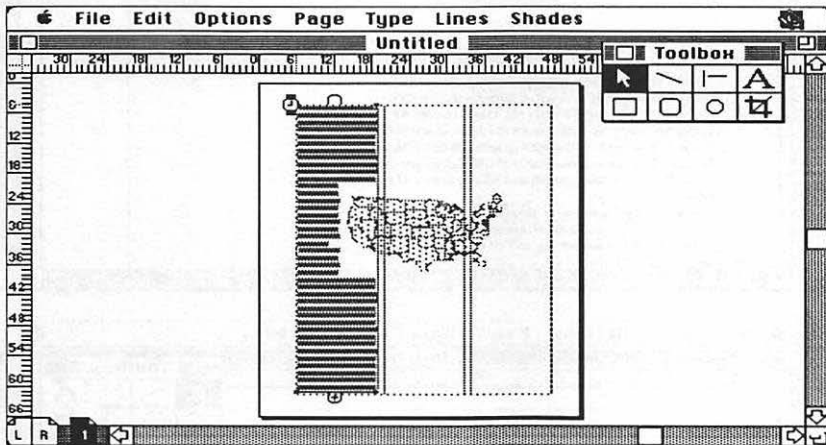


*Figure 2.8. Autoflow and Text wrap are selected from the option menu. The dialog box lets you set the width of the border of white space around the graphic.*

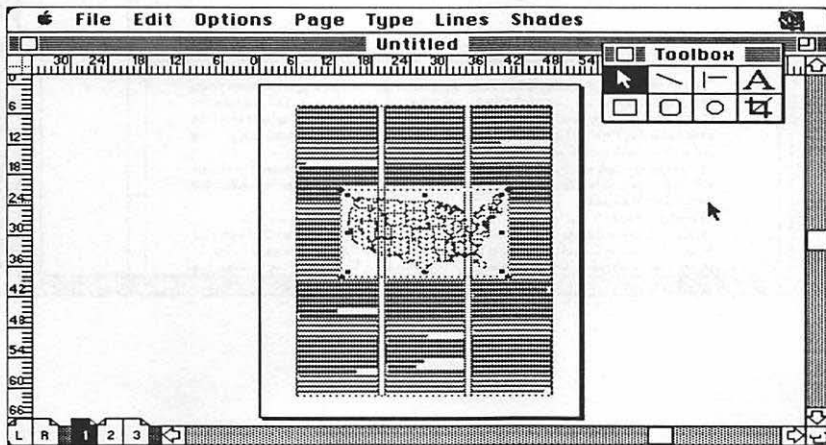




**Figure 2.10A.** Autoflow mode is indicated by the snaking arrow shape of the cursor, which is "loaded" with text.



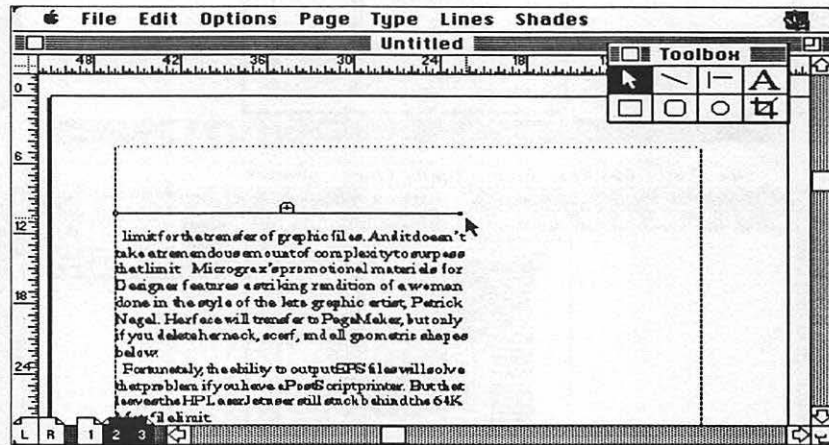
**Figure 2.10B.** The wrist watch indicates this screen was taken while PageMaker was in the middle of the Autoflow operation. Text has wrapped around the map in column one. In a moment, text will automatically flow down column two.



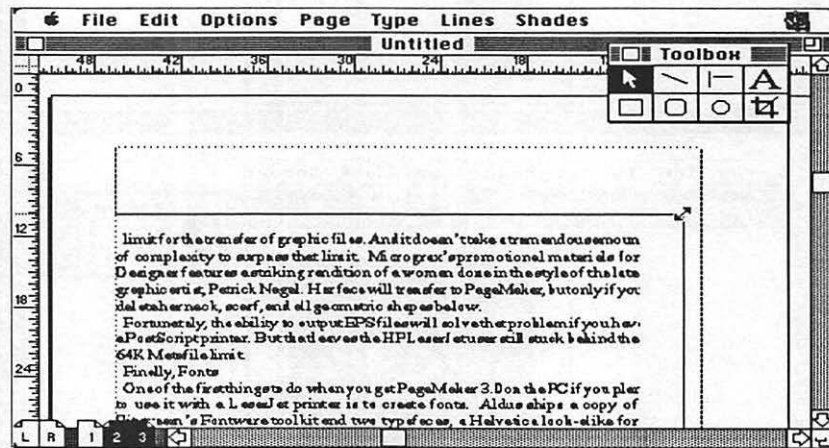
**Figure 2.10C.** The end result of selecting Text wrap and Autoflow is a graphic in the middle of a rectangular hole. Adjusting the "text repel barrier" manually would have achieved a closer, form-fitting wrap to the shape of the map.

Ah, but in PageMaker, type automatically flows into the widths of the columns you've established. If you want to change widths later, you simply select the column of type with the mouse and stretch it by the handles that appear (*Figures 2.12A and 2.12B*). Just as in manual production, you may have to pull all elements off the boards and place them again, but this is considerably easier in PageMaker than on a manual paste-up board.

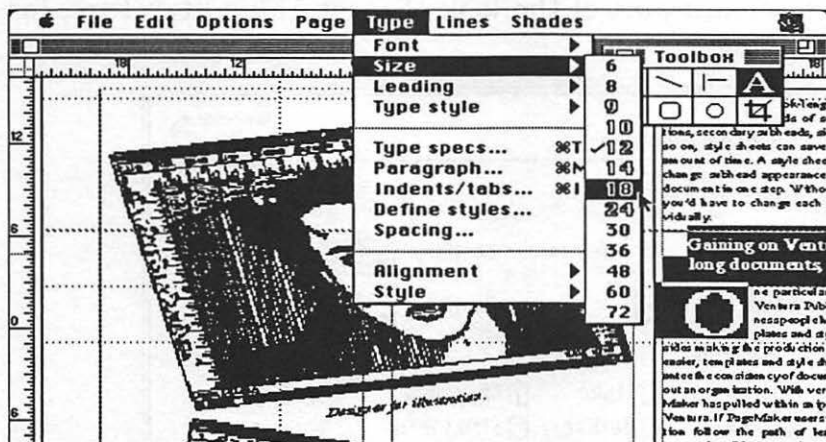
*Figure 2.12A.* You begin to change the column width of type merely by clicking on a text block, which gives it handles and a subtle "windowshade" shape.



*Figure 2.12B.* Once you've selected a handle, you simply hold down the mouse button and drag until the text block is the width you want it. When you release the mouse button, text reflows to fill the new shape of the text block.

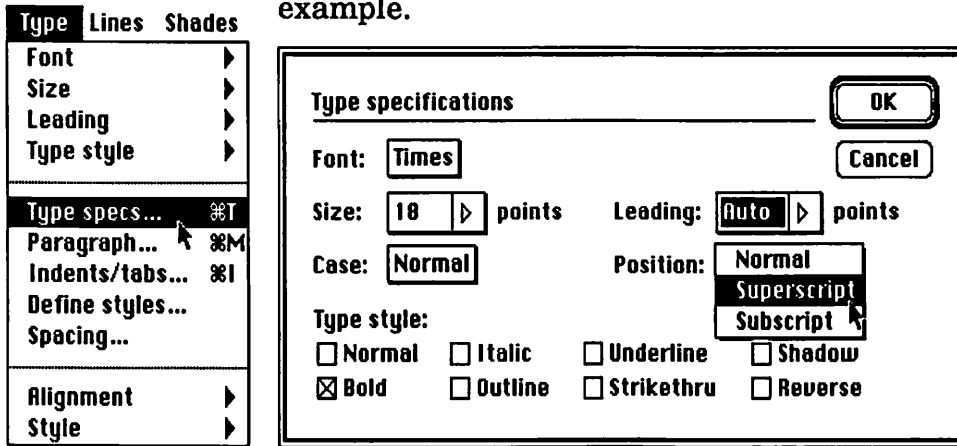


To affect an individual piece of text, you must highlight it. The simplest way is to drag the I-beam text cursor over it. Once the text is selected, you can pull down the type menu to make your changes one at a time using PageMaker 3.0's new pop-up menus, which are displayed off to the side of the main pull-down menus (*Figure 2.13*). Alternatively, you can use PageMaker's keyboard shortcuts (**Shift + ⌘ + B** for bold, **Shift + ⌘ + I** for italic, **Shift + ⌘ + Spacebar** for normal, **Shift + ⌘ + L** for Align left, **Shift + ⌘ + J** for Justify, and so on).



*Figure 2.13. The very responsive pop-up menus for the major type specifications are a great time saver. You don't have to wait any longer for the dialog box to come up.*

Ultimate control of typography is achieved using the **Type specs** dialog box shown in *Figure 2.14*. This dialog box also controls justification, position, and case of selected type. There are no keyboard shortcuts for the latter two — these actions are taken less frequently. Nor is there a shortcut for setting reverse type — that is, making type white so it's visible when placed on a dark background. Reverse type, although best used sparingly, can be an important element in your design. Setting section heads in reverse type on a wide line of a second color is an important part of the look of most Aldus literature, for example.



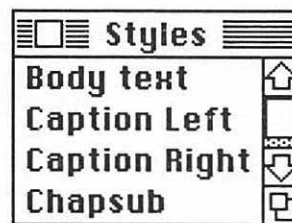
*Figure 2.14.* Any choice in a pull-down menu that has three trailing dots requires further information before PageMaker can act. PageMaker gets that information by presenting a dialog box. You specify your desires by clicking on the appropriate buttons, by selecting items in the scrolling selection panels and pop-up submenus (such as Leading and Position, which is popped up), and by typing in the input lines. Here Times 18-point normal text with auto leading in the superscript position has been selected.

In the *City Lights* newsletter in *Figure 2.15* a large “A” drop-cap is reversed out of a black rectangle and the ID line out of the black masthead. Once again, reverse type plays a stylistic role, here matching the dramatic white on black *City Lights* masthead.



*Figure 2.15.* The text “the excitement will be” has been selected with the I-beam cursor (shown in the margin, left). Releasing the mouse button will activate the Select All command and cause all of that article to be selected.

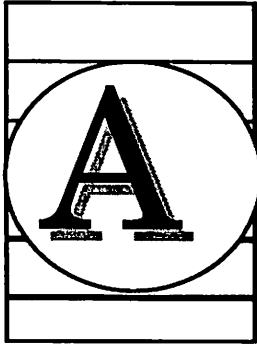
A major improvement in PageMaker 3.0 is that any combination of these type specifications can be assigned to a particular style of paragraph—body copy, headline, subhead, caption, sidebar, or any style you might care to name. Once such a style is defined, paragraphs can be tagged with the style by pulling down the style menu or by clicking on the **Styles** palette (*Figure 2.16*).



*Figure 2.16.* After a style is defined, it appears in the palette. You can apply that style to selected text with a simple mouse click.

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In PageMaker 2.0, applying the same typographic changes that a style sheet handles in two mouse moves could have taken a dozen or more mouse moves and keystrokes.



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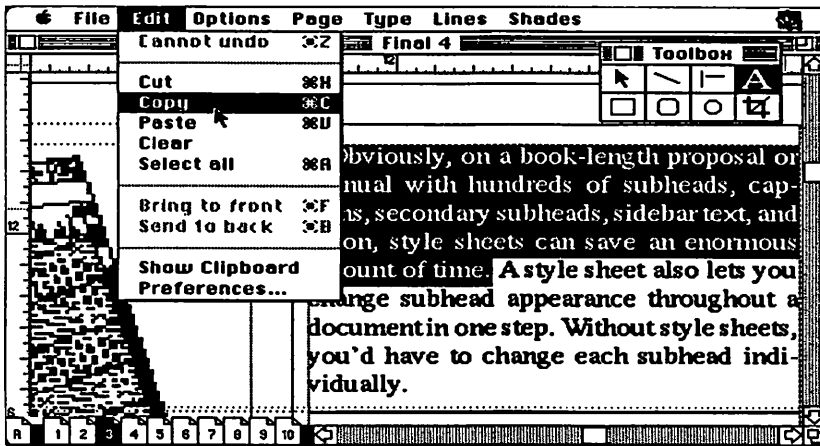
## Shadow Shows

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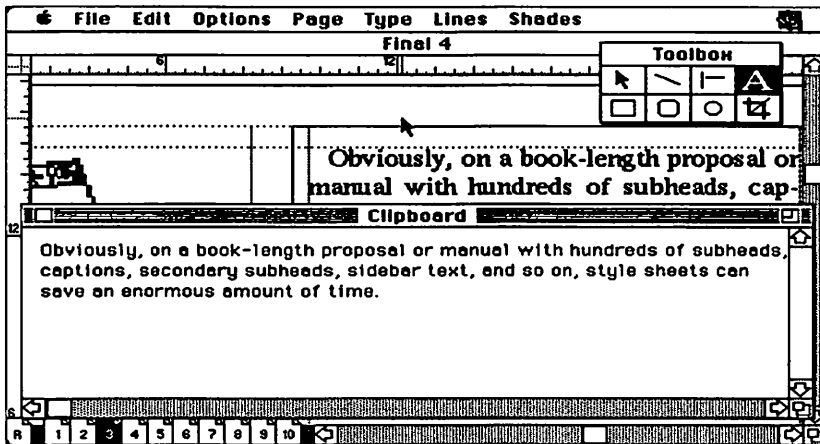
Not all of the type styles in PageMaker's **Type specifications** dialog box actually correspond to a set of letterforms painstakingly created by a type designer. The Macintosh design included routines for several variations on Apple's basic screen fonts; these routines were made part of the system's basic graphic routines. That's why outline, shadow, underline, bold, and italic always appear in Mac's **Style** menus: they're built in. But professional designers turn their nose up at the kind of outline, shadow, and underline type the Mac usually produces. PageMaker may take some of the stigma away from using shadow type, however. While you might see the same old tacky Mac font on-screen, the printed result is a perfectly formed letter and a perfectly formed shadow.

Another advantage of PageMaker over manual production is that text can be edited after it's placed on the page. Once again, this is not the most efficient way to get perfect pages out the door, but it's far easier than the manual equivalent of setting individual lines of type to paste over errors.

We would have to stop the bus to delve completely into PageMaker's text editing capabilities. For now, suffice it to say that the PageMaker text tool works as it does in most Mac applications. It can be used to insert text, type over text, add new text, and to **Copy, Cut and Paste** text via the clipboard (see *Figure 2.17* and *2.18.*)

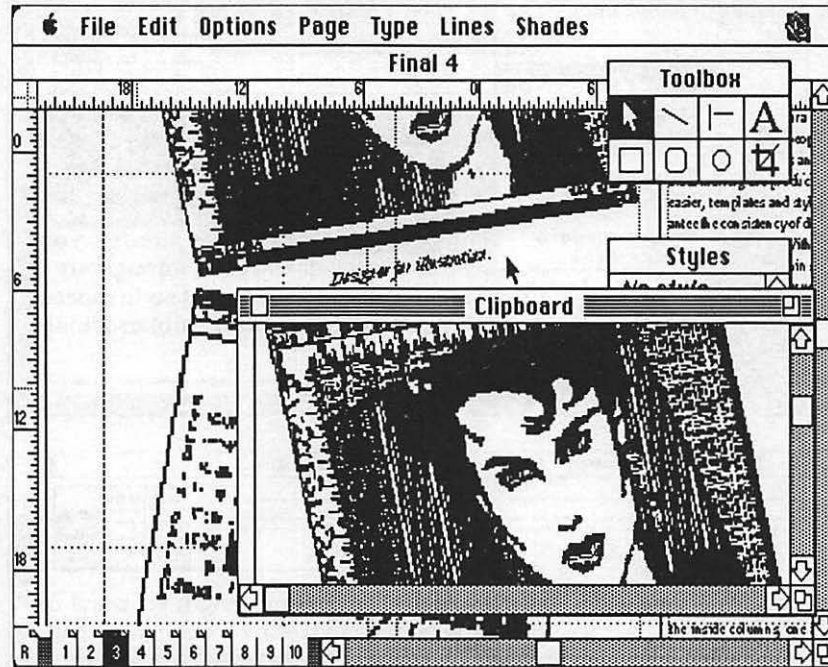


*Figure 2.17. Text is selected by a sweep of the mouse or a keyboard shortcut (holding down the Shift key and pressing the cursor movement keys). Text must be selected before it can be acted on — in this case by copying it to the clipboard.*



*Figure 2.18. At any time, you can glance at the clipboard to see what's there — in this case, the text that was just selected and copied.*

You can also cut and paste *graphical* images to the clipboard, as shown in *Figure 2.19*. Once those images are placed, PageMaker can resize them or crop them within the limitations of the particular graphic file type. PageMaker's ability to *edit* imported graphics — as opposed to resizing or cropping them — is limited to adjusting the screen and gray scale of scanned images and to covering up unwanted pieces of paint-, Postscript-, and draw-type graphics with opaque white shapes. We'll detail the various graphic types, the kind of botches they're prone to, and how to cover such botches soon enough. Once again, Hunter is urging us to get back on the bus: there's a lot of ground to cover.



*Figure 2.19.* Just as text can be selected and cut to the clipboard, so can graphics, as shown here.

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## PageMaker and the rest of the Mac

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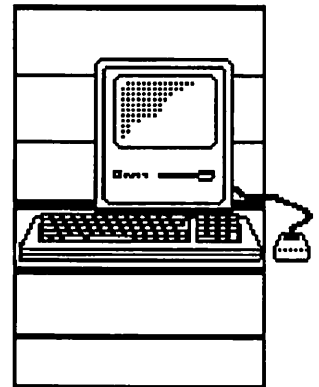
If you know how to use Macintosh software, you are already pretty far along the learning curve for PageMaker 3.0. That's one of the beauties of the Macintosh environment and a key advantage over the nearly identical version of PageMaker that Aldus sells for the PC.

If you have a Macintosh with enough memory, you'll find it a particularly lovely machine to do your desktop publishing on. With Apple's MultiFinder, you'll be able to switch instantly from one application to another when you're working. Given PageMaker's real role as an integrator of the output of various applications, that ability to move quickly from one application to another is especially desirable, which leads to the third Hot Tip of the chapter:

---

One of the truly wonderful things about the Mac is that you can put **Memory for**  
4 megabytes of memory in the bottom-of-the-line **MultiFinder**  
Macintosh Plus, and \_\_\_\_\_  
MultiFinder can use it \_\_\_\_\_  
all. The Mac II handles a full 8 megabytes, and while that sounds like a lot, desktop publishing pushes you towards that ceiling fast. It's not rare for me to use PageMaker, SuperPaint, FreeHand, PictureBase, Word 3.02, and HyperCard all in an hour. In 4 megabytes, I can run them all at once, and save 5 to 10 minutes an hour that used to be spent shutting down and starting up programs.

How much memory do you need? All you can get. Just to give you an idea: Adobe Illustrator 88 asks MultiFinder for 2 megabytes all by itself.



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## Getting started

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I showed you the heart of PageMaker first to get you interested. Now it's time to backtrack and tell you how to get started.

Aldus has made installing PageMaker on your hard disk a complete no-brainer. You insert the first disk and do what you're told. The only really interesting thing about this process is that 3.0 is the first version of PageMaker that requires a hard disk.

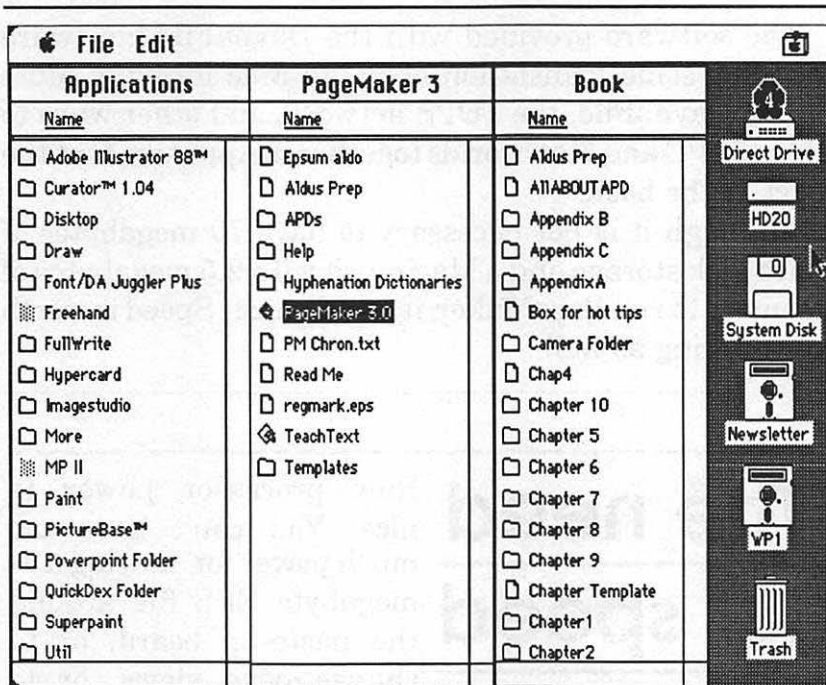
Actually, even though it was *possible* to run from floppies in previous incarnations, such a configuration wasn't especially *useful*. Desktop publishing and graphics programs consume storage the way squirrels consume peanuts—they always want more, no matter how much you've already given them.

A Mac user doesn't have to do anything else to run PageMaker 3.0 effectively. Once it's on a hard disk, all that's left is to launch the PageMaker 3.0 icon.

Launching the PageMaker 3.0 icon from the Finder (or MultiFinder) is a cinch. Simply click on the icon with the mouse pointer. The display of the icon changes from dark type on white to white type in a dark rectangle, which shows it is selected. So far, so good. Now, pull down the **File** menu by moving the mouse pointer to the word **File** in the menu bar, and select **Run**.

As there are throughout the Mac environment, there's a shortcut: double-click on the PageMaker icon. If you plan to work on an existing publication, there's an even better shortcut: double-click on the publication's icon.

You may have noticed that five disk drives are visible on the Macintosh desktop shown in *Figure 2.20*. The machine I used to produce this book is only a Macintosh Plus with a single built-in 800-kilobyte drive, but it has been considerably enhanced as far as storage.



**Figure 2.20.** A tidy desktop is the sign of a sick mind? Nah. I just like to be able to find everything in a hurry. Why five disk drives? Doesn't everybody have five disk drives? If I had mounted drives that were off on the network, it would have been seven ...

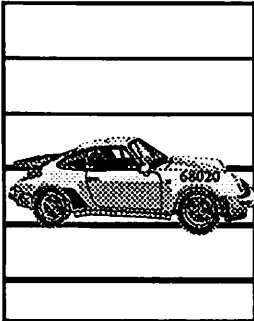
My main hard disk is an external Jasmine Direct Drive 50, a very fast SCSI interface hard drive that compares well even to a Mac II's internal drives. The impact of a high-speed hard disk is even greater than the speed increase you get moving from the Mac Plus to the Mac II, in my experience. Of course, I was moving up from the old HD20 — the original, floppy-speed hard disk that Apple released with the 512-kilobyte Mac. That drive has since been relegated to backing up the data folders in my Jasmine Direct Drive 50. In fact, it was just large enough at 20 megabytes to back up this book.

Even when you throw in the built-in floppy, that leaves two drives unaccounted for. What are they? Well, I do much of my writing for PC-oriented publications, and I use a DaynaFile to provide a direct link between my Macintosh Plus and PC format floppy disks. The DaynaFile I'm using handles both the 360-kilobyte 5.25-inch and the 720-kilobyte 3.5-inch varieties, and a 1.2-megabyte 5.25-inch drive is also available.

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The software provided with the DaynaFile hardware handles some translation of PC to Mac formats. More about DaynaFile, the TOPS network, and other ways to link the PC and Mac worlds together in Appendix C at the back of the book.

Although it is not necessary to have 70 megabytes of hard disk storage and a Macintosh with 2.5 megabytes of memory to run PageMaker, it sure is nice. Speed is worth considering as well.



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## The need for speed

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Raw processor power is nice. You can't have too much power for moving a 1-megabyte EPS file around the paste-up board, or to change page views, or to make original MacDraw finally finish redrawing the screen.

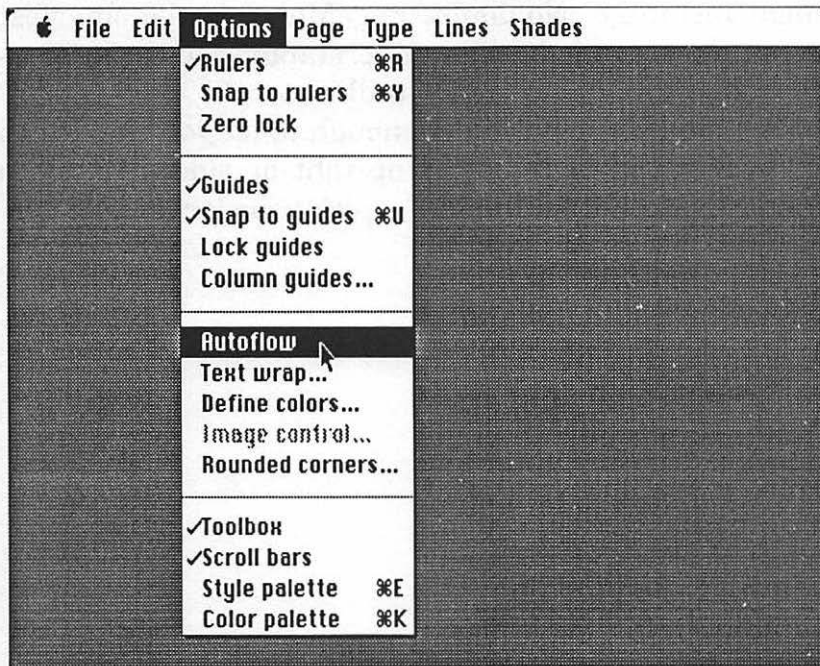
Does that mean you should get a Mac II?

Well, maybe. The Mac Plus and Mac SE are very close to each other in raw processor speed; the Mac II doubles their clock rate and handles twice as much data per gulp. In *MacUser's* tests (March 1988), a Macintosh II took only one-third as long as a Plus or SE to recalculate a spreadsheet.

But the II has to devote some of that extra power to displaying color or shades of gray. The Plus and SE took 78.6 and 70.5 seconds respectively to scroll a PageMaker pub; the Mac II was only slightly faster at 58.6 seconds. (A 68020 accelerator card, which didn't have to worry about color, took only 25.2 seconds.)

What's the bottom line? The II is roughly twice as fast for real-world desktop publishing. It can make you significantly more productive.

Another way to gain effective speed is to set your defaults right. When you launch PageMaker, you arrive at an empty PageMaker desktop. You can change PageMaker's default settings when the desktop is empty by pulling down menus and making choices. For example, in *Figure 2.21*, the **Option** menu is down. There is a check next to **Scroll bars**; thus any publication created will have scroll bars visible. There is no check next to **Rulers**. If I created a publication, I would have to turn on the ruler in order to measure spacing. I find that I measure spacing continually, so I have changed my personal default to make rulers always part of the desktop. This and other changes to the PageMaker defaults save me time. Make sure you spend some time on the empty PageMaker desktop and set all of the menu defaults exactly the way you want them.



*Figure 2.21.* You need to go through all the PageMaker menus with no publication open and set the defaults the way you like them. Here Rulers, Guides, Snap to guides, Toolbox, and Scroll Bars are all toggled on. Other options are hidden — Preferences is in Edit, for example.

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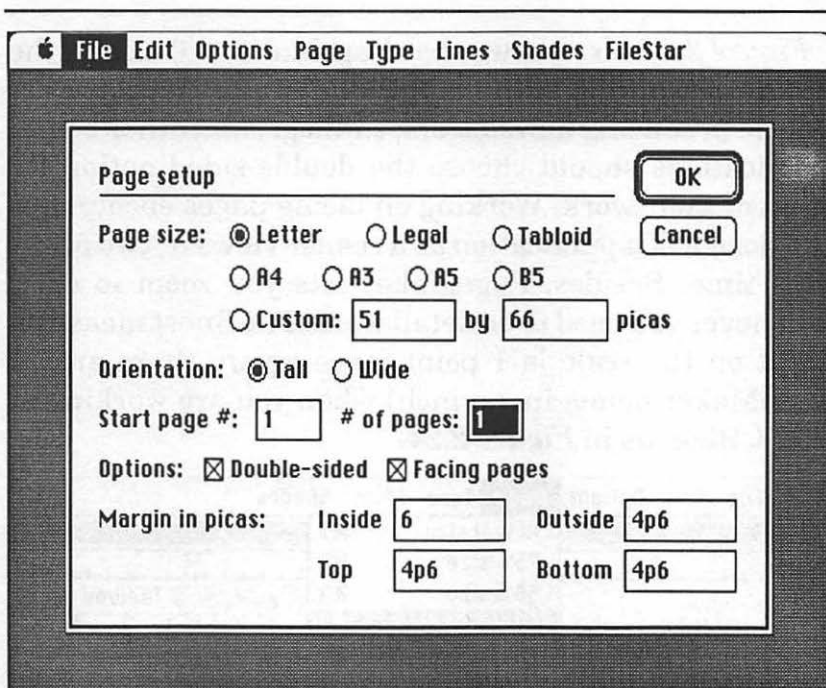
## Creating a new publication

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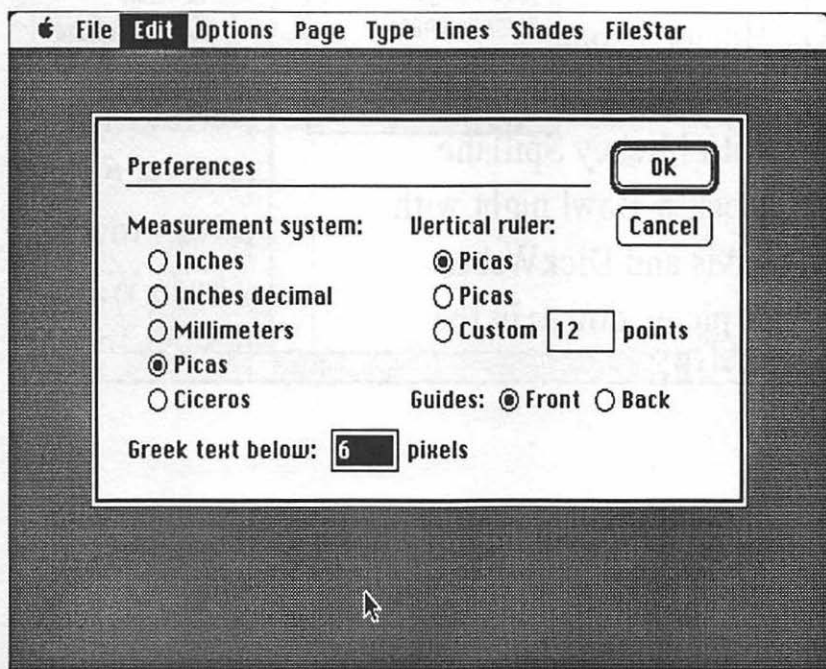
The dialog box that appears when you create a new publication shows the basic scope of PageMaker's page-making ability. You can create pages as large as tabloid size (17 x 22 inches). At 12 points to the pica and 6 picas to the inch, that's . . . er . . . pretty darn big in picas, too.

PageMaker's **Page setup** dialog box (*Figure 2.22*) shows that PageMaker can also handle custom sizes — in this case, 45 picas and 9 points wide, 55 picas and 6 points high. That happens to be the measurements of the pages of the book you're reading. If you don't believe me, check it with your pica pole. You don't have a pica pole? Well, neither do I. I typed in the decimal inches, clicked the **Picas** button in the **Measurement System** dialog box (*Figure 2.23*) and PageMaker arrived at that measurement instantly. No doubt: PageMaker is the smartest pica pole around. It even understands ciceros (a European measure equal to 4.55 millimeters).

PageMaker is also smart enough to let you work with the paper tall or wide (or upright or sideways, or in landscape or portrait mode — pick your jargon).



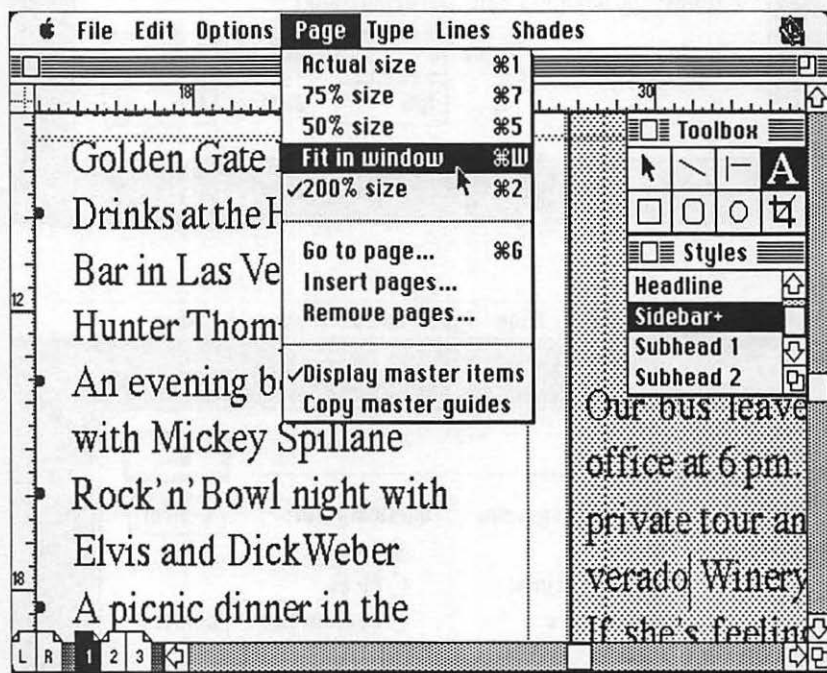
**Figure 2.22.** This is the Page Setup used in this book.



**Figure 2.23.** I prefer to work in picas and points, and so that's how I set the Preferences dialog box.

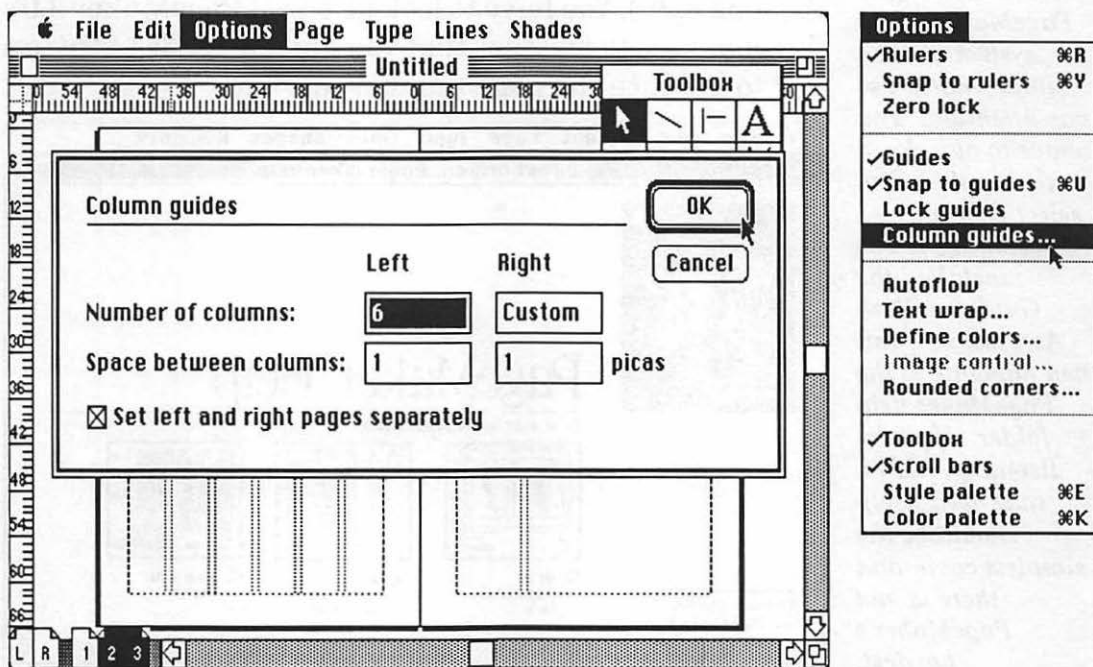
Figure 2.24 also shows that PageMaker 3.0 allows the option of working with two pages simultaneously. Most people producing newsletters, catalogs, and other bound publications should choose the double-sided option for most of their work. Working on facing pages encourages the design of a publication as a reader views it, two pages at a time. Besides, PageMaker lets you zoom in close whenever you need to do detail work. The finest measurement on the scale is 1 point (once again, there are 72 PageMaker points in an inch) when you are working at 200% Size, as in Figure 2.24.

**Figure 2.24.**  
Efficient use of PageMaker on a small-screen Mac demands continual change of Page views. Here PageMaker displays the publication at 200% size, good for detail work. Precise zooming is done by holding down Shift and Command while clicking the mouse pointer on the desired point of the page.



## Master pages and page numbering

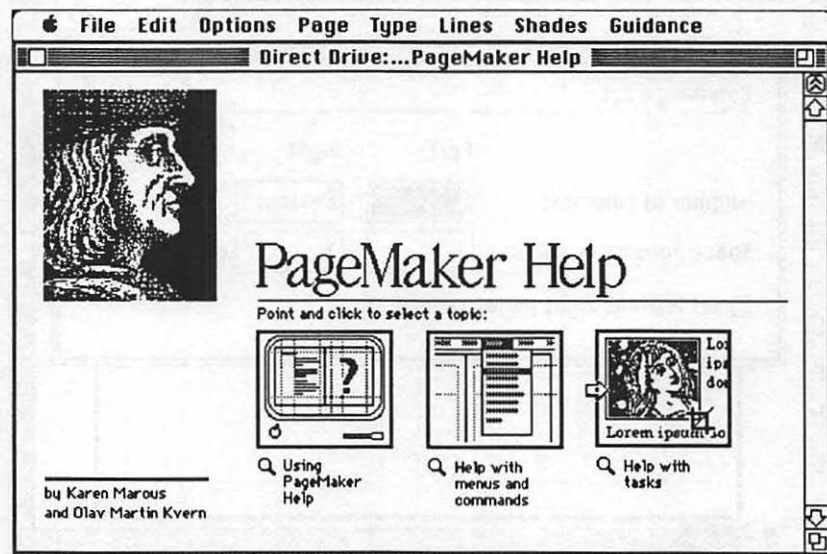
Master pages hold recurring page elements, such as the folios at the top of almost every page in this book. To “turn” to a master page, use the page icons marked **L** and **R** at the bottom of the PageMaker layout board. Click on the pair of them, and you’re on the master pages spread. If you chose not to work with facing pages, only one master page icon appears. As *Figure 2.25* shows, differences between left- and right-hand pages can include a different number of columns or regular and irregular column widths.

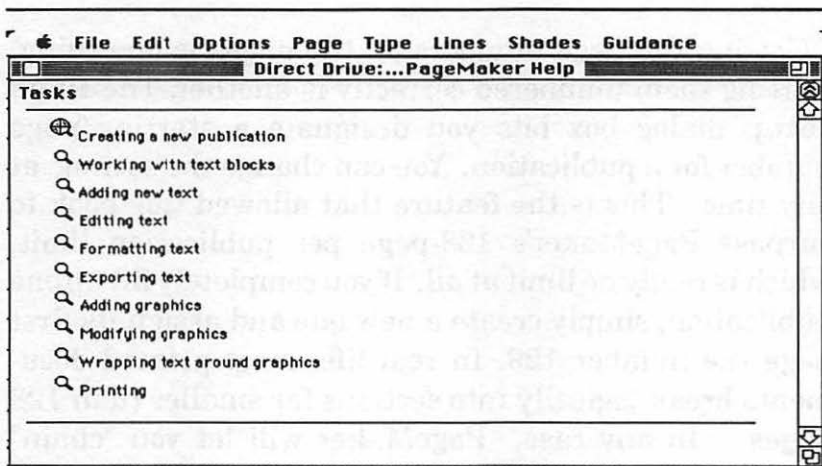


*Figure 2.25.* Column guides are an important part of a publication’s design grid. The horizontal guides for your grid are pulled down from the ruler at the top of the page. Notice that the column guides for facing pages can be set independently.

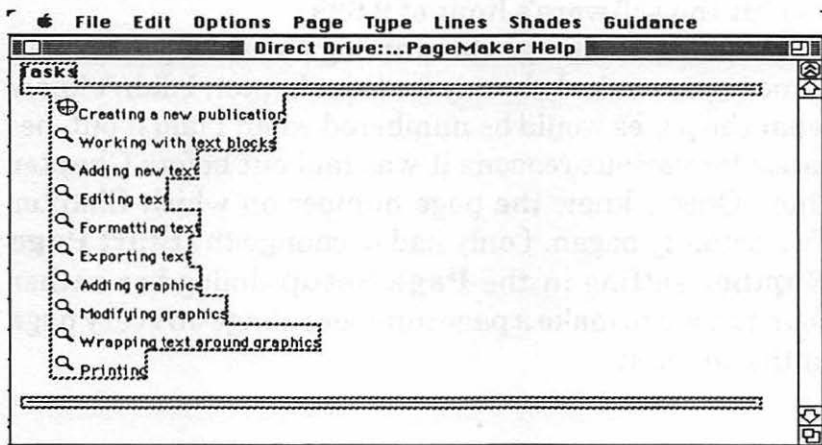
To produce page numbers automatically for this chapter, all I had to do was place PageMaker's page number marker in the appropriate spot on the master page of the Chapter Two publication. I always have trouble remembering what to type to insert the page number marker, and here is one of the few places where PageMaker 3.0 on the Macintosh is inferior to the PC version. On the PC, context-sensitive help will quickly guide you to the precise keystroke combination needed to produce automatic page numbering. On the Mac, a limitation in the size of Desk Accessories makes the otherwise marvelous Guidance hypertext help system fall short (Figure 2.26 through 2.29). You have to look in one of PageMaker 3.0's fine manuals to discover that you must press **⌘ + Option + P** to produce the page number marker.

**Figure 2.26.** Getting to PageMaker's help system is not a simple matter, so pay attention. You have to pull down the Apple menu, select Guidance — assuming you've installed the Guidance Desk Accessory — and then navigate to the PageMaker help folder. If you're listening, Aldus, take heed: Help should be the simplest command there is, not PageMaker's hardest.

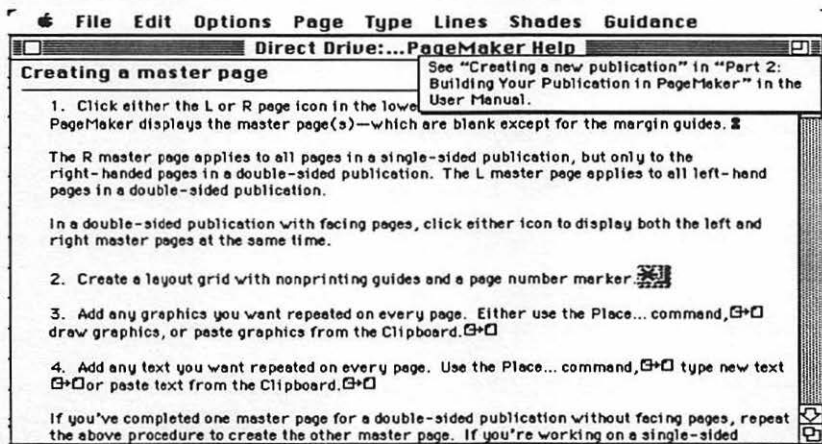




**Figure 2.27.** Guidance isn't perfectly intuitive, either. Ah, but it is hypertext. The first thing to do is center the crosshairs on the topic of interest and click. Remember, you're trying to find out the keystrokes for automatic page numbers.



**Figure 2.28.** It's obvious when you find the right thing to click on that you've done something ... but what? Wouldn't a nice scrolling box with "page numbers" in it have been easier?



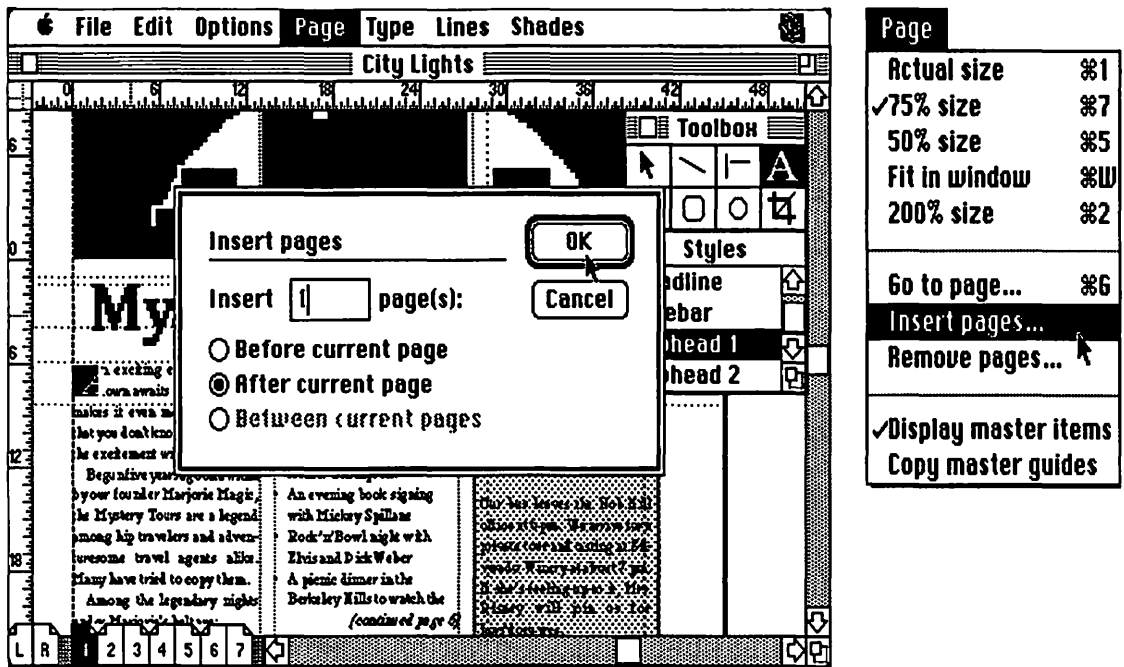
**Figure 2.29.** Eventually you fathom which parts of the screen to click on and get to a reference to "page number marker" — but instead of telling you the correct keystroke, it refers you vaguely to the manual.

---

Getting the page numbers on the pages is one thing. Getting them numbered correctly is another. The **Page setup** dialog box lets you designate a starting page number for a publication. You can change the setting at any time. This is the feature that allowed this book to surpass PageMaker's 128-page per publication limit, which is really no limit at all. If you completely fill up one publication, simply create a new one and assign its first page the number 129. In real life, most printed documents break logically into sections far smaller than 128 pages. In any case, PageMaker will let you "chain" publications in this manner and keep count for you until you hit the software's limit of 9,999.

The ability to change the starting page of a publication came in particularly handy for this chapter. I didn't know what the pages would be numbered when I laid it out, because for various reasons it was laid out before Chapter One. Once I knew the page number on which Chapter Two actually began, I only had to change the **Start Page Number** setting in the **Page Setup** dialog box rather than having to make a page number change on every page in the chapter.

Publications also tend to change in length unexpectedly, despite the best planning. PageMaker expands pubs easily anytime in the production cycle (*Figure 2.30*).



*Figure 2.30. PageMaker easily adds pages to work in progress.*

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## Placing replaces pasting

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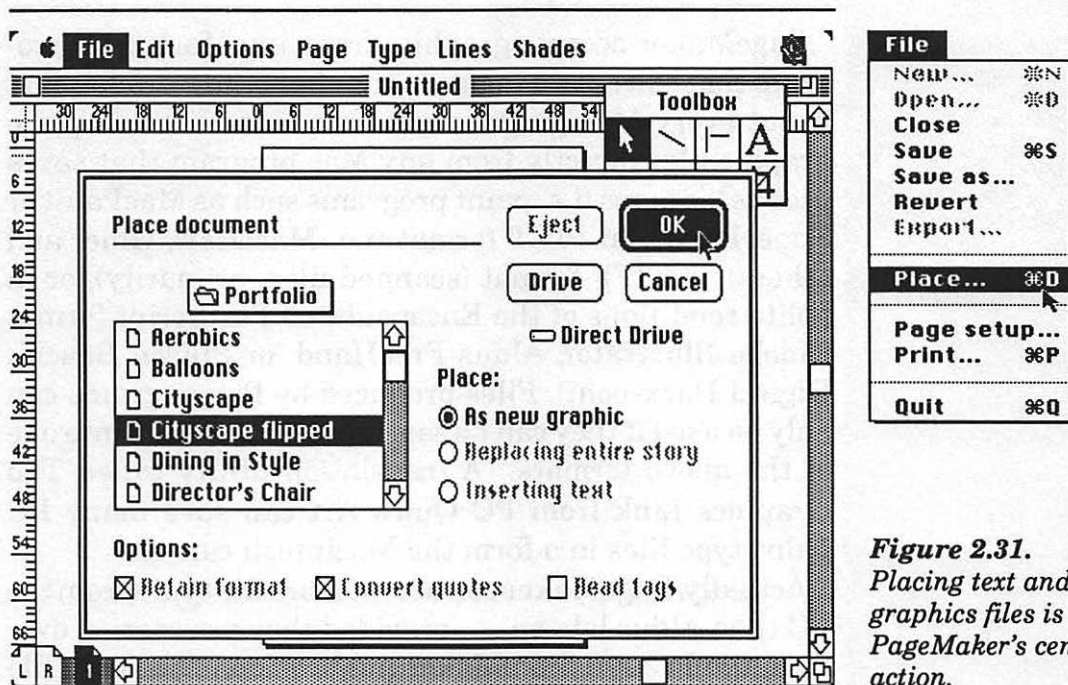
In manual document production, you “paste up” galleys of type and pieces of artwork. In PageMaker, you place computer files that contain text or graphic images (If you don’t know what a file is, read Appendix A).

Usually, pasting up a page in the pre-PageMaker world involves putting hot wax on the back of a piece of art or brushing it with mucilage in order to attach it firmly (but “movably”) to the paste-up board. To paste up a piece of art in PageMaker, on the other hand, you simply:

- 1) click on the name or icon of a graphic image file
- 2) position the loaded pointer
- 3) click the mouse button

Clicking a mouse button is neater than applying mucilage and less painful than getting hot wax on your arm.

*Figure 2.31* shows the dialog that occurs when you place a file in PageMaker. Just as there’s no real difference between the way you place type galleys and the way you place artwork on a real paste-up board — glop, plop, and hope it doesn’t fall off on the way to the printer’s — PageMaker’s basic **Place** action is the same whether you’re placing text or graphic images.



**Figure 2.31.**  
Placing text and graphics files is PageMaker's central action.

The most efficient way to use PageMaker is to prepare all the graphics and text files for a particular publication beforehand. You have to be sure that the files you're preparing are compatible with PageMaker, of course. Fortunately, one of PageMaker's greatest strengths is the diversity of data types it understands.

---

PageMaker accepts graphics from any Macintosh program that can cut an image to the clipboard, which is just about every Mac program you can name. It can place graphic files directly from any Mac program that saves files as bit maps (i.e. paint programs such as MacPaint or SuperPaint), in PICT format (i.e. MacDraw, Glue, and others), in TIFF format (scanned files, primarily), or in polite renditions of the Encapsulated PostScript format (Adobe Illustrator, Aldus FreeHand, or Silicon Beach's Digital Darkroom). Files produced by PC programs can only be used if they can be saved in or translated into one of the above formats. A translation utility called The Graphics Link from PC Quick Art can save many PC paint-type files in a form the Macintosh can use

Actually, PageMaker can accept more file types from the PC than Aldus lets on . . . provided they are carried over from the PC in a PageMaker publication. The only file formats that won't transfer inside a PageMaker publication are PICT from the Mac to the PC and Windows object-oriented files from the PC to the Mac. But perhaps by the time you read this Micrografx will be shipping its PICT-to-Windows Metafile translation software, which will eliminate even that barrier if you're willing to do enough work.

## Word processors

### Mac

MacWrite

Microsoft Word 1.05, 3.0

Microsoft Works

WriteNow

Other Mac word processors that save these formats

### PC

Windows Write

Microsoft Word

XyWrite III

Multimate

Wordstar

### Either

Text

DCA Revisable-form text

*Figure 2.32.*  
*Although the list*  
*looks small, it*  
*covers just about*  
*every word-*  
*processing program*  
*you can name.*

Text can come from virtually any word processing program on the Mac or the PC. The only difference among them is how much formatting and type specification can be passed into PageMaker along with the word processing file. *Figure 2.32* lists the word processing file types PageMaker knows how to place in its publications: the leading word processors on both machines are accounted for.

Microsoft Word 3.0, by far the leading word processor on the Macintosh, tops the word processor list in *Figure 2.32*. PageMaker 3.0 can read Word 1.05 and 3.0 files directly from the disk, and it can export the text of stories that have been placed in PageMaker as Word 3.0 files with their formatting intact. That ability to read files back out

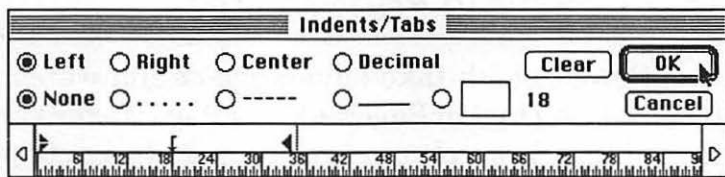
---

after they've been placed in a publication is important. It provides you with an ability to update your original word processing document after changes have been made in PageMaker. And it also allows you to pass a file out from PageMaker for processing that PageMaker alone cannot manage: the checking of spelling, the creation of indexes and tables of contents, and so on.

This export ability is not the perfect answer; it would be much easier if PageMaker could handle these tasks itself. But for that, you'll have to wait for PageMaker 4.0 or later. In the meantime, you can read Chapter Eight to see how Word 3.0 can be used to make up for some of PageMaker's deficiencies.

If your favorite word processor is not listed in *Figure 2.32*, and it can't save files in any of the proprietary word processing formats listed, you still don't have to abandon it. PageMaker can also place ordinary ASCII text files, and it is a rare word processor indeed that cannot store work as an ASCII file. Even spreadsheet and database files can often be saved as ASCII text files, allowing you to place a table or a few rows of numbers into a publication. If you publish dBASE files often, then maybe you're working on the wrong machine. PageMaker 3.0 for the PC includes a filter for dBASE.

Of course, ASCII text carries with it none of the formatting information that determines how words are arranged on the page and what fonts the text should be assigned, but that loss of formatting information is no great concern, since PageMaker will automatically pour text into pre-defined column widths and has its own extensive formatting capabilities.



*Figure 2.33. The Indent/Tabs tool can be dragged to where you're aligning your tabular material.*

For example, *Figure 2.33* shows PageMaker's **Indents/tabs** ruler, which has the handy ability to include leading dashes, periods, underlines, or a character of your own choosing in tabular material.

Actually, it is possible for a simple ASCII file to contain full formatting information thanks to PageMaker 3.0's style sheets. A writer must simply type the name of the desired style inside angle brackets at the beginning of a paragraph. That paragraph will then assume the attributes assigned to the style name when it is placed in PageMaker. This tagging procedure is a good way to give writers control over the formatting of final documents.

Finally, PageMaker 3.0 on the Mac accommodates the DCA Revisable format, which allows it to accept text *and* formatting information from many word processing programs that run on the PC and on other computers. PC programs that save files in this IBM standard format include WordStar 2000, Volkswriter 3, OfficeWriter, Framework, DisplayWrite 3, and Samna Word. DCA compatibility means PageMaker 3.0 can preserve the format of word processing files created on IBM DisplayWriters and other dedicated word processors, IBM mini-computers, and IBM mainframes.

---

Transferring files from another computer may require delving into the mysteries of telecommunication (which I attempt to clarify in Appendix A), but given a bit of set-up time, a communications program, a modem, and a clean phone line, PageMaker 3.0 can deal with text produced on virtually any computer.

## **Text editing in PageMaker**

---

One thing to both take advantage of and watch out for when editing text in PageMaker is PageMaker's ability to thread text from column to column and page to page. It is this attribute that causes changes to ripple through an entire document automatically. This proves useful, for example, when the best paragraph to cut to make a story fit a layout is not the last paragraph. It is also useful for playing havoc with a lot of painstaking work if you aren't careful. For example, in this book, each head and subhead is marked by a 2-point rule. If I cut two lines of text, the change ripples throughout the entire thread of text. All lines of text move two higher to fill in for the deleted lines, but none of the graphics move. Thus the 2-point rule that needs to be right under the subhead now comes two lines *after* the subhead. Each and every graphic that is closely associated with text will have to be moved.

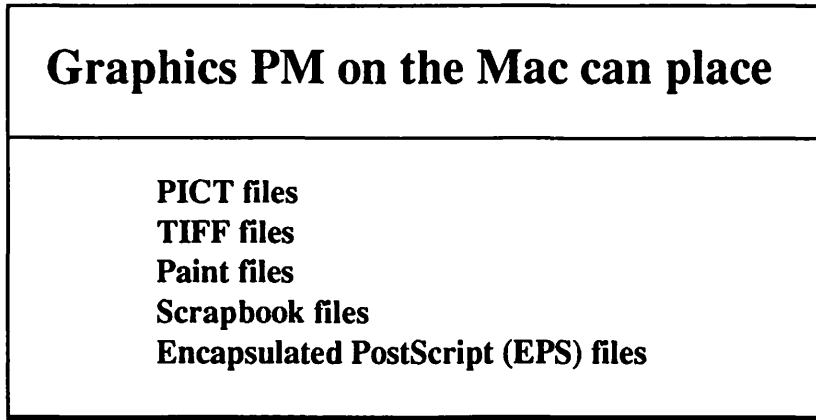
The ability to attach graphics to particular pieces of text is something else to hope for in version 4.0 of PageMaker.

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## PageMaker puts graphics in their place

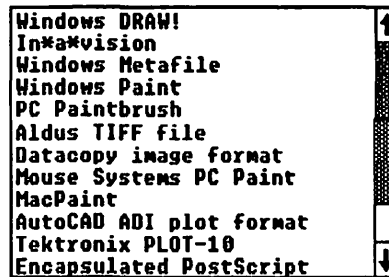
---

Everybody knows that the Macintosh is pretty fair computer for manipulating graphics. *Figure 2.34* lists the graphics file formats PageMaker 3.0 on the Macintosh knows about. Although it may not seem very lengthy, these four formats covers nearly every program that runs on the Mac and a few that run on the PC.



*Figure 2.34. A list of the graphic files PageMaker 3.0 on the Mac can place. See Chapter Five for more details on these different formats.*

The PC version of PageMaker can actually place a wider variety of graphic file types (*Figure 2.35*). But that diversity is more a symptom of the lack of standardization on the PC than a weakness of the Macintosh version of PageMaker.



*Figure 2.35. The PC version of PageMaker reads many kinds of graphics files. But PICT files aren't among them.*

**Figure 2.36.** *These icons show that you are in the middle of placing, from left to right, TIFF, paint, encapsulated PostScript, PICT (draw), and a series of eight Scrapbook images.*

---

One of the original intents of the Mac was to provide easy data exchange among programs through support of a few, well-defined standards. Adherence to those standards among developers has made the job of Aldus developers easier and your use of PageMaker more pleasant. If a graphic appears on a Mac screen, you can get it into a PageMaker document.

Placing a graphic is much like placing text, except the mouse pointer turns into a “loaded” **TIFF, Paint, PostScript, Draw, or Scrapbook** icon (*Figure 2.36*), depending on the kind of file being placed.

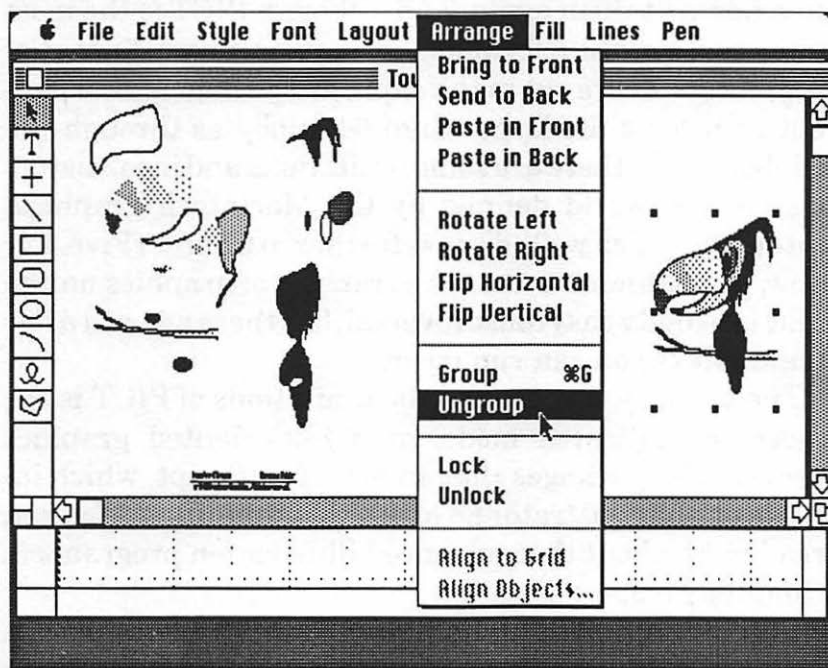


Which brings up the question: What’s the difference between paint programs, draw programs, and programs like Adobe Illustrator?

Paint images are stored as collections of dots called bit maps. Most paint programs — MacPaint and FullPaint, for example — store images at the resolution of the screen, which is 72 dots per inch. Thus, most paint files contain less detail than a typical 300-DPI laser printer can reproduce.

Images produced by draw programs such as MacDraw, in contrast, are stored as mathematical descriptions of a collection of geometric objects—thus the name “object-oriented graphics.” PageMaker translates the description of these objects to reproduce them at the full resolution of your screen and, more importantly, the highest resolution of your printer.

Figure 2.37 illustrates a typical MacDraw drawing as you would ordinarily view it on the right and broken into its component parts on the left. The process of creating art in MacDraw is also object oriented, obviously. An artist who is clever at combining geometric shapes and various shadings can use it to produce compelling illustrations.



*Figure 2.37. An object-oriented drawing on the right, and its component objects on the left.*

Object-oriented graphics like those produced by MacDraw cannot be imported when the file is saved in the proprietary MacDraw format. To import them into PageMaker, you have to save files in the PICT format.

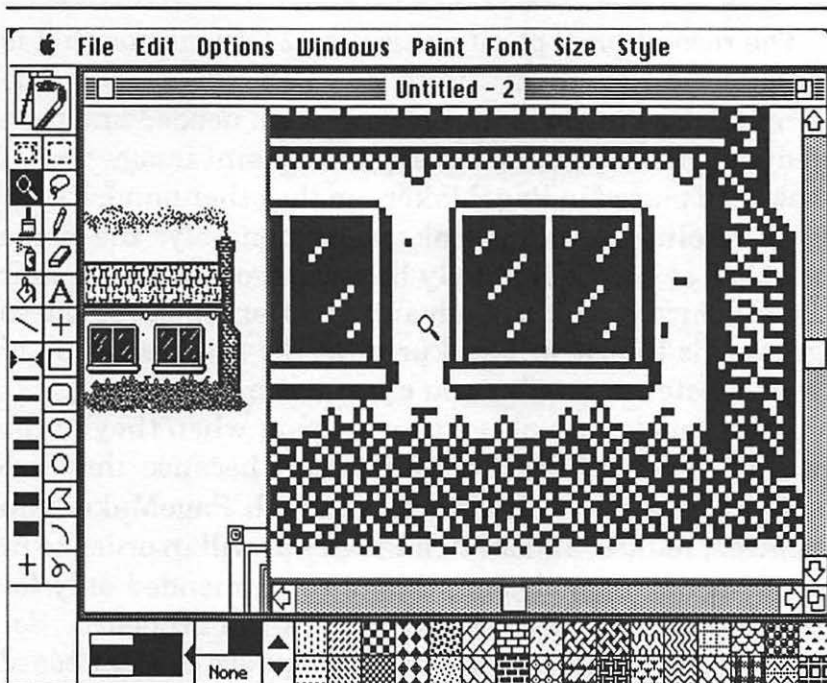
---

Unfortunately, PICT is not the perfect interchange format. Complex MacDraw graphics cannot always be saved as PICT files, for example, which means you won't be able to bring them into PageMaker. Files saved as PICT files will lose some characteristics, so you may not be able to bring them back into the originating application and edit them again. And although PICT is the most universal graphics format — it is the primary format of graphics that are cut to the clipboard — PageMaker cannot transfer a file larger than 64 kilobytes through the clipboard. So there are some limitations and inconsistencies in the world defined by the Macintosh graphical interface, which we'll discuss further in Chapter Five. For now, just remember that the transfer of graphics on the Mac is usually easy and universal, but there are still a few blind alleys you can run down.

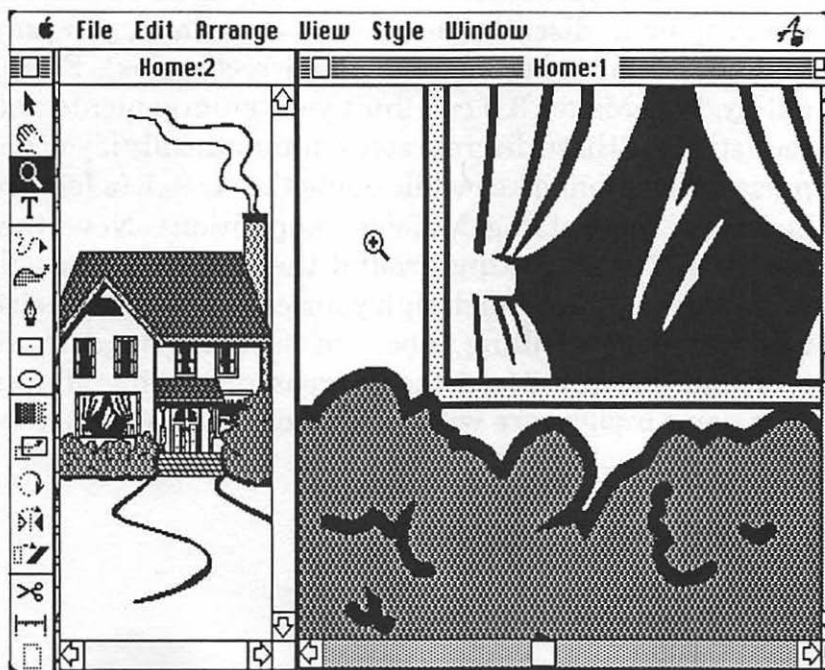
The primary way around the limitations of PICT is the more sophisticated model of object-oriented graphics provided by packages that support PostScript, which include Adobe Illustrator 88 and Aldus FreeHand. You can read more about these advanced illustration programs in Chapter Five.

One of the many advantages of working with such a package is the ability to zoom in for detail work. As *Figure 2.38* shows, the Illustrator image doesn't break up into its component dots as the MacPaint image does.

The resolution-independent nature of object-oriented drawings also maximizes the quality of your final output. The Illustrator-produced house of *Figure 2.39* will print at 300 dots per inch on a LaserWriter printer and at resolutions as high as 2540 on a Linotronic typesetter. The curves in the drawings simply get smoother as the resolution of the printing device increases. The MacPaint image in *Figure 2.38*, in contrast, will seem jagged.



*Figure 2.38. While the view of the “paint” house on the left doesn’t look bad, when you zoom in it breaks up into its component bits.*



*Figure 2.39. This PostScript drawing shows that the house is still high-resolution when you zoom in — a key advantage of Adobe Illustrator and Aldus FreeHand. PostScript drawings always take full advantage of the resolution of the printer, and they still look good even after you’ve enlarged them.*

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The resolution of paint images is 72 DPI, although it is possible to get them up to 288 DPI by creating the original drawing four times larger than needed and then reducing it. If you need to expand a Paint image once it has been placed in PageMaker, on the other hand, its 72-DPI resolution will shrink proportionately: the same number of dots will simply be spread out over a larger area. Once again, the advantage of an object-oriented graphic is that it will still print at the full resolution of your printer even after you expand it by stretching.

Paint images are also a terrible pain when they're the wrong size or shape for your layout because they are subject to pattern distortion. Although PageMaker can enlarge, reduce, and stretch images at will in order to fit a particular page design, this is recommended only for (object-oriented) files. Paint images are stubborn. For example, if you start with a paint image of a checker board and you want the spacing to stay even and the squares to remain equal, you are limited to enlarging and reducing the graphic in discrete jumps (and even then, you may find the squares become elongated rectangles). Fortunately, PageMaker 3.0 can limit your enlargements and reductions to these discrete steps automatically if you depress the command key while doing the stretch (a feature lacking in some of PageMaker's competition). Nevertheless, there is no getting around the fact that you will sometimes be forced to design your page around the size a paint image is willing to be. On the other hand, there is an undocumented trick that increases the range of sizes that paint images are willing to be on (see page 85).

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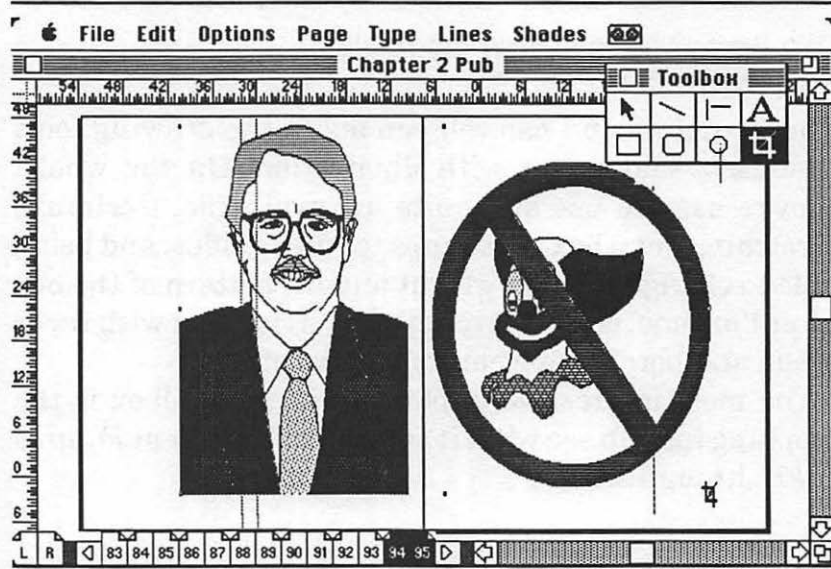
## The PageMaker drawing tools

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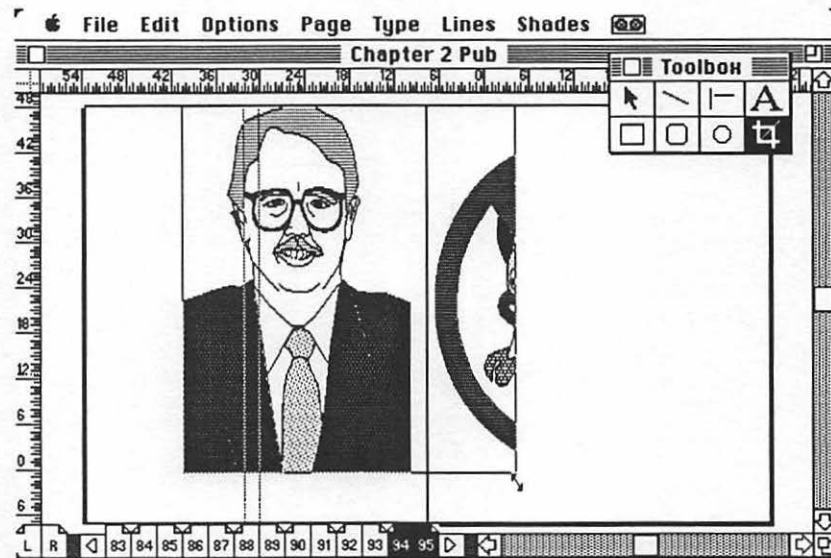
There's not much I can tell you about the drawing tools that isn't said better with illustration. On the whole, they're easy to use and quite as invaluable. Certainly, stretching out a box that snaps to ruler guides, and being able to change the line weight and fill pattern of the box after I'm done, is a great relief after struggling with razor blade and border tape earlier in my career.

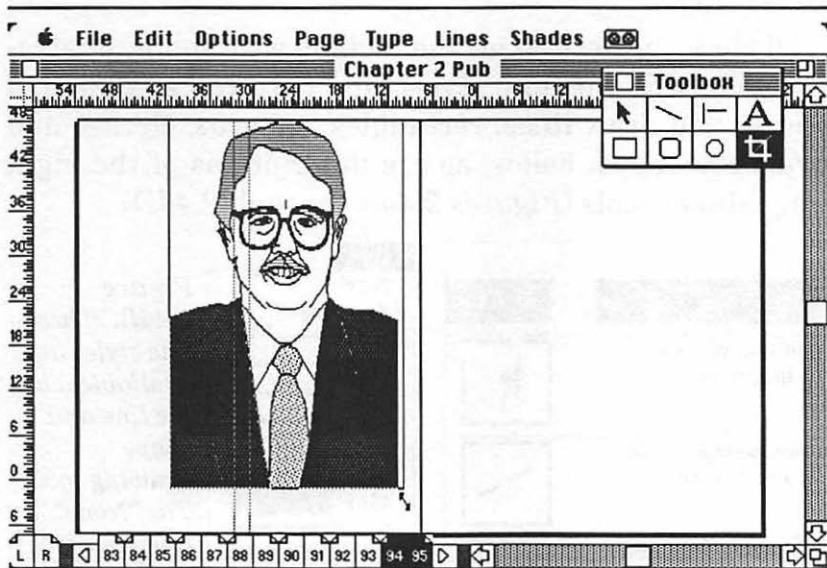
The most impressive implement in the toolbox is the cropping tool. To see what it can do, take a look at *Figures 2.40* through *2.43*.

*Figure 2.40. The image has two people in it, and I don't want the bozo. So I place the cropping tool over the handle at the lower right of the image.*

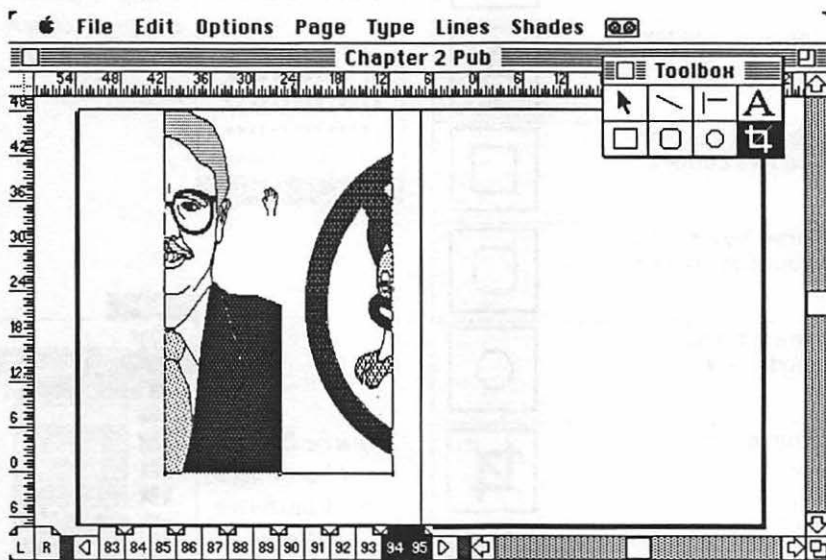


*Figure 2.41. As I drag the handle, the image is cropped.*













*Figure 2.42. I've framed the image just as we want it. The bozo is gone now. Or is he?*



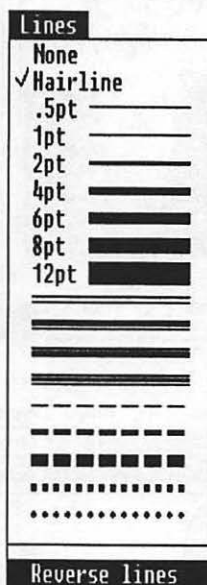
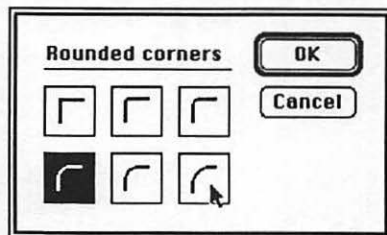
*Figure 2.43. No, he's not. The grabber hand slides the image inside the frame to reveal he has simply been cropped out of view.*

I'll close the section on the toolbox with more illustration. The line weights, styles, and patterns available to you as you draw lines, rectangles, squares, circles, and ovals are shown below, as are descriptions of the eight PageMaker tools (*Figures 2.44A through 2.44D*).

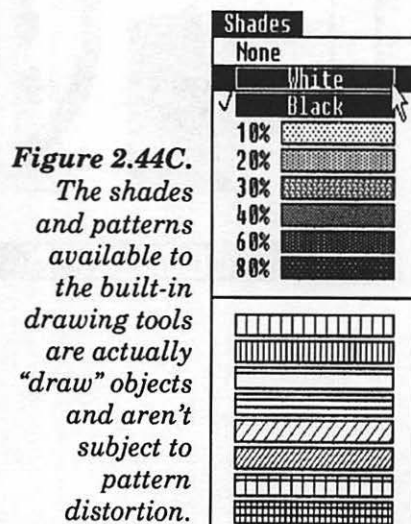
**Figure 2.44A.** The eight toolbox icons are fairly intuitive, although the cropping tool might be tough for someone with no background in graphics. In any case, here they are, defined.

To...	Use the.
edit text blocks or graphics	
draw straight lines in any direction	
draw straight lines at 45° increments	
enter or edit text	
draw boxes with square corners	
draw boxes with rounded corners	
draw circles and ovals	
trim graphics	

**Figure 2.44D.** The Rounded corners dialog box is hidden under Options and affects the Rounded-corner box tool.



**Figure 2.44B.** These line styles are available with the line and shape drawing tools. The "None" line style is useful when using a white shape to cover an unwanted page element.



**Figure 2.44C.** The shades and patterns available to the built-in drawing tools are actually "draw" objects and aren't subject to pattern distortion.

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PageMaker is usually pretty stingy about resizing bit maps without introducing moire patterns. But there's a way around the problem for 300 DPI printers.

## **Resizing paint files**

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In this book design I used a two-column design: one wide column and one narrow one on the outside of each page. I could use that narrow column for a graphic to draw attention to sidebars, for illustration captions, or leave it blank to air out the page. I could also place the drop-down part of a menu out there, next to the corresponding dialog box in the inside column. The main column width was for the main text and screen shots.

The problem was that the Macintosh screen shots refused to be resized to the shape I needed when I used PageMaker's trick for maintaining regular patterns. The screens either jumped to a size that was too wide, leaving virtually no outside column, or became so narrow that they and the text were simply *too* narrow. If I resized them without the command key, the distortion was very noticeable (the pattern in the box in the upper right corner of this page is the regular pattern of the Macintosh desktop after similar distortion).

The trick I used to solve the problem? I changed the PageMaker 3.0 printer driver to the Varsityper VT-600. The doubled resolution of the printer driver gave PageMaker the ability to calculate twice as many sizes at which regular patterns would remain regular. Of course, I had to change the driver back when it came time to print, but that was fine. The important thing is that the printed versions of the screens in this book are the width I needed and free of pattern distortion.

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## More New Features

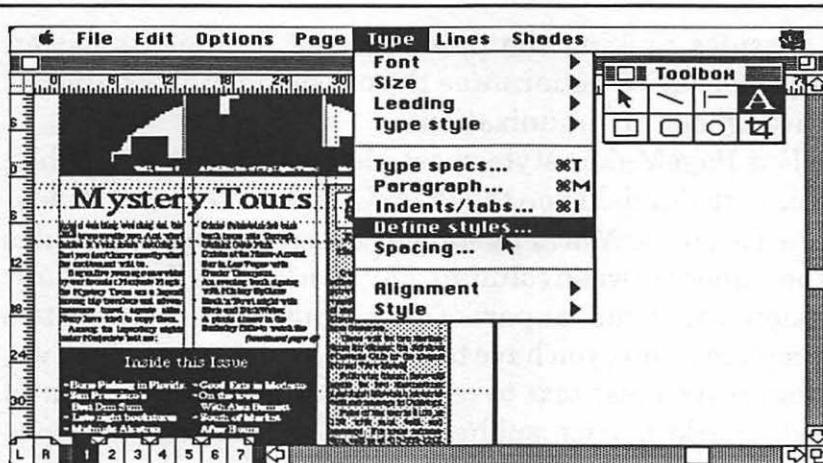
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We've already touched on several of PageMaker 3.0's new features, including autoflow and automatic wraparound features (covered on pages 46 and 47). But there's more, the most important of which is support for style sheets. Style sheets should make everyone who uses PageMaker rejoice.

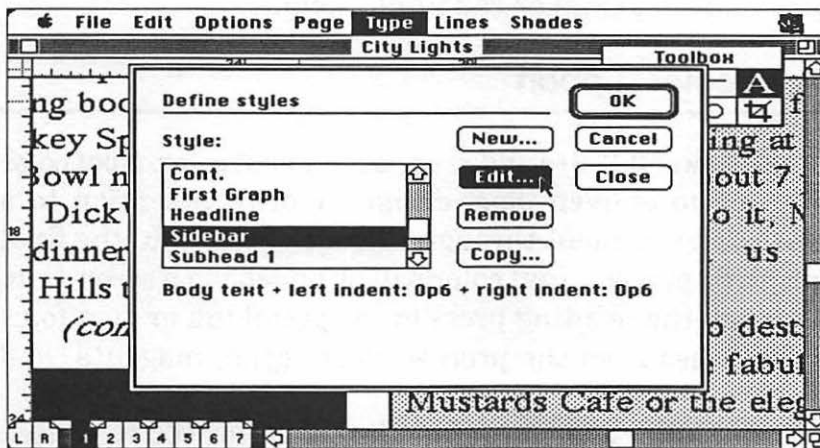
Take the case of changing from body text to a typical subhead. With earlier versions of PageMaker, this took about eight steps. A keyboard shortcut could bring up the type specifications dialog box in a single keystroke. But you still had to pick a new font, change the style to bold, increase the size, and perhaps change the leading. You'd also have to eliminate the first line indent, which meant pulling down the paragraph dialog box, selecting the measurement in the first line indent box, and typing 0.

PageMaker 3.0's style palette makes subheads *much* easier: all you have to do is click on the text, then click on **Subhead** in the style palette. If you're using one of the templates that come with PageMaker — and many people will find those templates fill all their needs — you don't even have to define what a subhead is. If you do need to create your own subhead style, it takes about a dozen keystrokes, but from then on a subhead is only two clicks away. How to create a style is illustrated in *Figures 2.45* through *2.47*.

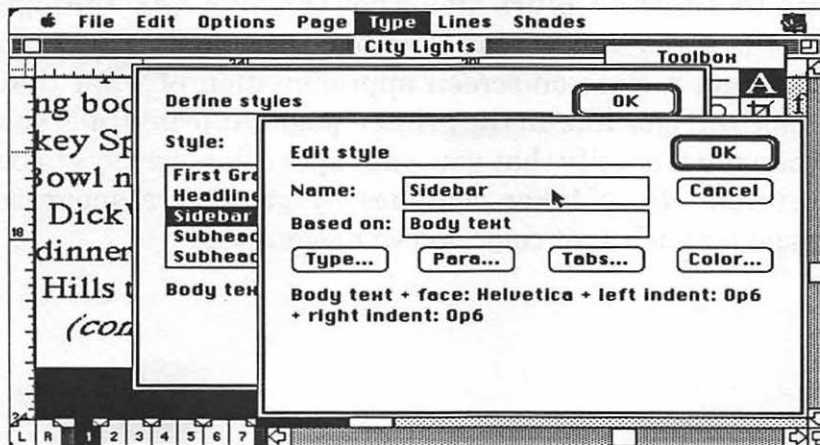
Obviously, on a book-length proposal or manual with many subheads, captions, secondary subheads, sidebar text, and so on, style sheets save an enormous amount of time. Style sheets also let you change subhead appearance throughout a document in one step. Without style sheets, you'd have to change each subhead individually.



*Figure 2.45. The first step in defining or editing a style is choosing Define styles in the Type menu. PageMaker 3.0 assumes you're basing the new style on the style of the currently selected text block, so it doesn't hurt to select text that's close to what you want.*



*Figure 2.46. Here the Sidebar style is being edited.*



*Figure 2.47. The dialog box shows the style's current settings. By clicking on Type... or the other buttons, you call up the dialog box for changing that set of characteristics.*

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Besides making the production of documents easier, style sheets can guarantee the consistency of documents throughout an organization.

But PageMaker style sheets have limitations. Unlike Ventura Publisher on the PC or Quark XPress and Ready-Set-Go on the Mac, PageMaker doesn't incorporate rules (hairlines between columns, say, or a 2-point line above or below a subhead) as part of a style tag. That presents two problems. One, you have to place the rules manually. Two, if an edit causes text to reflow and you have a horizontal rule marking each subhead, say, the rule will not move when the text of the subhead moves. Visually they're a unit, but PageMaker can't link them.

## Spot color support

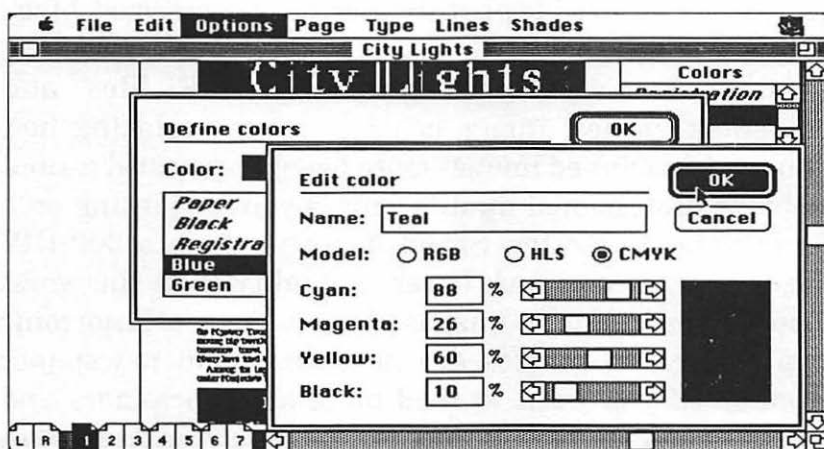
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PageMaker 3.0 also adds support for spot color. Spot color is used to enliven page design or draw attention to a particular element through the use of color. In the final printing process, that color will be added via a second run through the printing press for a special ink or on a four-color press from the process colors cyan, magenta, and yellow.

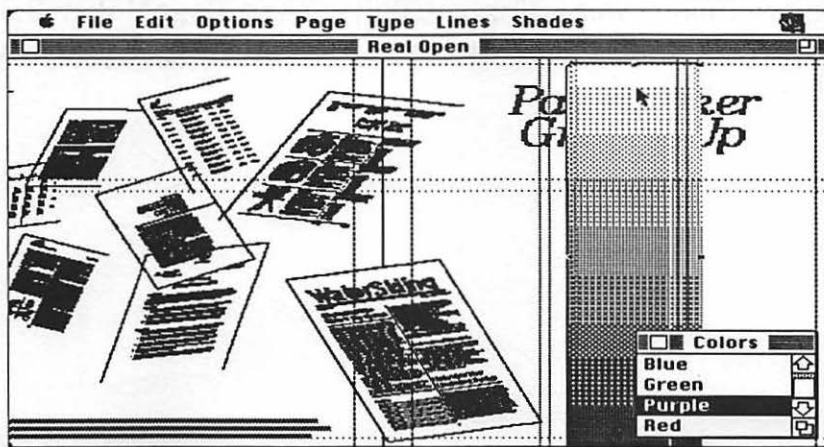
PageMaker lets you define the spot color you've chosen via its **Define Colors** dialog box (*Figures 2.48 through 2.50*). If you have a Mac II with a color monitor, you can then get a close on-screen approximation of what that color will look like on the printed page. At print time, you then must specify that you want spot color overlays to be printed. PageMaker complies by printing a separate page for each spot color you've designated.



*Figure 2.48. In the upper right corner of the screen you can see the Colors palette, which is toggled on in the Options menu. Defining a new color begins with the Options menu as well.*



*Figure 2.49. I've chosen the process color model, which blends cyan, magenta, yellow, and black. On a Mac II, you can move the sliders until the color displayed is just what you want, or you can enter numbers from a chart of colors.*



*Figure 2.50. Here I've defined purple and assigned it to a screen that's about to go behind some text. The laser printer output won't be purple, of course — but it will include a page marked "purple layer" with just that screen on it.*

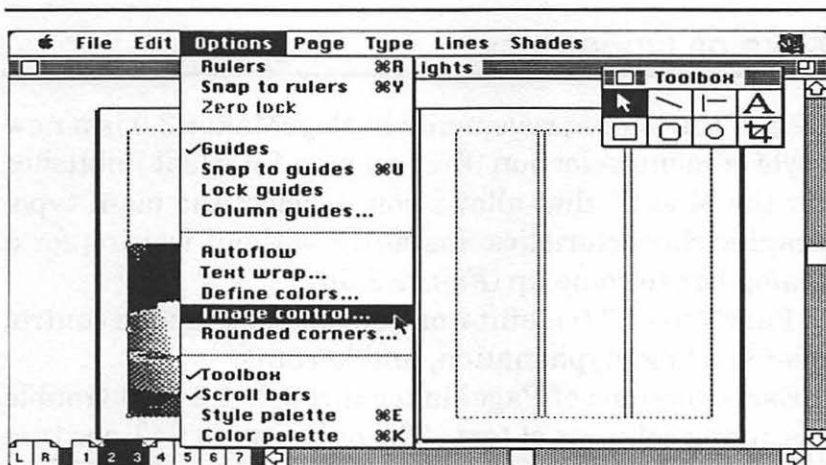
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## Image Control

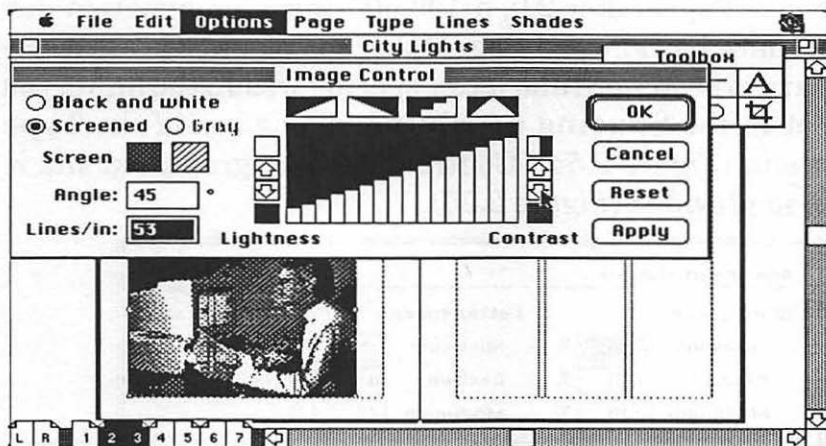
---

The increasing number of gray scale scanners prompted PageMaker 3.0 to add more control over scanned images. Essentially, PageMaker gives you some of the control you might have over an image in a darkroom: you can increase or decrease an image's brightness, increase or compress the range of grays in the image, and add a few special effects (*Figures 2.51* through *2.53*). You won't be able to turn a lousy scanned image into a good one, however, anymore than you can make a lousy negative into a brilliant photo in the darkroom. You can help a bit, or maybe save a terrible photo by going to a posterized, black and white image.

Although support for gray-scale TIF files and PageMaker's new image control makes replacing half tones with scanned images more feasible, you still cannot achieve professional quality unless you're printing on a Linotronic typesetter. Scanned images from a 300-DPI laser printer are much lower in quality than the worst newspaper half-tone images. And even on a Linotronic typesetter, the images are no better than newspaper quality. (If you want to read more about scanners and scanned images, see Chapter Four. If you're interested in more image-processing capability than PageMaker 3.0 provides, take a look at the section on ImageStudio in Chapter Five.)



**Figure 2.51.** Image control is gray unless you have a TIFF file image selected.



**Figure 2.52.** Image Control lets you change from a dot screen to a special-effects line screen, change the angle of that line screen, and set the printing resolution in lines per inch. You can also adjust lightness and contrast.



**Figure 2.53.** Three images are overlaid here. The top stripe has been "solarized" by clicking the Black and white button. The middle uses the standard values for a 300 DPI laser printer. The bottom uses the line screen with the angle set to 90 degrees.

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## More on typography

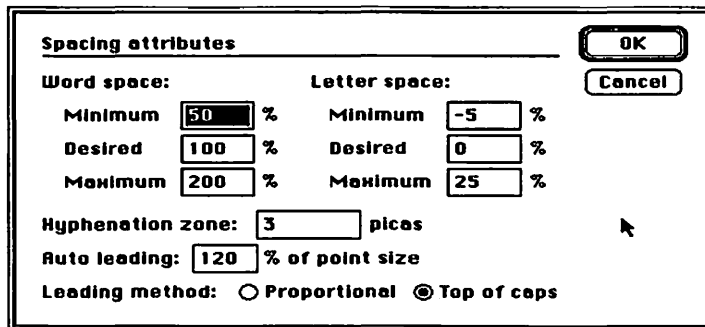
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One of the big improvements in PageMaker 3.0 is a new style of menu selection (first seen on Interleaf Publisher for the Mac II) that allows you to select the main typographic characteristics instantly, without waiting for a dialog box to come up (*Figure 2.56*).

PageMaker 3.0 maintains version 2.0's precise control over spacing, hyphenation, and kerning.

Early versions of PageMaker through 1.2 had trouble justifying columns of text. The only way to fix lines that were too loosely spaced was to manually insert hyphens. Since PageMaker 2.0, a 100,000-word hyphenation dictionary has allowed PageMaker to split words as necessary to keep word and letter spacing within the limits you set in the **Spacing attributes** dialog box of the **Type** menu (*Figure 2.54*). Control over paragraph indents is also provided (*Figure 2.55*).

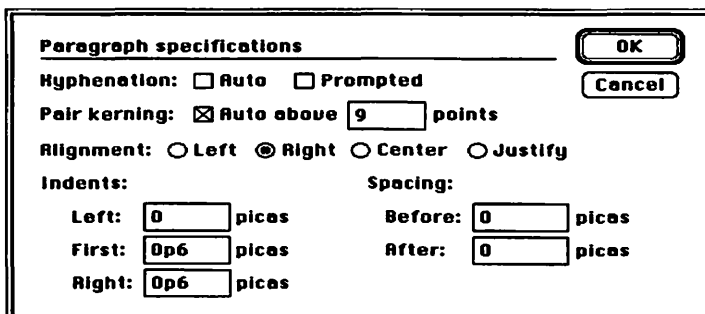
**Figure 2.54.**  
*Setting minimum and maximum spacing closer together increases the hyphenation rate. Choice of leading methods is new to PageMaker.*



The **Spacing attributes** dialog box contains the following controls:

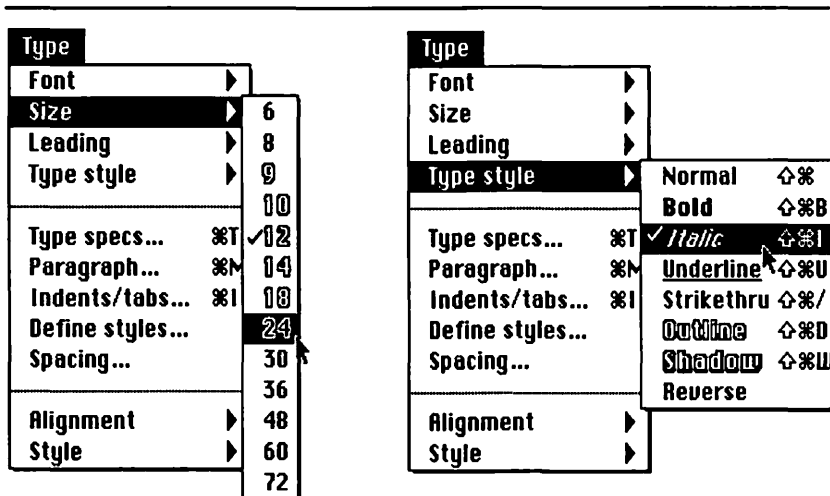
- Word space:** Minimum (50 %), Desired (100 %), Maximum (200 %)
- Letter space:** Minimum (-5 %), Desired (0 %), Maximum (25 %)
- Hyphenation zone:** 3 picas
- Auto leading:** 120 % of point size
- Leading method:**  Proportional,  Top of caps
- Buttons:** OK, Cancel

**Figure 2.55.**  
*PageMaker also controls paragraph indents and alignment. Kerning is also controlled on a paragraph-by-paragraph level.*



The **Paragraph specifications** dialog box contains the following controls:

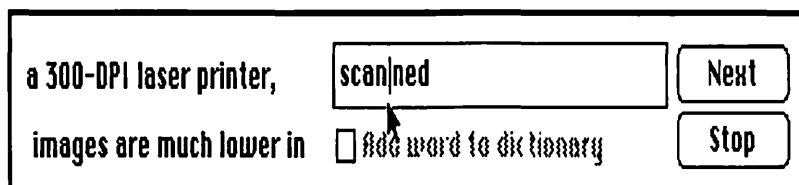
- Hyphenation:**  Auto,  Prompted
- Pair kerning:**  Auto above 9 points
- Alignment:**  Left,  Right,  Center,  Justify
- Indents:** Left (0 picas), First (0p6 picas), Right (0p6 picas)
- Spacing:** Before (0 picas), After (0 picas)
- Buttons:** OK, Cancel



*Figure 2.56. The pop-up menu lets PageMaker 3.0 present more choices in the instantaneous manner of a drop-down menu despite the limited area available on the Mac's menu bar.*

Not all words are found in a 100,000-word dictionary, of course. Therefore, PageMaker provides prompted hyphenation. In **Prompted Hyphenation** mode, PageMaker provides a suggestion of where the hyphens should go to correct a loosely spaced line, but lets you make the final decision (see *Figure 2.57*). You can accept the hyphenation it suggests or move the hyphen to a more desirable location. You have the option to add a word break to PageMaker's dictionary by checking the **Add word** box (there's room for 1300 additional words in the dictionary). If you like, you can even use a text editor to add words to the PMUSER.TXT supplementary dictionary file in a batch.

*Figure 2.57. Sometimes, the word breaks suggested by PageMaker's prompted hyphenation algorithm need to be scanned (not scan-ned).*



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## Kerning

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PageMaker also implements kerning. What's kerning? Well, the shape of letters is such that an adjacent pair may seem to have too much space between them. This space becomes more apparent at larger point sizes. For example, look at the "W" and the "o" in the word "Words," set below in 36-point type.

# Kern Words?

Notice how the bulge of the "o" could afford to sidle a bit closer to the "W." And how the "e" would fit into the notch of the "K" if the "e" could be moved over? PageMaker will automatically kern such letter pairs for you. However, because kerning slows on-screen composition and is difficult to discern for smaller point sizes, PageMaker allows you to specify the smallest type size to kern.

PageMaker also allows you to move letters closer together manually by pressing **⌘-Backspace**. Each press reduces the space between adjacent characters by 1/24th the point size of the character that's to the left of the insertion point. For example, the following line has been kerned a great deal.

# Kerned Words!

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## The advantages of PostScript

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Although the PC version of PageMaker is virtually identical to the Macintosh version, the PC user of PageMaker may find himself at a severe typographic disadvantage. That is because almost every user of the Mac version of PageMaker is working with a PostScript printer, while many PC users are struggling along with such non-PostScript devices as the Hewlett-Packard LaserJet printer.

PostScript is a language the computer uses to describe how to print things. PostScript's vocabulary includes the ability to size type at any arbitrary size and in several styles from a single typeface description. It takes a smart but expensive printer to understand such a language. To handle the PostScript computations, all PostScript printers actually have a built-in computer that is more powerful than a Macintosh Plus.

But as a result, the original Apple LaserWriter's four built-in typefaces—Times Roman, Helvetica, Courier, and Symbol—could be printed in any combination of bold, normal, italic, shadow, outline, and underline from 4- to 127-point, and every half-point size in between. The LaserWriter Plus and the new Apple LaserWriter II NT and NTX have eleven built-in typefaces, as do most of the other PostScript printers. Moreover, the power of PostScript contributes greatly to the flexibility of illustration programs like Adobe Illustrator and Aldus Freehand.

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Aldus has tried to take care of the poor PC user who's stuck with a PC, a non-PostScript printer, and a single font cartridge. With PageMaker Version 2.0, the original HP LaserJet, and the TMS Proportional 1 font cartridge, the user had only 8 fonts: the Tms Rmn face in 10-point bold, medium and italic, 8-point Tms Rmn Light, 14-point Helvetica Bold, 8.5-point Line Printer, and the LaserJet's built-in Courier font. The user was forced to forget about 30-point headlines. But with PageMaker 3.0 on the PC, Aldus makes available Bitstream Fontware that allows the creation of a handful of fonts in a range of type sizes up to 30 point on an original LaserJet and 72-point on a LaserJet II (providing the printer has 1 megabyte or more of memory).

But there's still a sizable gap between the capabilities of a PostScript printer and a non-PostScript printer, and that goes for the Mac as well. On the Macintosh, it's now possible to buy laser printers based on QuickDraw, the language the Mac uses to create images on the screen. Actually, saying the printers are based on QuickDraw is a bit misleading. The printer doesn't know hoot about QuickDraw: it simply takes a bitmap sent over from the Mac and prints it, much as the ImageWriter does. The difference is that the bit map printed by the ImageWriter is 72 DPI, while the LaserWriter II SC bitmap is 288 DPI.

The biggest advantage of QuickDraw printers like the Apple LaserWriter IISC and the General Computer Personal LaserPrinter is price: because they use the Mac's processor and memory to prepare the dots that make up the printed page rather than relying on their own built-in computer, they are several thousand dollars cheaper than a comparable PostScript printer.

---

The biggest disadvantage of these printers is typography. In order to print a font on the SC that approximates the quality of a PostScript font, you need a corresponding Macintosh screen font that's four times as large (this is related to the Paint trick mentioned earlier in which you increase resolution by shrinking the image). Moreover, you need a screen font for each size you print. As a result, you are going to devote more disk space to fonts than you would with a PostScript printer, which needs only a single font to print any size type. While Apple ships a disk containing a wide range of point sizes with the SC—9, 10, 12, 14, 18, 24, 36, 40, 48, 56, 72, and 96 in Times, Helvetica, Courier, and Symbol—you don't have the same flexibility in sizes without sacrificing quality. The odd sizes—11- and 13-point type—look a little funny, as will sizes larger than 24 point that do not have a corresponding screen font that's four times larger. And Apple provides only the Roman variety screen font, so you cannot print *true* serif face italics with the SC, although the untrained eye will have trouble seeing a difference. Nor will you have access to the broad range of typefaces available on a PostScript printer.

Also problematic on a QuickDraw printer is use of drawings that really take advantage of the advanced features of PostScript: illustrations that include rotated text, Cricket Draw files that include fountains, the whole of Adobe Illustrator, and the new PostScript clip art libraries from T/Maker and other vendors.

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Another thing to consider is that neither the standard Personal Laser Printer nor the LaserWriter IISC can be networked. Because they need to receive large bit maps at high speeds from the Mac, the QuickDraw printers connect via the SCSI port rather than through the much lower bandwidth AppleTalk network connector. If you need to share the printer, or think you might eventually need to share the printer, than you'd probably be better off going with a PostScript device.

The bottom line is this: buy a PostScript printer if you're serious about producing high-quality pages with PageMaker 3.0. If you don't mind compromising the quality of your pages a bit, you can get by with a QuickDraw printer, but I wouldn't recommend it.

No time to stop the bus to delve further into typography and printers right now, beyond providing the following list of PostScript laser printers that will be covered in greater detail in Chapter Five.

- Apple LaserWriter, LaserWriter Plus
- Apple LaserWriter II NT, NTX
- AST TurboLaser PS
- Compugraphic CG400-PS
- Dataproducts LZR 2665
- DEC PrinterServer 40
- NEC Silentwriter
- QMS PS800
- Qume ScripTen
- Texas Instruments OmniLaser 2108, 2115
- Varityper VT-600

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PageMaker 3.0 also supports PostScript-compatible typesetters, the Linotronic 100 and the Linotronic 300, which print at resolutions of 1270 DPI and 2540 DPI respectively. The question of whether you need the higher resolution for your particular job is, well, entirely up to you. As we'll see in our chapter on PageMaker service bureaus, commercial outfits are getting about \$10 a page for typeset output. For an idea of the difference between laser printer and typeset output, compare the type used in the Acknowledgements and Foreword with the type on all other pages. (Also check the photographs on pages 167 and 171 for an idea of how the extra resolution of the Lino pays off for reproducing photographic images without having your printer strip in a half-tone.) These pages were set on a Linotronic 100 at 1270 DPI. The pages of the chapters and appendix are 300 DPI output of the Apple LaserWriter II NT.

## Using templates

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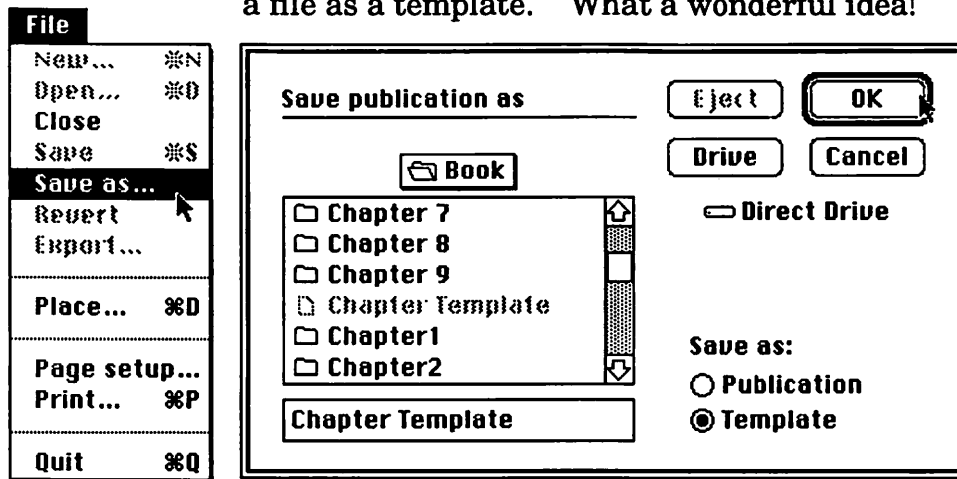
Finally, we get to one of the most powerful levers built into PageMaker: templates.

Setting up the format of a newsletter or any other periodical document is quite a bit of work. You can preserve that effort by storing an “empty” version of the newsletter: it contains only the masthead, column guides, rulers, section headings, and other elements that define the basic look of the newsletter. No copy or illustrations are included.

Elements that recur on each page — such as the column guides that define a newsletter's basic grid or the type and 1-point line that form the page folios at the top of most pages in this book — are stored on the master pages (creating them once is better than once a page).

Unfortunately, in older versions of PageMaker it was possible to muddy the pristine usefulness of a template file by opening it, modifying it significantly, and then saving it back to disk. Instead of starting with a clean but formatted slate, the next time you went to use the template you'd find yourself staring at a finished document. You'd have to delete graphics and text, reverse whatever modifications you made to the basic template style to accommodate that particular publication's needs, and otherwise put yourself out unnecessarily.

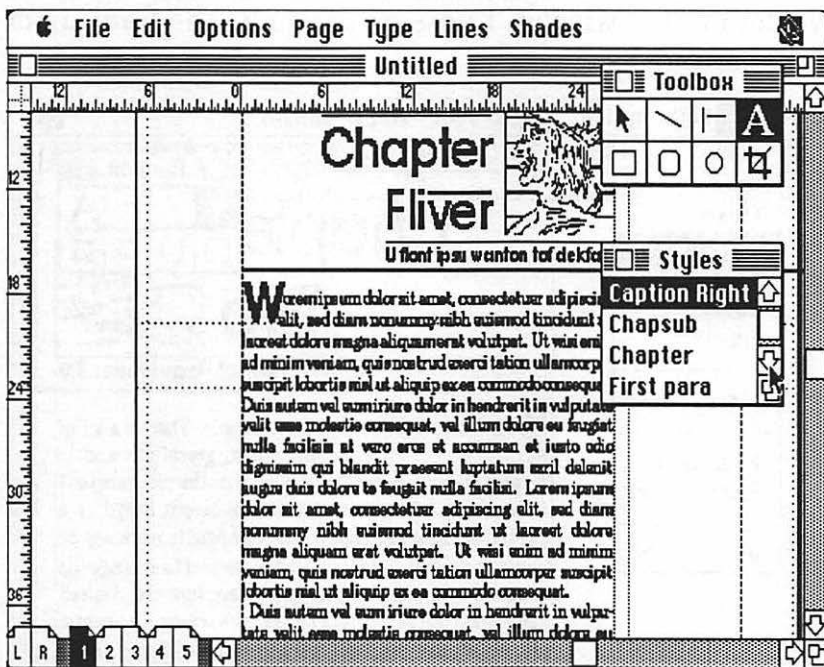
Fortunately, PageMaker 3.0's **Save File As** dialog box (Figure 2.58) includes a new feature that explicitly labels a file as a template. What a wonderful idea!



*Figure 2.58. The Save as option in the File menu is more powerful than you might realize. Besides designating that a publication become a template, and allowing you to save an old file to a new location, Save as compresses a publication to its smallest possible size on disk. When you delete a lot of material from a publication you'll notice that it doesn't get smaller when you Save it. But it will shed those excess kilobytes if you use Save as.*

You can make your own templates, of course, or you can use the templates shipped with PageMaker 3.0, or you can buy additional templates (Aldus sells a set for newsletters and another set for general business publications, with plans to publish more). You can even hire a talented graphic artist to produce a slick template for your newsletter without telling anyone, and make everyone think you're blessed with good taste and judgement when actually you're just in the bucks.

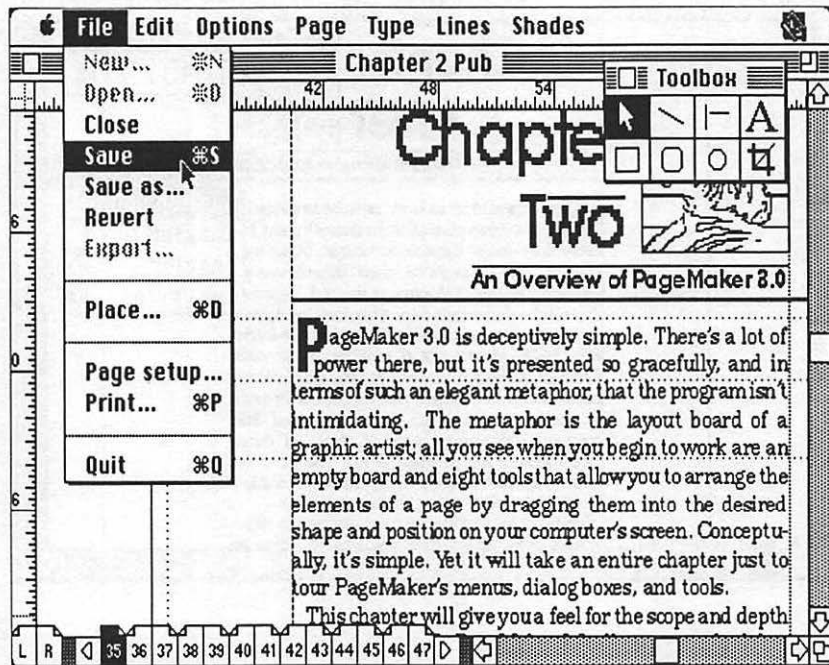
Figure 2.59 shows my **Chapter** template. (As you might have guessed, I didn't hire a talented graphic artist to produce it: I did it myself.) The page you're reading was produced simply by adding words of wisdom and carefully chosen graphics to that template.



**Figure 2.59.**  
*Uflont ipsu wanton tof dekf... Isn't that what she had to say to the robot in The Day the Earth Stood Still? Well, the point is that the text in a template should be an obvious fake — it's just there to hold the font, size, and place for real text you pour in to replace it.*

Speaking of words of wisdom: you put a lot of work into your publications, so protect them. Remember, your creations exist only in the most precarious sense until you save them to your hard disk. Those little 0s and 1s in silicon can be blown away by something as trivial as a drill press or a hair dryer being turned on in an adjacent electrical circuit. Lightning could strike a nearby phone line and send a transient through your modem and through your computer's memory. Or those little 0s and 1s could vanish into the ether for *no apparent reason*. I've worked with computers for a long time, and I've lost more than my share of 0s and 1s—often, just when I needed them most. Work that should have been saved to disk five, ten minutes before I lost it. From such losses come wisdom. This wisdom I pass on to you as the final tip of the chapter:

**Figure 2.60.**  
*Saving your files regularly is a good idea even though PageMaker implements a safety feature that keeps you from losing more than two pages of work (barring a catastrophic system failure like a disk crash).*

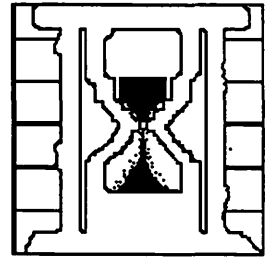


Do you see the “**⌘-S**” next to **Save** in the **File** menu in *Figure 2.60*? That “**⌘-S**” should remind you every time you save a file that there is a keyboard shortcut that can save you an immense amount of grief: pressing the **⌘** key and the **S** key simultaneously will pass all your hard work safely to your hard disk. Aldus implemented many keyboard shortcuts for PageMaker 3.0, for which we can all be thankful, but this is the one for which I am most thankful. Use “**⌘-S**” every chance you get.

## Time Saver

Actually, Aldus went even further to protect your files. Every time you touch the page icons or use the menu to go to another page or two-page spread, PageMaker performs what Aldus terms a “mini-save.” You can revert to the last mini-save by selecting **Revert** off the **File** menu with the **Shift** key held down. This proves mighty handy if you haven't saved for ten pages but mess up badly on the current spread: things revert to just as they were the last time you clicked the page icon or selected **Go to page**.

As a consequence, you can never lose more than two pages of work because of an odd system error or act of God. Oops, that's not really true. A hard disk failure could cost you everything: PageMaker publications, text, image files, and those wonderful public domain DAs you downloaded from CompuServe. The whole Chibcha nation gone, wigwams and all. So back up all your files. This gets tough if they grow larger than a floppy can hold, which often happens with large images and publications. There are solutions: using another hard disk or tape drive, for example. Don't let anything stop you from backing up. It's important.



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Hope you enjoyed the tour. Gee, we didn't really spend much time in the dark alleys, did we? Well, maybe I was expecting a wilder tour because I've driven down so many dark alleys in the PC version of the PageMaker program.

In any case, I hope you got the idea that PageMaker 3.0 on the Mac is a fine, powerful product. The original PageMaker did a wonderful job of emulating how professional graphic designers work when they design and paste up a page. PageMaker 3.0 adds features that automate some of the drudgery and make the production of long documents much more efficient. The electronic paste-up board PageMaker creates, occasional bugaboos notwithstanding, is far more efficient than the manual tools and more pleasant to use than any other desktop publishing program I've tried.

So what's the bottom line? A couple of questions. If you haven't already purchased PageMaker 3.0 for the Macintosh, ask yourself:

- What quality of designs am I capable of, given the time I have to get up to speed and implement them?
- Do I want to spend time slaving away at an electronic paste-up board?

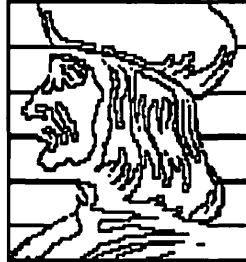
As fine a tool as PageMaker 3.0 is, it's still just a tool. You'll have to work hard. And it's up to you to make design decisions that result in effective publications. Aldus PageMaker 3.0 merely makes it easier for you to implement those decisions. As professional design consultants are fond of saying, a desktop publishing package does not a designer make.

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# Chapter Three

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A mail-order form and catalog

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**W**e're about to meet one of the several varieties of people who use PageMaker. Bill Byron is one of those renaissance men you hear about every once in a great while. Musician, poet, gourmet, speaker of seven languages, amateur physicist, owner of an astounding collection of wild animals kept in the world's finest private zoo/arboretum, collector of fine things, expert on 19th-Century Japanese woodblock prints — you name it, and Bill Byron has dabbled in it.

Several years ago he quit his job as a technical writer for Bilgers TuffPumps and decided to pursue his life-long dream. He used the money his father Charles III had left him to become an entrepreneur. He opened up a shop to trade in the many and varied things he loved. This was not a cheap enterprise. He used all the money his father had left him.

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People would travel miles to visit Bill Byron's West Coast Eclectic. They could go to the Napa Valley to taste the wine and luxuriate in mud baths; to Munich to heft steins of beer and eat warm pretzels the size of your arm; to Berkshire, England to buy fine Victorian antiques at estate sales; to the main showroom of Exeters in Los Angeles to see expensive electronic gadgets; or they could go to Redwood City, California, to West Coast Eclectic, where they saw all of the above and more on display. Some would come just to chat with Bill Byron about all the things discriminating buyers like to chat about.

Yes, Bill's shop was truly heavenly. Where else in the world would you find the supplies to set up your own mud bath and spa, complete with genuine Calistoga mud, redwood soaking tub, and a 500-gallon vat of Napa Valley mineral water? Nowhere else in California could you find a retail outlet that had a good selection of fresh Fugu puffer fish fillets, rosewood computer desks, Swiss alpine skiing gear, and radio-controlled toy jets, just to mention a few of the odd and wonderful items Bill Byron kept in stock.

Bill received frequent requests — mail from villas on the Costa Brava, phone calls from hill-top estates in Hong Kong, telegrams from the palace in Manila — for some item or another that someone had heard about at lunch in Beverly Hills, or while chatting across the aisle on the Concorde from New York to Paris. After dealing with such requests on an ad hoc basis for several years, Bill decided it was time to expand his firm into mail order. It worked for New York City's 47th Street Photo — why not West Coast Eclectic? Besides, he was desperate to move his business into the black. And that's why Bill latched onto a copy of PageMaker.

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## A question of motivation

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Why would someone with such discriminating taste want to design and produce his own mail order catalog? For one thing, with all his money tied up in merchandise, Bill couldn't afford to pay someone else to do it. But there was also his tendency towards dilettantism — he wanted to try everything that had an aesthetic dimension at least once in his life. Finally, there was his irresistible urge to play with gadgets. Bill suffered from the most passionate kind of gadget lust, and there are few gadgets more compelling to an aesthete than a computer running PageMaker.

Before he was willing to tackle a full-blown catalog, however, Bill decided he'd first create a mail order form to deal with the occasional mail and telex orders. If working with PageMaker was enjoyable, he would use it to create his catalog—and he would already have the finished order form.

When it came time to tackle the relatively simple design of the mail order form, Bill first considered the necessary elements. He came up with the following list:

- The West Coast Eclectic logo, store address, and order-by-phone information.
- Credit card information. Because it included a lot of detail — which credit cards would be accepted, the procedure for orders from outside the United States, blanks for filling in the credit card number, expiration date, and so on — it was going to take up a large part of the page.
- A section for the customer's address. To accommodate his credit account customers and for people buying his merchandise as gifts, this section was to have both a "Ship to" and "Bill to" blank.
- The actual order form, with spaces for stock number, item description, number of items, unit price, total price, and so on.

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## Bill tackles an awful design

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Before I describe step-by-step how Bill created his mail order form using PageMaker, let's examine the design process.

When he sat down to design, the first thing Bill did was groan. He had five disparate elements: one block of text, two “fill-in-the-blank” lines, one logo and text combination, and a table composed of a god-awful number of horizontal and vertical lines. There are few things uglier on a page than a god-awful number of vertical lines.

The largest element on the page was undoubtedly the table. Essentially a box filled with crossing lines, it would dominate the page no matter what he did. And so Bill, educated in the fundamentals of design, decided to follow the Frank Lloyd Wright school of thought and go with the flow. The logical unifying element had to be a box.

### Doing a “comp” of the design

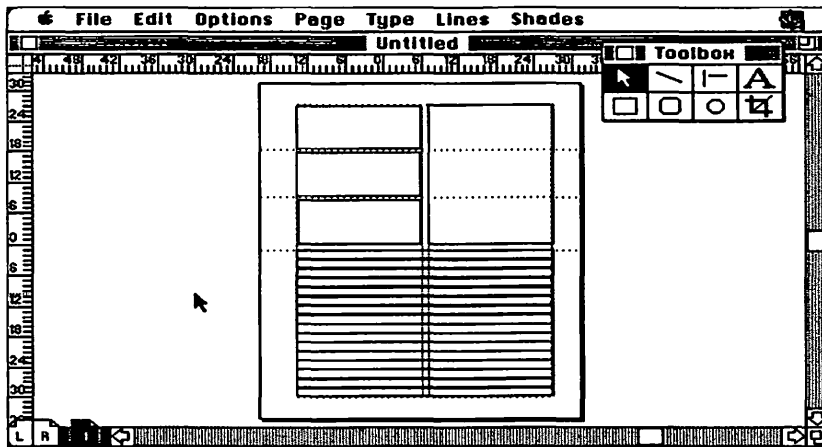
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To get a rough idea of how the form would look, Bill began by building the table. Although it is possible to draw in PageMaker itself using the tools for making lines, rectangles, and spheres in the PageMaker toolbox, Bill decided that wasn't the best way to go.

Complex objects must be built from several components. A table can be constructed either from lines or from rectangles stacked on top of each other. But PageMaker's drawing tools are intended to add graphic elements to a page, not to create complex objects — they provide no way to permanently group individual drawing components. You can combine and move a group of any of the elements PageMaker handles by surrounding them with the flashing lines of the marquee-style selection box. But as soon as you click elsewhere, the combined elements become independently movable again.

To save himself a lot of trouble in moving and re-sizing his table, Bill Byron decided to create it using another software package, and then place it in his PageMaker publication.

Once the table was done, Bill wanted an idea of how the complete form would look, because it wasn't especially attractive with only the table on the page. He still had four other elements, three approximately equal in size and the fourth about as large as the other three combined. He was going to unify the page by setting each of those elements inside a box. Thus his task was to divide the remaining half-page into four boxes; a little algebra told him the larger box would occupy a quarter of the page, and the other three would divvy up the remaining quarter. Using the **square-corner** tool from PageMaker's toolbox, Bill came up with a rough idea of how his page would look (*Figure 3.1*). Not bad, he decided.

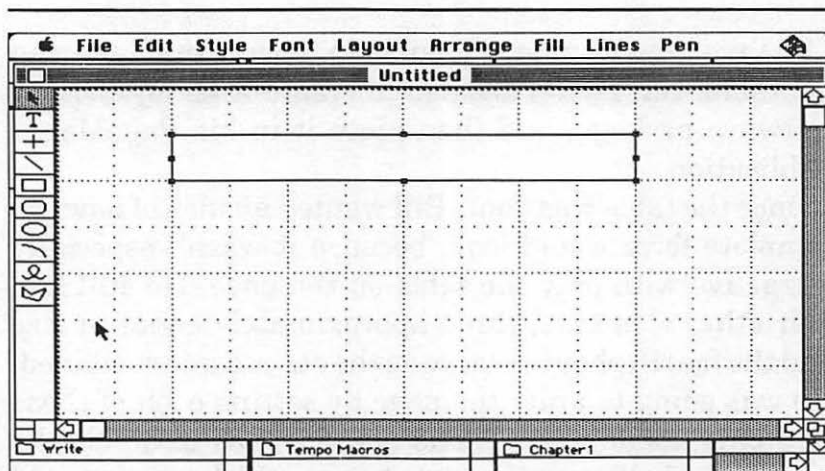


*Figure 3.1. A quick “comp” thrown together by boxing off the main areas of the top of his mail-order form—with the 16-box table he created in MacDraw below—gave Bill assurance his design was workable.*

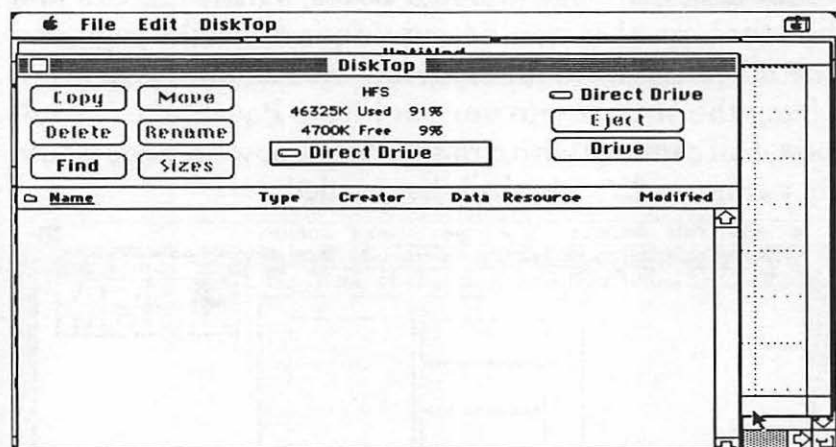
Satisfied that he was on the right track, Bill didn't bother to “comp” another design. He wrote his copy in Microsoft Word, and proceeded to put his order form together.

For a screen-by-screen account of how Bill did it, examine *Figure 3.2A* through *3.2Q* on pages 110 to 115.

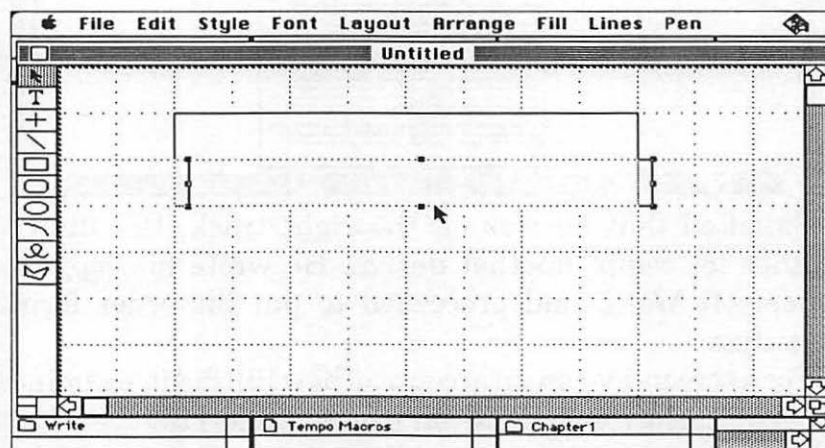
**Figure 3.2A.** Bill began constructing the table in MacDraw by selecting the rectangle tool from the tool palette. He clicked where he wanted the corner to be anchored, then dragged until the rectangle was a manageable size.

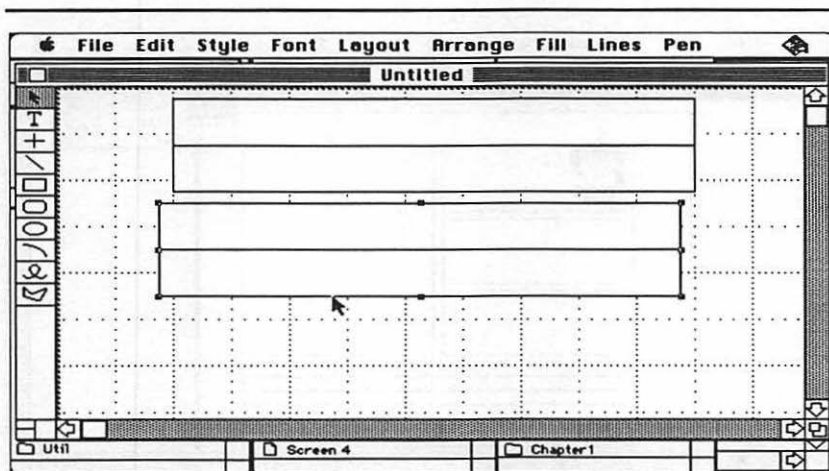


**Figure 3.2B.** After drawing the first rectangle, Bill simply made a copy of it by using Duplicate in the Edit menu.

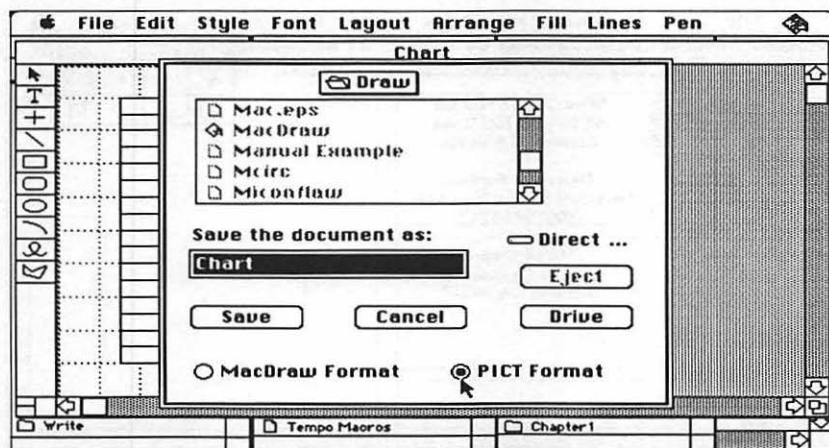


**Figure 3.2C.** In MacDraw, objects snap together, and that's what Bill did with his two rectangles.

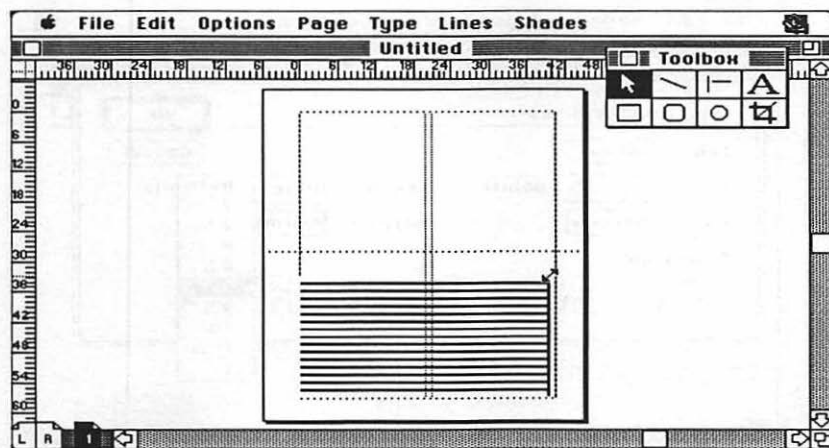




**Figure 3.2D.** Bill then Cut his group of two rectangles to the Clipboard, pasted, and then he had four.

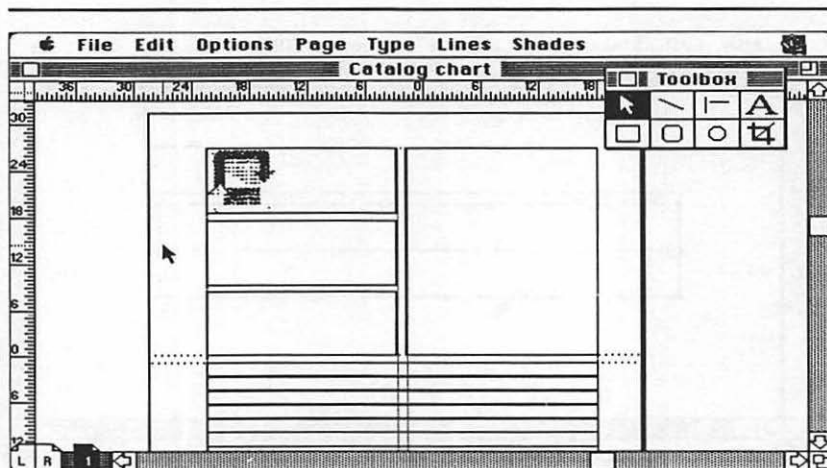


**Figure 3.2E.** When he had sixteen rectangles, Bill Byron chose Group from the Arrange menu. That way, his boxes would act as a unit during page layout. He saved the file as Chart in the PICT format so it could be placed in PageMaker.

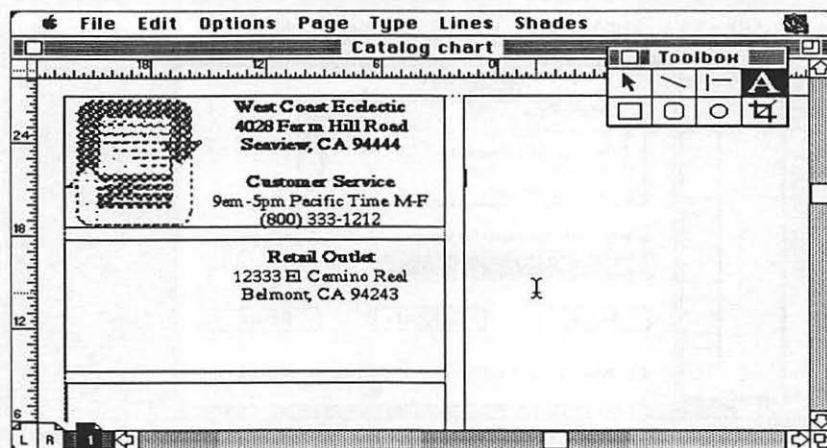


**Figure 3.2F.** Bill moved his Chart file into PageMaker. It was the wrong size, but by selecting the handle on the upper right corner of the table, he was able to stretch it until it just touched the guide precisely 28 picas 6 points down the page.

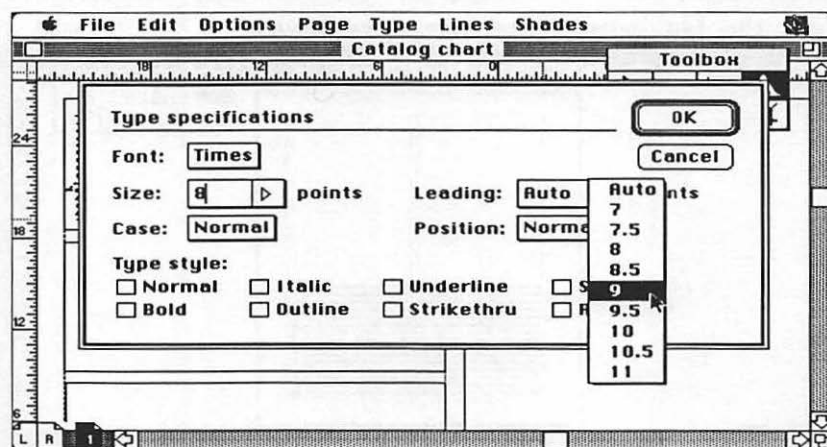
**Figure 3.2G.** Bill placed his WCE company logo in the upper left corner of the upper left box.

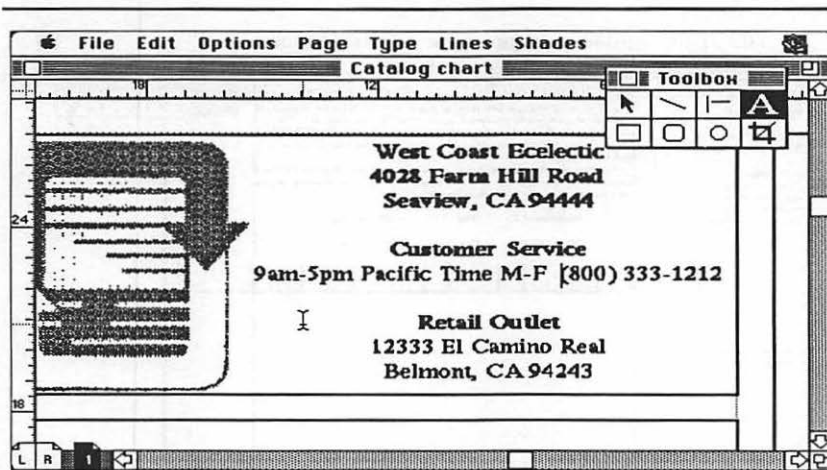


**Figure 3.2H.** With the logo situated, Bill placed the contact information copy, and discovered it was too big.

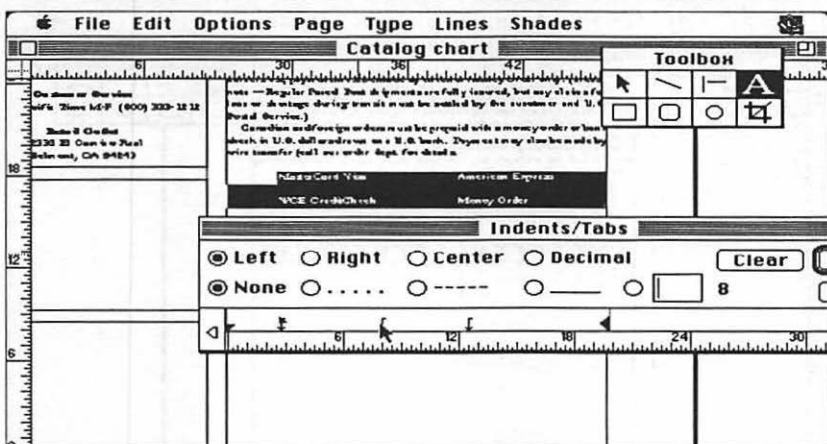


**Figure 3.2I.** Bill knew the Command-T shortcut to bring up the Type specifications dialog box and selected Times Roman normal in 8 point. Then he used the pop-up Leading menu to select 9 point leading.

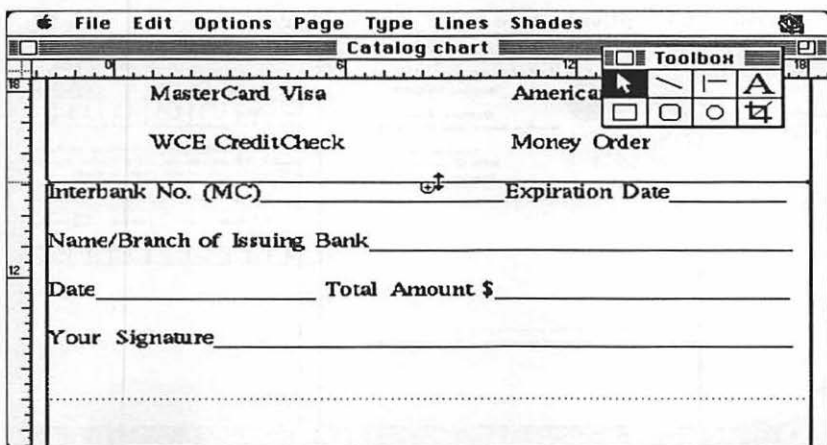




*Figure 3.2J. Bill made use of two point sizes, a touch of bold type, and extra space between each element to set them apart. He also decided to center the type to achieve a better balance with the logo.*

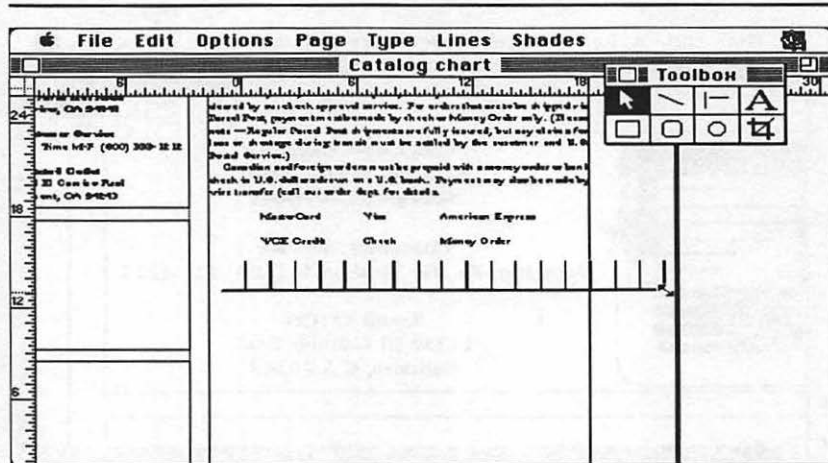


*Figure 3.2K. The methods of payment didn't line up when first placed in PageMaker, so Bill used the Indents/Tabs tool to line them up just so.*

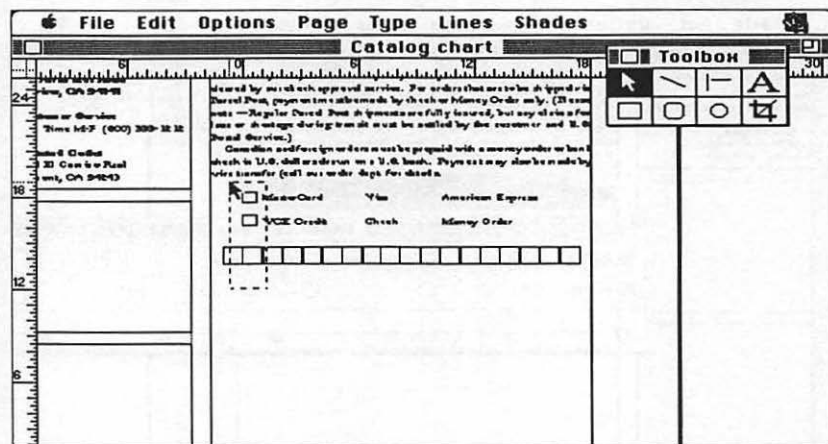


*Figure 3.2L. Bill rolled up the windowshade to insert the box for credit card numbers. After it was inserted, he would click on the bottom of the Windowshade and precisely place the next line of the form ("Interbank ...").*

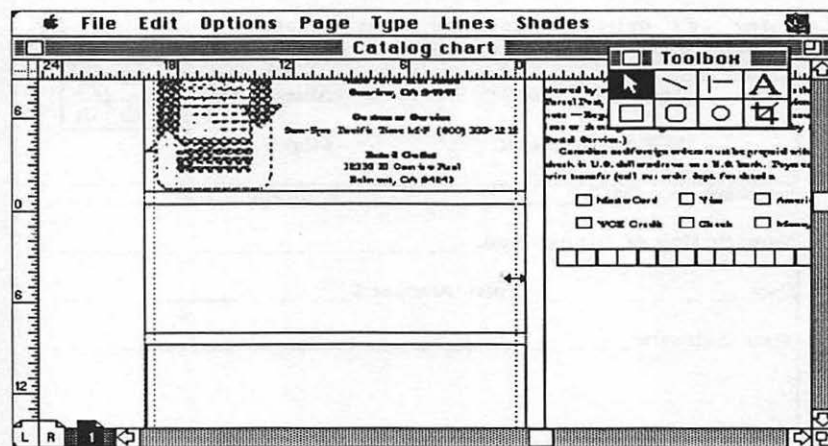
**Figure 3.2M.** Bill made the credit card boxes in Draw much as he made the table. It was a tad too big, so after Bill placed it he dragged the handle to shrink it down to the correct size.

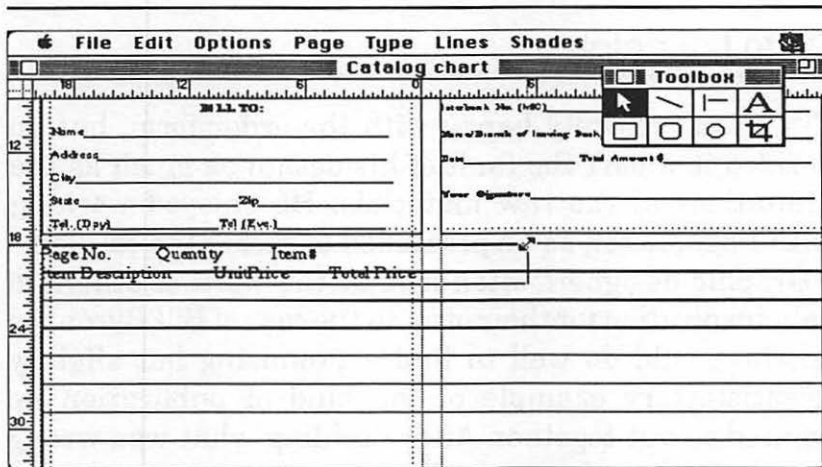


**Figure 3.2N.** Pushing the mouse button and dragging creates a flashing, marquis-style selection box. Bill wants to group the two boxes so he can Copy and Paste similar two-box groups next to the other payment choices.

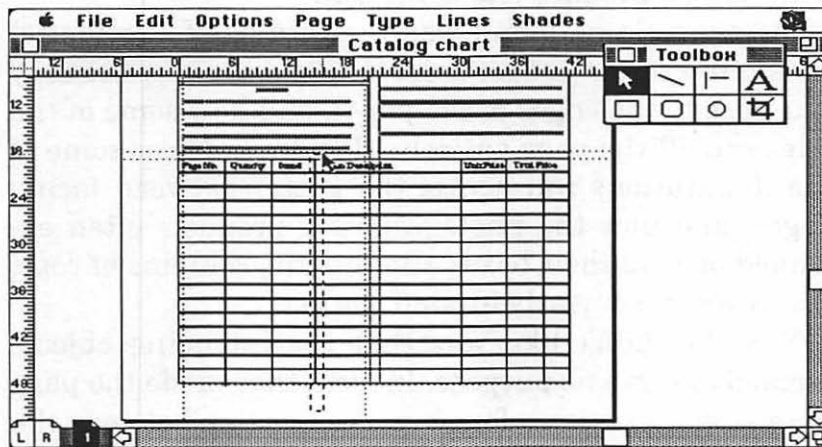


**Figure 3.2O.** Bill dragged column guides to create 1-pica margins between the addressing copy and the lines of the box.





*Figure 3.2P. Bill placed some tabulated copy, but it stopped flowing across the page and wrapped when it ran into the column guide. He stretched it to fit.*



*Figure 3.2Q. Bill used PageMaker's line tool to divide the various categories. In order to grab a line without disturbing the table, Bill started outside all objects and dragged a selection box until it completely surrounded only the line.*

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## On to the catalog

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Bill wasn't entirely happy with the order form, but he decided it wasn't the fault of his design as much as the limitations of the raw materials. He enjoyed working with PageMaker, so he proceeded to tackle the catalog.

Graphic designers often look at the work of others to gain inspiration for their own. In the case of Bill Byron, he felt he would do well to find a promising but slightly unsatisfactory example of the kind of publication he wanted to put together. After deciding what was wrong with it, he'd produce one of his own.

The example he found was the catalog of a potential competitor in the gadget area. He liked the way the copy ran close to the edges of the paper, and how some of the lines ran off the page entirely. He admired how some of the illustrations ran across the gutter between facing pages, and how the photographs of products often extended beyond their boxes and into the columns of copy, which wrapped neatly around the art.

What he didn't like was that the intruding objects seemed to serve no purpose. Indeed, they made the page confusing, sometimes forming a connection between the photo and the description of another product on the page. The eye didn't know what copy went with which photo. The designer tried to correct the problem with small arrows to lead the eye, but it didn't work. The headlines were also a problem: each one was limited to the width of a single column. To Bill, this seemed to stifle his ability to draw readers into the copy. He would have to find two or three small words to do the job for each product. "Scale model jet," for example, wasn't very exciting, nor did it tell people that this model of the supersonic Concorde was controlled by a PC and had broken the sound barrier (if calculated to scale).

Bill's design, on the other hand (Figure 3.3), is attractive and practical too. When his product illustrations leave the confines of their boxes, it is with a purpose. The tiger stalking onto the page draws the eye first. The paw leads you into the correct headline, and forms part of a spiral that leads the eye around the page: from the tiger's paw to the jet to the workstation, and back to the tiger's tail again.

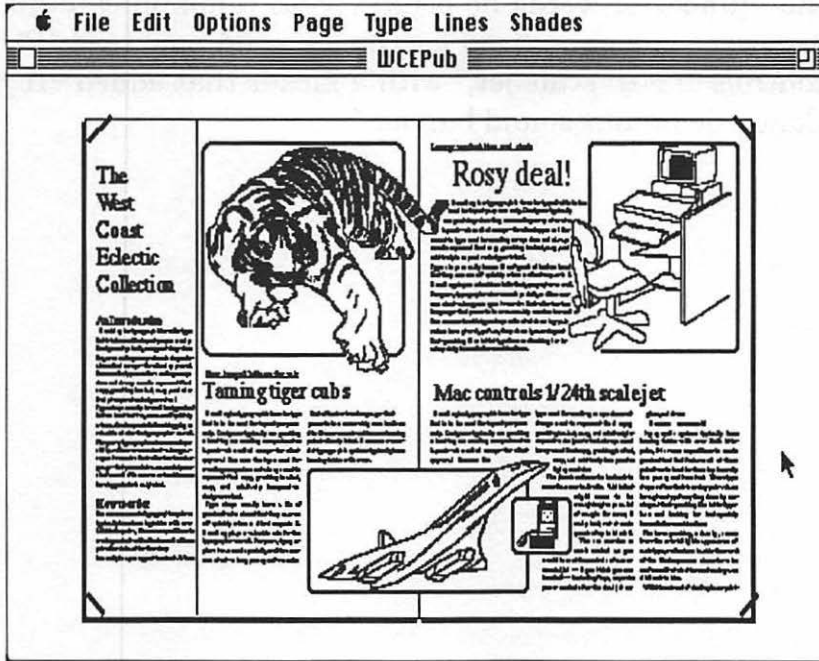


Figure 3.3. Here's what Bill Byron ended up with when he studied another catalog with a critical eye, building on its strengths while avoiding its weaknesses. Believe me, they didn't look much alike when Bill was done.

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There's no doubt about copy matching art in Bill's design. The jet is flying right into its own description, and the chair of the workstation leans into the corresponding copy. Bill made the headlines more effective using classic newspaper style: a main head in 36- or 24-point type extending over multiple columns. To give the copywriter a hand—in Bill's case, himself—he added a "kicker" in 18-point type above each headline, effectively doubling the number of words he could use to communicate his message. The main head for the jet could now read "PC controls 1/24th scale jet," with a kicker that added "Toy Concorde breaks sound barrier."

Bill wasn't sure whether he liked the cascading effect of the headline, "The West Coast Eclectic Collection" in column one, but I think the result is striking. That column is already set off from the rest of the page with a line bleeding off the paper's edge, and body type that is two points larger than the rest of the catalog. The cascade effect helps by giving that headline a stylish look the rest of the headlines don't have. Bill knew he was projecting his firm's image in that headline, and worked to improve its appearance through careful kerning (*Figure 3.4*).



*Figure 3.4. It just so happened that the name of Bill's mail-order collection stacked into a near-perfect triangle. Careful kerning has moved the individual letters very close to each other — they nearly touch when printed.*

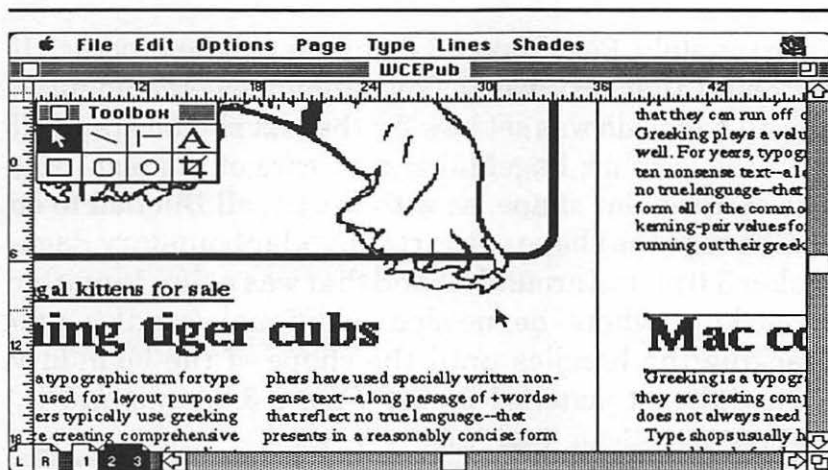
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## The layout process

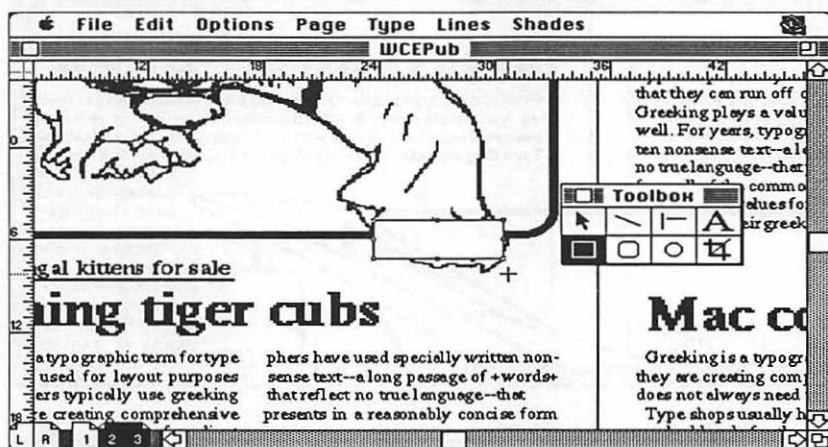
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Bill had several learning curves to overcome as he laid out the page. One was how to let the illustrations break out of the boxes. He quickly discovered the magic of using PageMaker's **rectangle tool** with **White** selected from the **Shades** menu and **None** selected from the **Lines** menu (*Figure 3.5A* through *3.5C* ).

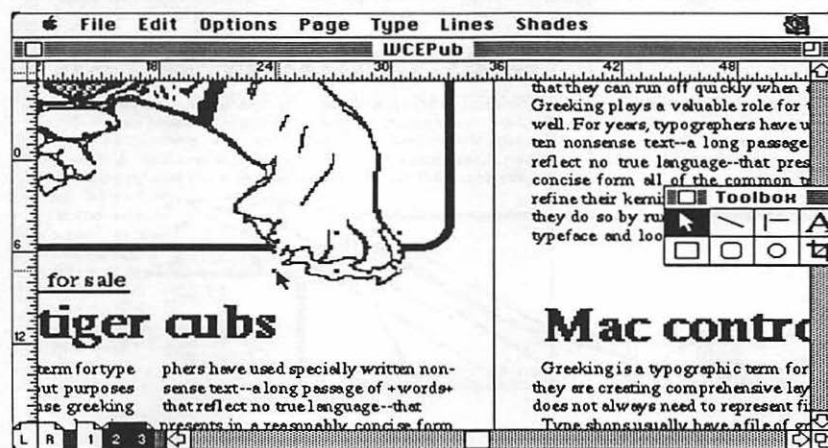
Also, it wasn't immediately clear to Bill how he could wrap copy around objects using PageMaker. Had he been using PageMaker 2.0, he would have had to do it a line at a time. For each line of the wrap, he would have dragged the handles of a single line of type to the correct width, using the ruler guides for precise margins between the end of the line and the object around which he was wrapping type. He would have then clicked on the "+" at the bottom of the text block, positioned the **text icon** against the guide he had established for the beginning of the next line, and pulled the **window shade** back up to the point where he wanted to make the next adjustment in line width.



**Figure 3.5A.** Both the see-through tiger and the see-through, round-corner frame are objects. Objects can be stacked, one on top of another. In this case, the frame is on top of the tiger's paws and tail.



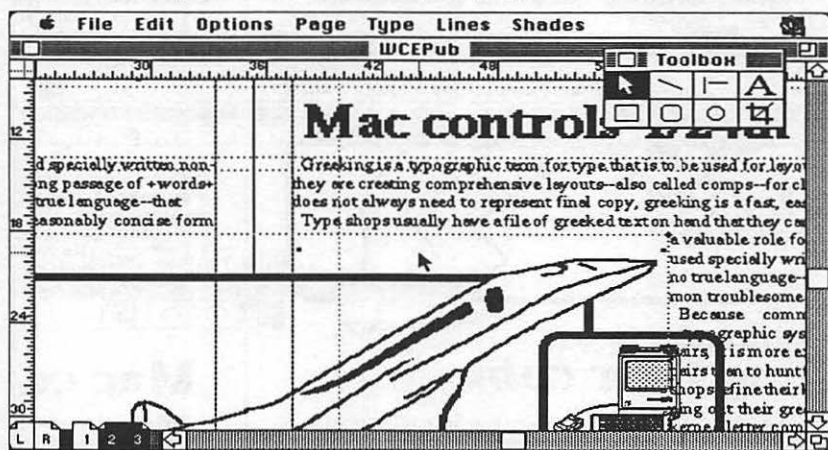
**Figure 3.5B.** To fix the glitch, Bill puts a box over the area where the tiger's see-through paw and the black border of the frame intersect. The box border is a hairline so we can see what he's done.



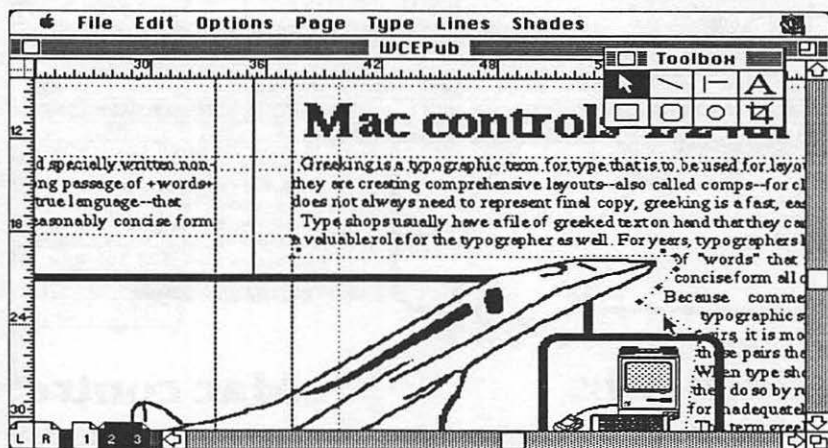
**Figure 3.5C.** Bring to front and Send to back stacks things with: the frame on the bottom, box in the middle, paw on top. White shading and None in the Lines menu then makes the box disappear, and with it the problem.

Fortunately, PageMaker 3.0 automates the process. If the object that text was to flow around was rectangular, all Bill had to do was set how far the text should stand off from the graphic; PageMaker took care of the rest. If it was an irregular shape, as with the jet, all Bill had to do was change the shape of the rectangular boundary PageMaker 3.0 placed around it. And that was a simple matter of clicking where he needed additional handles and dragging the handles until the shape of the boundary around the jet matched the jet (*Figure 3.6A and 3.6B*).

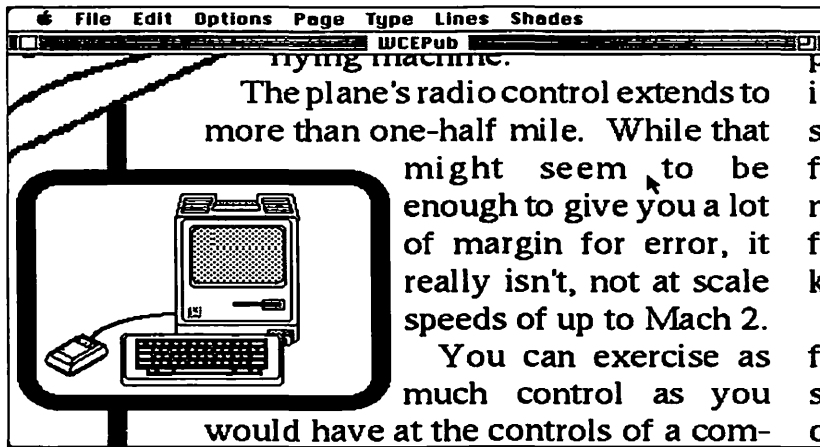
*Figure 3.6A.* To wrap the text around the plane, Bill selected the icon that wraps type around an irregular shape in the Text Wrap dialog box. But the result was simply a rectangular hole. Bill wanted a close-fitting wrap to the shape of the plane.



*Figure 3.6B.* By clicking on barrier, Bill creates more handles, which he then moves until the text barrier is the shape of the plane and the box containing the Mac below.



Bill knew he had to be careful with the narrow margin around the inset of the computer in the jet illustration. He was using justified lines of type. Conventional typesetters tend to justify such narrow lines by putting fewer words on each line and inserting white space between the letters of words and between the words themselves. While the line ends up justified, the spacing looks pretty bad (*Figure 3.7*). Bill expected to keep the spacing tight by breaking long words with discretionary hyphens, but he also tried something else for good measure. Using kerning commands to tighten the space between words and letters, Bill was able to keep his 10-point type looking good in a column width of only seven picas. He knew to check that section carefully when he printed, to make sure the kerning did not make the spacing irregular, or so tight that it was hard to read.



*Figure 3.7. One problem to watch for when wrapping text around a graphic is poor spacing because of the restricted column width.*

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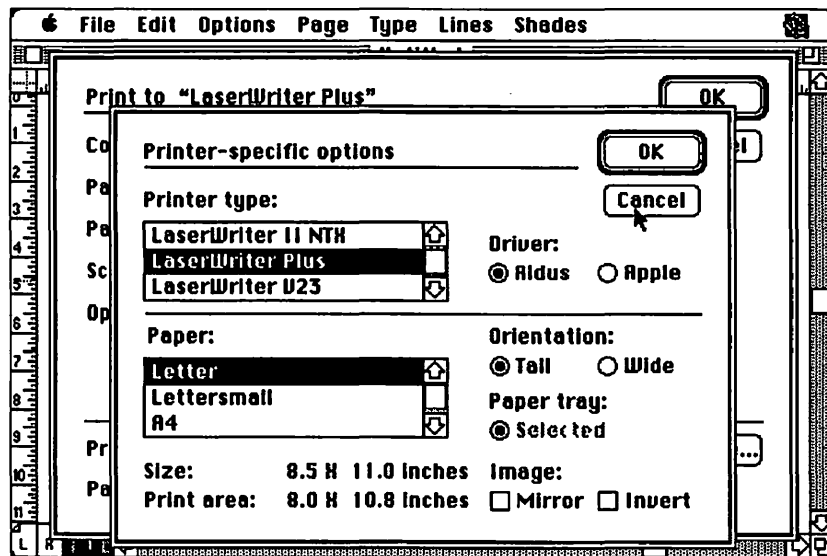
## All that work for nothing?

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Although Bill's design looked good on his screen, it didn't look so good on paper. When he printed the first spread, he had already invested several hours and he was horrified to discover that the edges of the pages were cut off. The worst offender was the jet that was supposed to fly across the gutter between the two facing pages. There was a gap in the illustration when those pages were put together.

Bill increased the height and width settings in the **Page Setup** dialog box, but it did no good. Stumped, he decided to use PageMaker's built-in help facility, and finally the **Printer-specific options** dialog box. There he got his first clue (*Figure 3.8*).

*Figure 3.8. Bill's design called for the jet to bleed to the edge of the left-hand page and cross the gutter onto the right-hand page. But a gap was left in the printout. A glance at the printer-specific options revealed his problem — the pages' image area was larger than his LaserWriter's Print Area.*

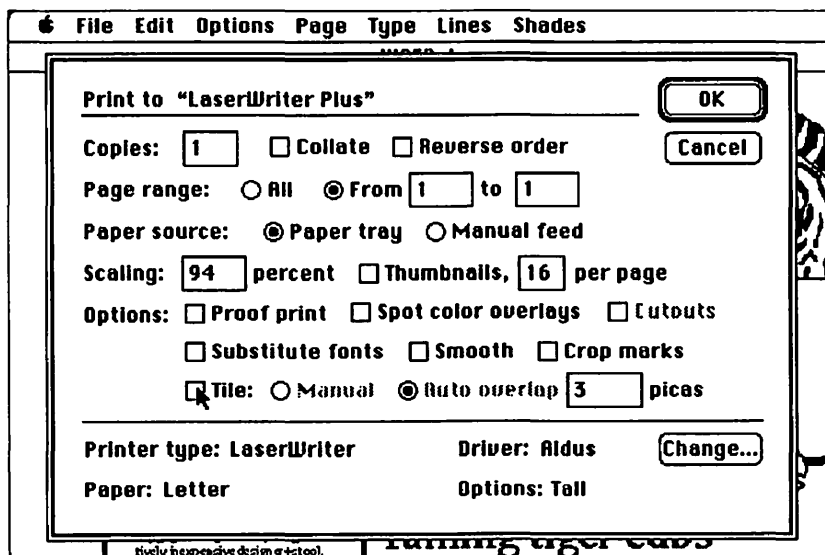


It wasn't long before Bill realized the problem: his LaserWriter Plus printer couldn't print all the way to the edge of the paper. Indeed, he discovered in the PageMaker manual that no laser printer's *print area* extends all the way to the edge of the paper. In the case of the LaserWriter Plus, the print area was 8.0 by 10.8 inches on letter-size

paper. That was actually pretty good as laser printers go, but it didn't solve the catalog's jet gap. Boy, was Bill mad, and I know how he felt. The print area of the AST TurboLaser that printed the chapters of my book on PageMaker for the PC is slightly smaller than 7 5/8-inches wide (I know, because I spent hours trying to figure out why it wasn't printing crop marks when I asked for them at that width). It's unfortunate that PageMaker doesn't warn you when you've exceeded the bounds of your printer, but it doesn't.

Fortunately for Bill Byron, there's an easy solution to the problem. Postscript printers can enlarge and reduce, which leads to our next Hot Tip:

All Bill had to do was reduce the size of his page using **Scaling** on the **Print** dialog box. At **100 percent**, Bill needed a half-inch more image than the LaserWriter could give him. By typing **94** in the box, Bill reduced his page to 94 percent of its original size, which made it just fit within the 8-inch limit (*Figure 3.9*). Later, when he went to the printer with his camera-ready pages, he had the printer enlarge them to 106 percent, counteracting the earlier reduction.



*Figure 3.9. Bill fixed the problem by printing the pages at 94 percent on his LaserWriter and having the printer scale them at 106 percent in the last step before they went on the offset press.*

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The final catalog was printed on 8 1/2-inch paper. It bled right to the edge of the page and is doing quite well, or so Bill tells me. I don't know. I still haven't seen any of those Concordes flying around over the school behind our house. But then again, the local birds and squirrels have seemed a little, well, squirrely lately, and I thought I heard a really small sonic boom last week. So maybe, just maybe, some rich kid in the neighborhood got his hands on a WCE catalog . . .

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# Chapter Four



Printers, scanners, displays

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**Y**ou must have a Macintosh with a hard disk to run PageMaker 3.0 on the Mac. But there are several other hardware components that you *might* need. In increasing order of importance, they are a large screen display, a scanner, and a PostScript laser printer. Actually, I think you do need a PostScript printer—*no might*s about it. And although people may argue with me about the relative importance of the other two, there's no doubt: scanners and large screen displays are nice, but much desktop publishing can be done without them.

And thus we have the structure of this chapter. I will focus long and hard on printers, far less so on scanners, and even less so on large screen displays.

Specifically, this chapter explains why PostScript is the way to go and then discusses the capabilities and speed of a range of PostScript printers, most of which I've had extensive hands-on experience with. It's true that PostScript is a standard, but all PostScript printers are not created equal: this chapter will tell you why and try to differentiate the various printers.

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The discussion of scanner hardware is limited to the pros and cons of sheet-feed versus flat-bed devices and a brief discussion of a few particular models. The software issues involved with scanning get more attention, particularly the question of how to get the highest quality photograph in your final publication using a gray-scale scanner (and whether or not the old-fashioned way of placing photos in a publication might not be better). For a discussion of how scanners fit into the development of high quality PostScript art, you will be referred to Chapter Five.

There's not much to be said about display subsystems. I'll talk about what to look for and pass along some subjective opinions about several of the displays currently available. There would be a lot more to say if I could convincingly convey response time, flicker, sharpness, and resolution on these printed pages. Instead, I think I'll do you the favor of letting you check displays out yourself.

Can I further justify my ranking of printer as most important in desktop publishing, scanner next, and large screen display last? You bet.

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Your printer is key because, no matter how good your design, the impression conveyed by your work can be no better than the sharpness and quality of the image your printer produces. Even if you end up producing your final pages on a PostScript typesetter, it's important that you perfect those pages on an efficient and accurate proofing device. Then there's print speed. The efficiency of your production can be very dependent on the throughput of your printer, particularly if you incorporate many downloaded fonts and image files into your publications.

Scanners are second because they've become so versatile. It wasn't too long ago that I dismissed the scanner as being more trouble than it was worth. Nowadays, I make the scanner second in my hardware add-on hierarchy.

What happened to boost the position of scanners? First, Adobe Illustrator and Aldus Freehand made the scanner valuable for the creation of flexible logos and design elements (see Chapter Five). Both packages allow you to scan a piece of paper artwork and trace it. The recent advent of tools that can automatically trace a bit map (Silicon Beach's Digital Darkroom and Adobe Illustrator 88) turns the once-painstaking process of converting scanned images into a simple click of the mouse. Once converted into PostScript art, the image has the advantages of resizing without distortion and printing at the highest possible resolution.

Additionally, the development of *gray-scale* scanners — scanners that capture images as many shades of gray, not just black or white — makes it possible to electronically store and reproduce photographs with a quality close to that of more traditional production methods.

Finally, there's the use of scanners for optical character recognition—the transformation of typewritten or printed words on paper into electronically revisable word processing documents—which can save you an enormous amount of rekeying.

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On the other hand, you have to remember that the vast majority of scanners in the world as this is written are not capable of capturing gray scale information, and are therefore not much good at high-quality reproduction of photos. Indeed, when printed at 300 DPI, even a photograph that was scanned with a gray-scale scanner does not reproduce all that well. It's only when you print on a Linotronic typesetter that a gray-scale scanned image really competes with a photographic half-tone. And even then, many desktop publishers who routinely print on the Lino and can afford gray-scale scanners find it far less painless to let their printer produce and strip in a half-tone whenever they need one rather than messing with the sometimes trying process of scanning photos and manipulating the very large image files that result.

Nevertheless, over the long haul you may find a scanner very useful, particularly if you use it for the capture of images to be converted to PostScript art.

My placing large screen displays third in this hierarchy may derive from my utter familiarity with PageMaker's remarkable zooming and scrolling abilities. I've worked so many hours using PageMaker on a little Mac Plus screen that I've become quite adept at pointing at a spot of interest and zooming it to 200 percent, or backing off to the "fit in window" view, or enlarging to 75 percent size view, or otherwise changing to a more appropriate view. Thus, a large screen display speeds up my PageMaker work only marginally. (On the other hand, it speeds up my work with Ventura Publisher on the PC immensely because of that package's less flexible zooming and its inability to scroll when you move the pointer to the edge of the screen.)

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My goal is not to talk you out of choosing a large-screen display, of course, but to help you choose the right one. I cannot deny that your display subsystem, consisting of monitor and display controller, is more important in desktop publishing than in any other microcomputer application, and that a high-quality large-screen display can make your PageMaker chores more pleasant. But you're going to spend an awful lot of time peering intently at the screen, routinely distinguishing units as fine as a single point, and your display had better be easy on the eyes. The quality of the display built into both the Macintosh Plus and Macintosh SE is quite good and forms a standard against which the others are judged. By all means, if you can afford one, get a large screen display, but be quite particular about its display quality.

With all that preliminary stuff behind us, let's move on to printers.

## **PostScript Printers**

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To begin our discussion of printers, let's consider what the PostScript page description language actually does.

PostScript is an English-like programming language used to describe text and graphics images. It can describe any shape, size, and orientation of text and graphics on the printed page. Programs like PageMaker can send their output in very compact form to the printer via a PostScript page description. Once that description is at the printer, the printer's built-in PostScript interpreter translates it from PostScript into the individual dots that make up the final printed page. Pages printed on higher resolution devices end up having more dots per inch even though PageMaker's PostScript description of them is essentially unchanged.

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PostScript typefaces are actually a mathematical description of the shape of each character, and one of the primary benefits of PostScript is its ability to scale those typeface descriptions to any size and resolution the printer can handle.

In contrast, the Macintosh's screen display and most non-PostScript laser printers rely on bit-mapped fonts. The pattern of dots that make up each character is stored for all 255 characters in each font. While a PostScript font is larger than a single small bit-map font, memory use is much more efficient using PostScript because the single mathematical description of a PostScript typeface suffices for all point sizes. In contrast, producing high-quality type on a printer that uses QuickDraw requires the presence of a large number of bit-map fonts at some very large point sizes. That's because to accurately approach 300 DPI resolution, the Mac's 72-DPI screen fonts will be reduced by a factor of four. If a font of the correct size isn't available, you'll have to live with the distortion that results when a bit-map is resized in anything but a discrete step. Consequently, a QuickDraw printer is typographically limited.

Ah, and then there's the issue of downloadable fonts. Through the efforts of Apple, Adobe Systems, and Linotronic, much of the ITC typeface library (which incorporates the Haas, Linotype, Mergenthaler, and Stempel typeface libraries) is available in PostScript form as downloadable fonts (also called soft fonts).

Downloadable fonts are not built into the printer — in general, they are purchased separately and then loaded from your hard disk into the printer's memory before you can use them.

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Despite the extra expense and hassle, it's best to leave your options open: typeface choice is important to the look of a PageMaker publication. When you want a particular typeface, or need to match a corporate-standard typeface, it's nice to know that many PostScript fonts are available.

The QuickDraw printers simply cannot match this variety, neither in sizes nor in typefaces. Although the variety of typefaces available for the General Computer PLP is impressive, they are not as numerous, convenient, or flexible as PostScript fonts. The Apple LaserWriter SC's fonts are even less impressive. What Apple ships are screen fonts that correspond roughly to the minimal set of typefaces available on the now discontinued LaserWriter: Times, Helvetica, Courier, and Symbol. But because Apple has never supplied true *italic* screen fonts — which are easy to read and cursive — you print the same questionable italics that ordinarily display on the Mac screen.

Even if you're happy to deal with the relative typographic inflexibility, there's the other loss: QuickDraw printers cannot accurately reproduce the many text and graphics effects that depend on PostScript.

Finally, you'll probably come to regret your choice of a QuickDraw printer if you ever need better than 300 DPI quality for your publications. If you own a LaserWriter II SC or General Computer PLP, you'll still be able to use the ever-growing number of service bureaus that can provide high-resolution typesetting of PostScript documents. But you'll have to recompose your PageMaker publications and live with considerable differences between the proofs you get on your QuickDraw printer and the final output you'll get from the PostScript typesetter.

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On the other hand, QuickDraw printers have several advantages. Like price. Adobe charges a steep royalty on each PostScript printer sold, and the PostScript controller built into each one, which includes a powerful processor and a lot of memory, can never be really cheap. As a result, QuickDraw printers are approximately \$2000 less than the equivalent PostScript printer.

Another alternative will be the PostScript clones. They've been "just around the corner" for more than a year — apparently, knocking off PostScript is tougher than anyone thought. When the software is ironed out, the clones will certainly be cheaper than genuine PostScript printers. They should also be faster, thanks to a powerful chip set from a company called Weitek. Unfortunately, it's still too early to say how compatible the PostScript printer clones will be.

QuickDraw printers can also be faster than PostScript printers, particularly when working with large bit maps. It is not uncommon for a PostScript printer working on pages with lots of graphic images to take ten minutes or more to print. And sometimes, on a complicated page, it's tough to tell if the printer is still grinding away on the PostScript page description or if the program has blown up. As one of the Aldus newsletters once said in reference to the Apple LaserWriter: if your page hasn't finished printing after half an hour, turn the printer off and try printing again. On the other hand, QuickDraw printers tend to be slower when printing text.

But enough about PostScript versus QuickDraw—on to the actual nitty gritty of the various PostScript printers.

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## An overview of PostScript printers

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PostScript is a standard—so aren't all PostScript printers the same? It's true that any printer that includes Adobe's page description language can scale characters to any size, print in many different shades of grey, and create special effects with graphics programs such as Cricket Draw and Adobe's Illustrator. These capabilities make life much easier for desktop publishers. But all PostScript printers aren't the same, and you need to look further than the price tag to decide which one to buy.

Virtually every PostScript printer offers 300 DPI resolution, for instance, but the Varityper VT-600 prints at 600 DPI, producing noticeably smoother characters. The duty cycle of one printer might be 3,000 pages a month, while the Dataproducts LZR-2665 claims 50,000. Other ways to distinguish among laser printers include paper handling, cost of supplies, and ease of installation. You can even think about print quality, which does vary among the printers depending on resolution, whether the printer is white-writing or black-writing (see glossary), and a certain *gestalt* of design that is the mysterious gift of the best engineers.

Other things being equal, though, the really important question for desktop publishers is, "How fast?"

The alacrity with which a PostScript printer will deliver a publication depends mostly on the kind of publication it is, the printer's rated speed, what fonts you want to use and whether they're built into the printer, and the amount of memory (RAM) in the printer and how it's allocated.

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What do I mean, speed depends on the kind of publication you produce? Well, documents created using PageMaker break down into two main camps: longer pieces composed primarily of text, like reports and technical manuals; and shorter, complex ones full of graphic images, like newsletters. There is actually a third very important aspect of a document: are the fonts used in it built into the printer or do they have to be downloaded?

It turns out that a PostScript printer that is quick with one type of document may not be quick with the other — and downloadable fonts may throw an otherwise fine printer for a loop. Downloading a font that's not already in the printer can take 20 to 40 seconds, so several font changes in one document can pad printing time considerably. I know, because Jim Felici and I tested a range of PostScript printers for *Publish!* magazine, and several of them seemed to go into endless loops. We used both kinds of test documents: a long, text-oriented document created in Quark XPress and a newsletter produced using PageMaker 2.0.

In order to make the tests realistic, we ran each document twice in a row and averaged the times. That's a typical scenario in desktop publishing: you print something, notice and correct a small imperfection of some kind, and then print it again.

Wait a minute, you say. What was that little detail in the last sentence two paragraphs ago? Shucks — I thought you wouldn't notice. Yes, a self-confessed PageMaker aficionado used Quark Xpress for the longer, text-oriented benchmark document when he could have used PageMaker. Wait—I can explain. We were conducting the tests in an office overlooking the Bay Bridge, and I was overcome by fumes ... and some off-brand mineral water that was probably high in arsenic content ... and, um, and Felici's insistence that we use Quark XPress.

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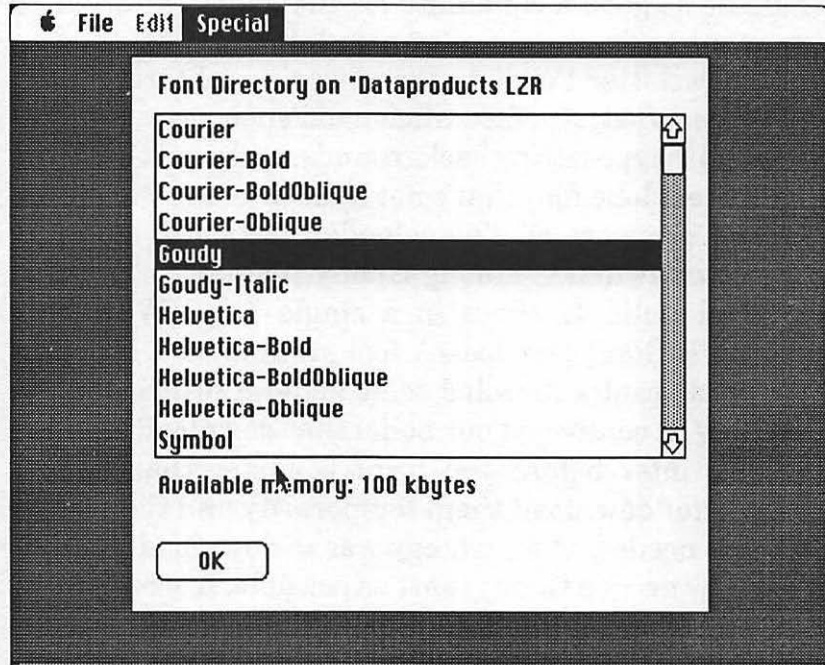
I don't think he particularly liked Xpress either, but as then-technical editor of the leading desktop publishing magazine, he had to *appear* unbiased. Besides, at the time, PageMaker wasn't a good choice for long documents: it didn't have automatic text flow or style sheets. If the tests were being conducted now, PageMaker 3.0 would be as good a candidate for the long, text-oriented document as for the complex newsletter.

The newsletter Felici designed was a real torture test. He's a certified typeface aficionado/snob, as are many people with typesetting backgrounds, and used Goudy, an attractive Adobe font that's not built into any PostScript printer I'm aware of. The calendar section of old Jim's newsletter switched among Goudy regular, bold, italic, and bold italic *47 times* in a single page. When Jim downloads Goudy, he doesn't fool around.

The test results revealed some general principles. For one thing, it confirmed our belief that downloading fonts to the printer before you print is faster than having PageMaker download them temporarily and then purge them, as needed. Our strategy was to download as many of the four needed Goudy fonts as possible. It seemed easy enough, because part of each PostScript printer's memory is free before you begin printing for just such uses as downloading fonts. That memory space is not exclusively for fonts, however. Fonts share the space with the printer prep file and Lord knows what else.

It turned out that some of the printers had enough memory to accept the laser prep file, download all four fonts, and still assemble the newsletter's pages. Printers with less memory choked: even though there appeared to be room for more fonts, PageMaker would simply refuse to finish printing the page (*Figure 4.1*).

*Figure 4.1. The Dataproducts LZR-2665 suffered from a lack of memory. After downloading two of the Goudy fonts, only 100 K remained — not enough memory to successfully print the PageMaker newsletter we used as a benchmark.*



Thus it was that we could download only one font on several of the printers, because we had to leave room for the other three to be shuttled in and out. These printers performed much worse on the newsletter part of the test.

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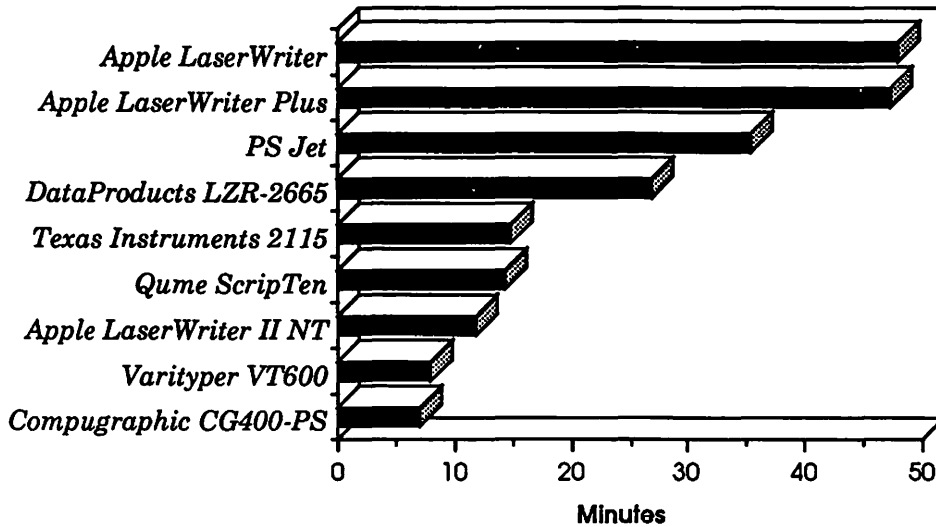
Another general principal confirmed by our tests was that printers ran closer to their rated speed on the long, text-heavy test documents, apparently because little processing was required to create the page images. But even on the simplest pages, only two printers in our test were able to keep up with their rated speed. And truly complex pages, like those in the sample newsletter, printed at closer to eight minutes a page than eight pages a minute.

What is this rated speed business, then? It's a number manufacturers bandy about that's based on the maximum rate at which the printer's engine can put images on paper. Rated speed doesn't usually reflect reality because it ignores the time it takes to assemble the image of the page in the printer's memory. Bit-mapped graphics, scanned photographs, and special effects involving shades of gray take a long time to assemble, because the printer controller needs to position each and every dot in an area of approximately 8 inches by 10 inches. Since each linear inch is covered with 300 dots, that works out to about a quarter of a million dots.

Another generality our tests confirmed was that the second run of each document was always a minute or two faster than the first run. That's because there's more to a PostScript printer's memory than the page buffer (which holds the quarter of a million dots we just talked about). Another part, called a "font cache," holds the image of letters that have already been constructed from their mathematical outlines. A printer begins to move text into the page buffer instantly if it has the appropriate letter image already in its font cache, so much of the processing time was eliminated during our second run.

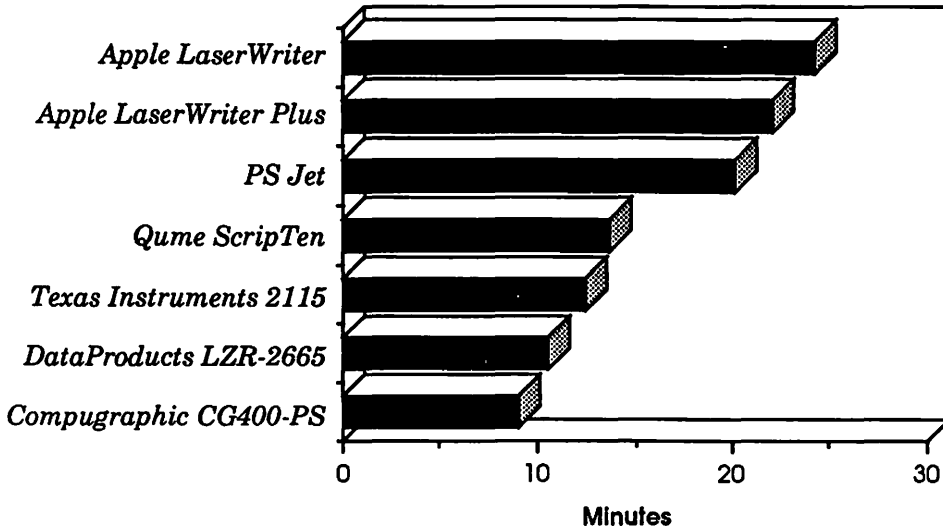
The times on the graph in *Figure 4.2A* and *4.2B* reflect an average of the two runs. Remember, shorter is better.

## Newsletter benchmark



*Figure 4.2A.* The newsletter weighed font downloading heavily.

## Long document benchmark



*Figure 4.2B.* The second test was a long text-oriented document that favored the faster print engines.

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## PostScript printers, one by one

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What follows is a consideration of all the printers listed in the test chart plus several more recently released printers — primarily the new Apple LaserWriter IIs — that I've had extensive experience with. We'll begin with the printer that started the PostScript cube rolling, the original LaserWriter.

### Apple LaserWriter

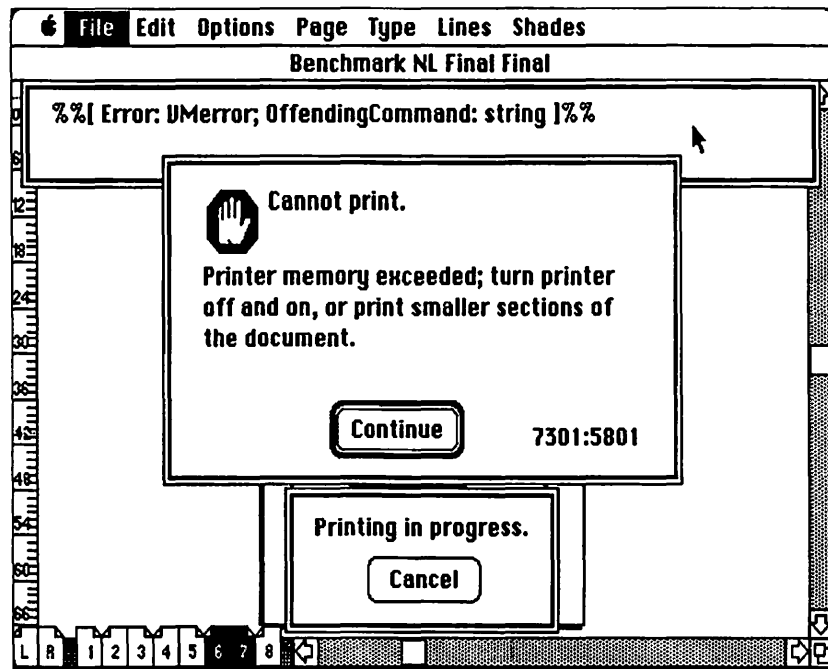
- **List price:** \$4999 before it was discontinued
- **Rated print speed:** 8 pages per minute
- **Resolution:** 300DPI
- **Memory:** 1.5 megabytes of RAM, 135K RAM free
- **Duty Cycle:** 4000 pages per month
- **Built-in Fonts:** Courier, Times Roman, Helvetica, Symbol
- **Paper handling:** 100 pages input and output. Maximum paper size: legal
- **Phone number for more info:** 408-996-1010

Apple no longer makes this beast, and it's quite clear why. Although desktop publishing was invented just to put this heavy-weight machine through its paces, that was some years ago. The LaserWriter showed the way, but now it's showing its age.

Based on the original Canon engine, the LaserWriter is your basic, no-frills PostScript printer. It defines the minimum Adobe font set of four typeface families: Courier, Times Roman, Helvetica, and Symbol. For those of you who might care, I have to say it: the performance of the LaserWriter suffers when attached to a PC because it lacks a parallel port and has to receive data through the slower, serial connection. For the Mac it's got AppleTalk.

The original LaserWriter's designers ignored the possibility that PC users might want to use the LaserWriter on their printer ports. They also seemed to think we'd all turn out nothing but short documents: the LaserWriter's 100-page input trays barely held enough to accommodate a single run of our longer benchmark document. The output tray, rated for only 20 sheets, miraculously managed to hold our 70 page opus, but barely.

Where the LaserWriter really falls down is memory. The impact of having only 135 kilobytes of memory free at startup quickly became clear when the LaserWriter failed to finish printing the test newsletter on my first try. I had run several jobs before downloading Goudy and the LaserWriter's memory was apparently in some disarray. The print job was interrupted by an error message (Figure 4.3). When I tried again after turning the LaserWriter on and off, the document printed successfully.



*Figure 4.3. When we didn't leave enough memory because we'd downloaded too many fonts, we got this error message.*

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Although there was scarcely room for a single 45-kilobyte font to be downloaded, it soon became clear that downloading it was the right approach. With one of the downloadable fonts resident when the print job started, the newsletter took 48 minutes. With none, the newsletter took an excruciating hour and 11 minutes. I could have chiseled it in stone faster.

And the LaserWriter has other problems. Switching from AppleTalk to a serial Postscript interface or to the Diablo 630 emulation mode requires reaching around to turn a knob tucked inconveniently on the back of the printer. And the LaserWriter shares a problem with other printers based on the original Canon laser engine: gray output. Large “black” areas not only fail to go black, they can also be interrupted by streaking patterns.

On the other hand, the LaserWriter is not all bad news. It's very good at scanned photographs and other images that depend on subtly different shades of gray. It's easy to set up. (Hey, that's something!) Apple's documentation steps you through the task of sliding in the all-in-one cartridge with no sweat — and there's no toner to spill. If you're a klutz like me, that has some real merit. The front panel is elegant and utilitarian: it uses the page icon light to tell you it's processing a job (flashing), out of paper (steady), or idle (off). Paper jam and ready lights provide all other status information.

The bottom line: if you've got a LaserWriter and you can live with it, live with it. If you need access to more or different fonts, sell it to someone who doesn't and buy yourself another PostScript printer.

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## Apple LaserWriter Plus

- **List Price:** \$5799 before it was discontinued
- **Rated print speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 1.5 megabytes RAM, 135K bytes free
- **Duty Cycle:** 4000 pages per month
- **Built-in Typefaces:** Courier, Helvetica, Times Roman, Symbol, ITC Avant Garde, ITC Bookman, Helvetica Narrow, New Century Schoolbook, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats
- **Paper handling:** 100 pages input, 20 pages output. Maximum size: legal
- **Phone number for more info:** 408-996-1010

The LaserWriter Plus's chief advantage over its lesser brethren is the addition of seven font families. Somehow, people make that add up to 35 fonts. Actually, since each point size of each typeface is technically a font, the LaserWriter Plus has thousands of fonts. Right? Right? (Oh well, why fight a losing battle? The operative word for typeface on the Mac is font because font is shorter and fits on the menu bar better.)

The bottom line on the Plus? There was no significant performance difference between it and the plain LaserWriter, but the Plus's additional fonts make the small amount of memory available for downloaded fonts less of a hindrance.

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## The Laser Connection's PS Jet Plus (upgrade lid)

- **List price:** \$2995
- **Rated print speed:** depends on printer this lid is on
- **Resolution:** 300 DPI
- **Memory:** 2.0 megabytes RAM
- **Duty Cycle:** 3000 pages per month
- **Built-in Fonts:** Courier, Times Roman, Helvetica, Symbol
- **Paper handling:** Because the PS Jet is actually a printer enhancement accessory, paper handling varies according to the printer it's installed on
- **Phone number for more info:** 800-631-2692

This is PS Jet the lid (for information on the lid already attached on a Canon printer, see page 165). It's actually a PostScript printer controller that replaces the top portion of any printer based on the Canon LBP-CX laser engine. In essence, it turns the original HP LaserJet or other non-PostScript printer into the equivalent of an Apple LaserWriter. Jim Felici installed it on a QMS Big Kiss printer, which took him about an hour and a half and a fair amount of screwdriver and pliers juggling. I'm sure it would have taken me longer. Heck, I would have spent an hour and a half just figuring out why QMS would curse a printer with a name like "Big Kiss."

The Laser Connection offers a PS Jet *Plus* conversion kit that adds the extra font families of the LaserWriter Plus and another 512K of RAM for \$500. The extra memory is a great idea. It would have let us download all four Goudy fonts for our test and improved performance immensely. As it was, the PS Jet shared the LaserWriter's undistinguished performance. On the other hand, if you already own a vanilla laser printer built on the original Canon engine, this is a relatively inexpensive way to go.

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## Qume Corporation ScripTen

- **Price:** \$5295
- **Print speed:** 10 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 3 megabytes RAM, 1 megabyte RAM free
- **Duty Cycle:** 5000 pages per month
- **Built-in Fonts:** Courier, Times Roman, Helvetica, Symbol, ITC Avant Garde, Palatino, New Century Schoolbook, Helvetica Narrow, ITC Zapf Chancery, ITC Zapf Dingbats, ITC Bookman Light
- **Paper handling:** 250 pages input, 100 output. Maximum size: legal
- **Phone number for more info:** 408-942-4000

When Felici saw the Easter-candy color scheme of the controls, he doubted this printer's seriousness, but the Qume ScripTen turned out to be a pleasant surprise. Heck, I knew right away those pastels were just the mistake of some marketing person who loved the first season of *Miami Vice*. Qume has always been a very serious printer company.

True to their heritage, Qume made the ScripTen especially interesting for PC users, with a parallel port to speed PC print jobs and a Hewlett-Packard LaserJet emulation mode that includes the four basic Adobe typefaces in point sizes from 1 to 72.

Yes, I know, you don't really care about the PC. Well, you'll be pleased to learn that the ScripTen is no slouch as a Macintosh printer, either. It has 11 font families built in, the same as the LaserWriter Plus, and speed and paper handling a LaserWriter user would die for.

The ScripTen had enough memory to download all four

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Goudy fonts, with room for a dozen more. The Qume prints very black rather than gray thanks to its “white-write” Toshiba laser engine, and a darkness control lets you compensate for the tendency of white-write engines to print a bit too heavily. On the other hand, no adjustment will compensate for the ScripTen’s problems — typical of all white writers — with thin lines and the middle range of the gray tones.

Moreover, the printer earned a few black marks — quite literally. And they were on my white milkman pants. The Qume is more difficult to set up than printers based on the Canon engine. The dozen pages of the manual devoted to installing the drum and toner assemblies are clear enough, and thank goodness for that, because you’ll need them. You add the toner to a hopper separately rather than sliding in a sealed cartridge as with the Canon-engine printers. I had trouble getting the toner hopper to click surely into place and spilled toner when I tried to figure out what was wrong. I then thought the bin was properly seated until progressively lighter pages and a flashing “Add Toner” light finally convinced me otherwise.

Well, Strehlo, just keep telling yourself that a system that separates the toner will cost less for consumables than an all-in-one cartridge system. That’s the only real advantage you gain from the separation of toner and optical drum.

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The Qume has eight indicator lights, but not the one you really need the most. The unit I tested failed to provide any indication that it was processing a page. That's one thing about PostScript and complicated pages: if you aren't a true believer in the infallibility of technology, you need some kind of reassurance during those 10 minutes before the first page of your document comes out. A Qume technician told me they were working on making the ScripTen's Ready light flash when the printer is processing but not printing a page, as on the LaserWriter. But he said it was a very technically difficult problem and they weren't sure when it would be fixed. Hmmmm. The same company has been awfully busy pulling up stakes in California and consolidating in Arizona, so they're probably still working on how to get that little light to blink.

Despite the setup difficulties, the pink and pastel blue buttons, and the the technical difficulties of making an LED blink, the ScripTen earned the official best buy award among all the printers I tested for *Publish!*

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## Texas Instruments Corporation OmniLaser 2118

- **Price:** \$7995
- **Print speed:** 15 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 3 megabytes RAM, 562K free
- **Duty Cycle:** 25,000 pages per month
- **Built-in Fonts:** Courier, Times Roman, Helvetica, Symbol
- **Paper handling:** 2 x 250 pages input, 500 pages output. Maximum size: legal
- **Phone number for more info:** 800-527-3500

I had a few difficulties setting up the TI OmniLaser too (do you sense a pattern here?), which may say more about me than about the white-writing Ricoh laser engine upon which the OmniLaser is based. The problem was that it was difficult (as in impossible) to fit the light-sensitive drum inside the printer with the protective green plastic tabs still installed around the toner drawer mechanism. I bet I would have found the section of the manual that explained that, too, if I hadn't panicked when I read that the drum shouldn't be exposed to light for more than five minutes. I had two minutes left when I panicked and began running back and forth to the men's room. Two loads of paper towels crumpled into a sufficient pile to shroud the drum in complete and utter darkness. After a quick mineral water break I glanced through the manual, discovered the section on removing the spacers, unburied the drum, and had nary a problem thereafter.

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Of all the printers I tested, the OmniLaser seemed the most solid and was the greatest hands-on pleasure. Compared to the three lights and single knob of the Apple printers, the OmniLaser's 11 soft-touch keys and LCD readout might seem like overkill. But that level of sophistication is just about right, particularly with four hardware and four software interfaces to deal with (besides PostScript, the OmniLaser emulates three PC printers: the TI 855, the HP LaserJet, and the Diablo 630). The instant feedback provided by the two-line display made it painless to switch among them. With the other printers in the test, we sometimes wondered whether we had the knobs and dials right until the familiar PostScript test sheet confirmed the emulation mode and connection interface. Not so with the OmniLaser.

And then there was the TI's performance. Paper handling was excellent. Its two input trays hold 250 sheets each, and all 500 pages stack neatly on the output side. Its 15-page-per-minute print engine made it fast on the text-intensive benchmarks, and its ample memory held it in good stead for the newsletter. With a recommended duty cycle of 25,000 pages per month, the OmniLaser would be a good choice for a high-volume printing application.

The OmniLaser's biggest problem was the lack of a darkness control. Our sample unit seemed to be doing the laser equivalent of over-inking (over-toning?), and there was nothing we could do about it. Nor about the white writer's trouble with thin lines and grays.

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The TI also seemed a bit light in the font department with only the basic Adobe fonts built in, but two slots for font cartridges make that limitation less troublesome. In fact, you can look at it as an advantage. Instead of being stuck with built-in fonts you don't really want, the OmniLaser approach allows you to choose just the fonts you do. A cartridge with a single Adobe font family — roman, bold, italic, and bold italic — lists for \$329, and a TI spokesman said TI would fill custom orders for as many as three font families in a single cartridge.

### **Dataproducts LZR-2665**

- **List price:** \$22,900
- **Rated print speed:** 26 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 2.5 megabytes of RAM, 179K free
- **Duty Cycle:** 50- to 80-thousand pages per month
- **Built-in Fonts:** Courier, Times Roman, Helvetica, Symbol
- **Paper handling:** 2 x 375 pages input with an optional 1500 sheet feeder and 10 bin collator. Maximum size: 11 x 17 inches (tabloid)
- **Phone number for more info:** 818-887-8000

Its rated speed, capable paper handling, and impressive duty cycle suggest this is a printer for people who print lots of pages. Indeed, on our long, text-oriented document the Dataproducts LZR-2665 was among the fastest. But when fonts had to be downloaded or large bit maps had to be processed, this heavy-duty printer sat idle far longer than it should have. It cries out for more memory. We received an error message when we tried to print our newsletter after downloading more than a single font. The results were print times close to the bottom of the ladder for that test.

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Dataproducts sent a technician to the office to set up the printer—as they would for any buyer—and he proved it *is* possible to fill a toner bin without spilling. He had to come back once when our unit began to print light during testing, and worked hard changing the toner, the developer, the drum, and adjusting various parts of the mechanism to fix the problem. That display of technical virtuosity made me understand why Dataproducts strongly recommends the purchase of an annual maintenance agreement from 3M or TRW, which will run you about \$4,000 a year depending on the number of pages per month you expect to print. Hmm. Seems a bit much for a printer that can be as slow as the Apple LaserWriter.

### **Varityper VT-600**

- **List price:** \$18,750
- **Rated print speed:** 10 pages per minute
- **Resolution:** 600DPI
- **Memory:** 4 megabytes RAM, 1 megabyte RAM free plus 10-megabyte disk for fonts
- **Duty Cycle:** 3000 pages per month
- **Built-in Fonts:** Symbol, Courier, Varitimes
- **Paper handling:** 200 pages input, 200 pages output.  
Maximum size: legal
- **Phone number for more info:** 800-631-8134

The Varityper was the first wave of a new generation of laser printers; perhaps we tried to catch it too early. Indeed, we didn't include the VT600 in our long text document benchmark because it lacked the necessary Times and Helvetica fonts in ROM. On the other hand, it printed our PageMaker 2.0 document, which was okay because it used downloaded fonts, in 8 minutes and 4 seconds, second fastest of all the printers tested.

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The Varityper is exciting for several reasons. Its 600-DPI resolution is discernibly better than the 300 DPI of the others. It boasts the impressive Adobe Atlas RIP (Raster Image Processor), which uses the same 68020 chip used in the Mac II. As a result, it was fast enough to keep up with the VT-600's 10 page per minute printer engine on pages of straight text, something only one of the other printers in our tests could do despite handling a quarter as many dots. And the built-in 20-megabyte hard disk, 10 Megabytes of which is dedicated to font outlines and 10 to image buffering and font caching, saves a lot of processing time. Even when we let PageMaker and the VT-600 download fonts as needed from its hard disk rather than downloading them explicitly to RAM ourselves, the machine was still faster than anything but the one printer I've yet to talk about.

On the downside, the VT-600 is the only PostScript device I've run into that doesn't have the four basic Adobe fonts built in. Rather, it substitutes Varityper's own variations on Times Roman and Helvetica to maintain compatibility with Varityper's typesetters. Ah, but what about compatibility with the PostScript standard? Lacking the most commonly used fonts in the PostScript world means a lot of documents composed on other printers won't print as expected on the Varityper.

If Varityper cannot or will not supply resident versions of Adobe's Times and Helvetica, a demand will probably arise for them in downloadable form to accommodate this otherwise lovely machine.

With an \$18,750 list price, required \$2,950 annual service contract, and a duty cycle of only 3000 pages per month, the VT-600 isn't cheap. Nor does it handle tabloid size pages — a pity, since its newsprint output is indistinguishable from true typesetting. Yet I think a lot of people will be impressed by Varityper's new plain paper marvel.

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## Compugraphic CG 400-PS

- **Rated speed:** 18 pages per minute
- **Resolution:** 400 DPI
- **Memory:** 6 megabytes, 1 megabyte free; 20-megabyte hard disk
- **Duty cycle:** 10 to 100,000 pages per month.
- **Built-in font families:** Helvetica (including Light, Black, and Condensed), Times Roman, Courier, Symbol, Optima, Palatino, ITC Souvenir, ITC Avant Garde, ITC Bookman, ITC Lubalin Graph, New Century Schoolbook, ITC Zapf Chancery, ITC Zapf Dingbats, ITC American Typewriter, ITC Korinna, Letter Gothic, Park Avenue, ITC Garamond
- **Paper handling:** 2,000-sheet input bin plus 230-sheet cassette; 500-sheet output. Maximum size: Legal
- **List price:** \$29,995 plus mandatory service contract (\$325-365 per month plus 1.5 cents per copy in excess of 20,000 copies per month)
- **Phone number for more info:** 800-822-5524

If you're printing tens of thousands of pages every month, you can't afford the leisurely pace of an eight-page-per-minute printer. Of course you may not be able to afford the luxury of the \$30,000 Compugraphic CG 400-PS, either. But if you need lots of pages in a hurry, fonts up the wazoo, and money is no object, you should take a close look at this machine. Heck, Felici was outright enthusiastic about it. Reminded me of a guy who had just taken a test ride in a Testarossa. And why not—the CG 400-PS was designed by its manufacturer to pump out as many pages in a month as some printers can produce in a lifetime. (Its duty cycle is 100,000 pages per *month*.) Heck, who wouldn't get excited when a printer rolled out our text-intensive Quark XPress document at 13 to 14 pages per minute? I can barely *shuffle* paper that fast.

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The CG 400-PS was new to the market and to Compugraphic; consequently, Felici had to run the tests at Compugraphic's offices on the only machine available in the western U.S. I have yet to see it in action, but I've had other people describe it to me in awed, hushed tones, so I guess maybe Felici wasn't just carried away.

The Compugraphic is manufactured by Agfa-Gevaert. It gets more speed than you might expect from a printer made in Belgium via its hot Adobe Atlas 68020 controller pumping bits through a full 6 megabytes of memory. It is also a bit exotic for another reason: it was the only printer in the *Publish!* tests that doesn't use a laser to charge the drum of the marking engine. Instead, it uses a matrix of light-emitting diodes. It's hard to say whether the LED technology had any impact on the machine's impressive print quality. In any case, its 400-DPI type looks better than any of the 300-DPI laser printers in the test.

Like the Varityper printer, the CG 400-PS boasts a hard disk for permanent font storage and a megabyte of RAM for font-downloading on top of that. But Felici complained that connecting the cables, switching from AppleTalk to a PC interface, and adding toner and paper is about all you can do on this printer by yourself. There's no such thing as a print-density control knob, for instance. If your CG 400-PS is printing too light, you have to call Compugraphic for service, and the adjustment requires a trained technician—better trained, apparently, than the one who watched Jim test the machine. Even though the tech had just gotten back from boning up on the new machine at a Compugraphic session, he couldn't immediately figure out which of a half-dozen variables was causing the print to fade.

For sheer performance, though, the Compugraphic is hard to beat. For the price of six LaserWriters, a fancy German automobile, or the down payment on a San Francisco condominium, it ought to be.

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## Apple LaserWriter II Family

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The Apple LaserWriter II family is interesting. The three models are basically the same printer with different, interchangeable controller boards inside. You can upgrade the bottom-of-the-line SC to the top-end NTX just by removing two screws and swapping boards.

The core of the family is the second generation of Canon laser engine. That makes the LaserWriter II's blacks much blacker than that of the first generation, which drew complaints for faintness and streaks. Unfortunately, good blacks seem to have been achieved at the expense of the grays. The LaserWriter II resembles a white-write printer in its too dark, unsmooth run through the gray scale. Too bad — gray was where the original LaserWriters really shone.

The SC is the QuickDraw printer: no PostScript and no networking (the SC stands for its SCSI interface, which is how the QuickDraw-produced page images are transferred quickly from the Mac).

Next up is the NT. It is quite similar to the old LaserWriter Plus it replaces: same built-in fonts, same processor, same lack of a parallel port to accommodate PC users. Its performance has been improved over that of the Plus with an extra half-megabyte of memory and a later, faster version of PostScript. And then there is this undeniable plus: it can be upgraded to the NTX.

Ah, the NTX. Apple had fallen far behind in the PostScript printer realm, but this baby puts them back at the front of the pack in the 300-DPI race. It has some of the same high-performance characteristics that made my mouth water for the 600-DPI Varityper and the 400-DPI Compugraphic printers, as you'll see in a moment.

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But probably the most interesting thing about the LaserWriter II family is its upgrade path:

SC to NTX upgrade <b>\$4299</b>	[	• SC \$2799	SC to NT upgrade <b>\$2099</b>
		• NT \$4599	
		• NTX \$6599	NT to NTX upgrade <b>\$2499</b>

And the upgrade path doesn't stop at the NTX — you can add memory and hard drives. As this is written, only Apple's SCSI drives work (and their 20-megabyte drive costs a healthy \$1299). Apple is also the only company that makes the kind of SIMM memory modules used by the NTX. A 1-megabyte upgrade listed for \$249 in the summer of 1988, but that price is volatile.

With that perspective on the LaserWriter II, turn the page to take a look at the two PostScript members of the family.

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## Apple LaserWriter II NT

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 2 megabytes, 419K free
- **Duty cycle:** Apple does not restrict the per-month duty cycle; instead it lists the minimum life expectancy as 300,000 pages.
- **Built-in Typefaces:** Courier, Helvetica, Times Roman, Symbol, ITC Avant Garde, ITC Bookman, Helvetica Narrow, New Century Schoolbook, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats
- **Paper handling:** 200-sheet input bin; 200-sheet output. Maximum size: Legal
- **List price:** \$4599
- **Phone number to call for more info:** 408-996-1010

The LaserWriter II NT is a solid, workhorse PostScript printer — but how fast is it? Well, I'd like to tell you how the LaserWriter II NT compares to the other printers on the long, text-heavy document benchmark, but I was unable to run it. The benchmark was conducted on all the other printers using Version 1.04 of Quark XPress. Unfortunately, that version of XPress is not compatible with the version of the Laser Prep file needed by the LaserWriter II family. Using a current version of Quark XPress would eliminate this incompatibility, but then the benchmark results would not be valid.

Had I been able to run the benchmark, the difference between the LaserWriter II NT and the LaserWriter Plus it replaces would have been minor. In the May issue of *Byte* magazine, author Curtis Franklin found a seven-page text file that took 1 minute 41 seconds on the LaserWriter Plus took 1 minute 31 seconds on the NT, about a 10 percent improvement.

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On the PageMaker newsletter benchmark, in contrast, the LaserWriter II NT proved itself more than 400 percent faster than the LaserWriter Plus. That's largely because the newsletter benchmark skews sharply towards printers with enough memory to download and cache four fonts. If you don't use a ton of downloaded fonts — that is, if you use the printer's built-in fonts — you won't see much difference in speed.

But there's no doubt that the half-megabyte memory boost was much needed, just as there's no doubt that the NT is an improvement over the Plus in all but its handling of grays. Its list price is lower, its paper handling is better, it's smaller, it's faster, its blacks are blacker, and its sleek outlines fit better with the look of the rest of the Mac line. But other PostScript printers — the NEC SilentWriter, the Qume ScripTen, and the AST TurboLaser PS, for example — offer similar features and more memory for less money.

What none of those printers have, however, is the ability to be upgraded to a muscle machine like the LaserWriter II NTX.

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## Apple LaserWriter II NTX

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 2 megabytes (expandable to 12 megabytes of RAM, with option to add a SCSI hard disk for fonts and font caching), 419K free
  - **Duty cycle:** Apple does not restrict the per month duty cycle; instead it lists the minimum life expectancy as 300,000 pages.
  - **Built-in Typefaces:** Courier, Helvetica, Times Roman, Symbol, ITC Avant Garde, ITC Bookman, Helvetica Narrow, New Century Schoolbook, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats
  - **Paper handling:** 200-sheet input bin; 200-sheet output. Maximum size: Legal
  - **List price:** \$6599
  - **Phone number to call for more info:** 408-996-1010

The LaserWriter II NTX is the fastest 300-DPI laser printer I know of. Indeed, it's more powerful than some 32-user minicomputers. It has the Mac II's 68020 processor and numeric coprocessor, which lets it crunch page images quickly. It can also be expanded with up to 12 megabytes of memory. It has a slot for an as yet unannounced ROM card that will accept additional typefaces. And you can attach a SCSI hard disk for storing and caching *lots* of fonts. With a 20-megabyte hard disk, you can fit the whole Adobe font library with about 16 megabytes of space left over for font cache. And that means fonts would rarely have to be reconstructed from their mathematical outlines. As a result, the NTX with a hard disk will really scream, even if it has the minimum 2 megabytes of memory.

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If you're in an organization that mixes PCs and Macs, it's interesting to note that the NTX includes an emulation of the Hewlett-Packard LaserJet Plus, the most popular laser printer in the PC world.

You may think you don't need the raw horsepower of an NTX. But if you ever have a deadline staring you in the face, consider this: it took 21 minutes to print the chapter you're reading on the NT, but only 13 minutes on the NTX. When a document has to make the Federal Express pick-up, or when a complex proposal has to get out today or your company loses a chance at that business, you'll appreciate the speed.

There's no doubt that other printers are better suited for heavy-duty applications than the NTX — the Compugraphic with its higher-speed print engine and incredible duty cycle pops immediately to mind. But the NTX, configured like the Compugraphic with 6 Megabytes of memory, a 20 Megabyte hard disk, and eight extra Post-Script typefaces, costs only \$10,000 or so — about one-third of the Compugraphic's \$30,000 price tag. I never thought I'd say this about a printer that costs as much as my car did when it was new, but a souped up NTX is actually a bargain.

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## Other PostScript printers

There are other PostScript printers available, of course, but I haven't had extensive experience with them. The best I can do is list the specs of a few of the more interesting ones.

### QMS PS-800 Plus

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 2 megabytes, 411K free
- **Duty cycle:** 3000 pages per month
- **Built-in Typefaces:** Courier, Helvetica, Times Roman, Symbol, ITC Avant Garde, ITC Bookman, Helvetica Narrow, New Century Schoolbook, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats
- **Paper handling:** Maximum size: Legal
- **List price:** \$5494
- **Phone number for more info:** 800-631-2692

### QMS PS-2400 Plus

- **Rated speed:** 24 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 2.5 megabytes, 411K free
- **Duty cycle:** 30,000-40,000 pages per month
- **Built-in Typefaces:** Courier, Helvetica, Times Roman, Symbol
- **Paper handling:** Maximum size: Tabloid
- **List price:** \$29,995
- **Phone number for more info:** 800-631-2692

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## Digital Equipment Corporation PrintServer 40

- **Rated speed:** 40 pages per minute
- **Resolution:** 300 DPI
- **Duty Cycle:** 100,000 pages per month
- **Built-in Typefaces:** Courier, Helvetica, Times Roman, ITC Avant Garde, ITC Lubalin Graph, ITC Souvenir Light, New Century Schoolbook
- **Memory:** 5 megabytes, 256K free
- **Paper handling:** Lots — depends on options. Paper up to tabloid size (11 x 17 inches)
- **Comment:** Very fast because of use of MicroVax as controller and 2.5-megabyte print buffer. Designed for use on a VAX network — its only interface is DECNet.
- **List price:** \$57,900
- **Phone number for more info:** 617-897-5111

## Digital Equipment Corporation ScriptPrinter

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 3 megabytes, 1 megabyte free
- **Duty cycle:** 10,000 pages per month
- **Built-in fonts:** 7 families
- **List price:** \$6,295
- **Phone number for more info:** 617-897-5111

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### **Diconix Dijit 1/PS (ink-jet)**

- **Rated speed:** up to 20 ppm
- **Resolution:** 300 DPI
- **Memory:** 4 megabytes, 1 megabyte free
- **Duty Cycle:** 70,000 pages per month
- **Built-in fonts:** Courier, Helvetica, Helvetica Narrow, Symbol, Times Roman
- **List price:** \$18,000
- **Phone number for more info:** 617-897-5111

### **Nissho Electric LN-2448**

(uses CCS-Page, a PostScript-compatible page description language)

- **Rated speed:** 22 pages per minute
- **Resolution:** 480 DPI
- **Memory:** 7.5 megabytes, 1.5 megabytes free
- **Duty cycle:** 80,000 pages per month
- **Built-in fonts:** 12 font families
- **List price:** \$24,000

### **NEC Silentwriter LC890**

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 3 megabytes, 400K free.
- **Duty cycle:** 8,000 pages per month
- **Built-in fonts:** 11 font families
- **List price:** \$4,795

### **AST Research, Inc. Turbolaser PS**

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 3 Megabytes, 280K free
- **Duty Cycle:** 8,000 to 10,000 pages per month
- **Built-in fonts:** 10 font families
- **List price:** \$3,995

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### **Quadram Quadlaser PostScript**

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 3 megabytes, 1 megabyte free
- **Duty cycle:** 10,000 pages per month
- **Built-in fonts:** 10 families
- **List price:** \$4,995
- **Phone number for more info:** 404-923-6666

### **The Laser Connection PS Jet Plus Printer**

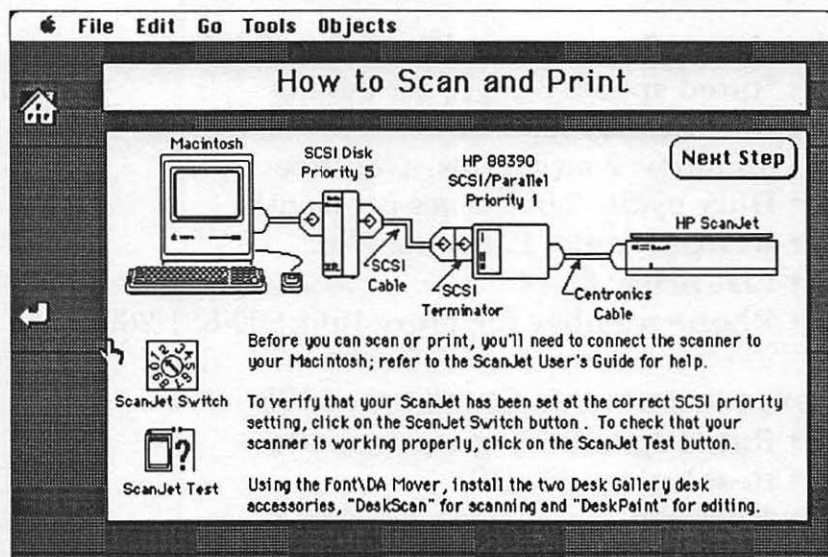
- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 2 megabytes, 473K free
- **Duty cycle:** 2,000 pages per month
- **Built-in fonts:** 12 font families
- **List price:** \$5,495
- **Phone number for more info:** 800-631-2692

### **Texas Instruments OmniLaser 2108**

- **Rated speed:** 8 pages per minute
- **Resolution:** 300 DPI
- **Memory:** 2 megabytes, 243K free
- **Duty cycle:** 10,000 pages per month
- **Built-in fonts:** 4 families, 2 slots for font cartridges
- **List price:** \$5,995
- **Phone number for more info:** 800-527-3500

## Scanning the scanners

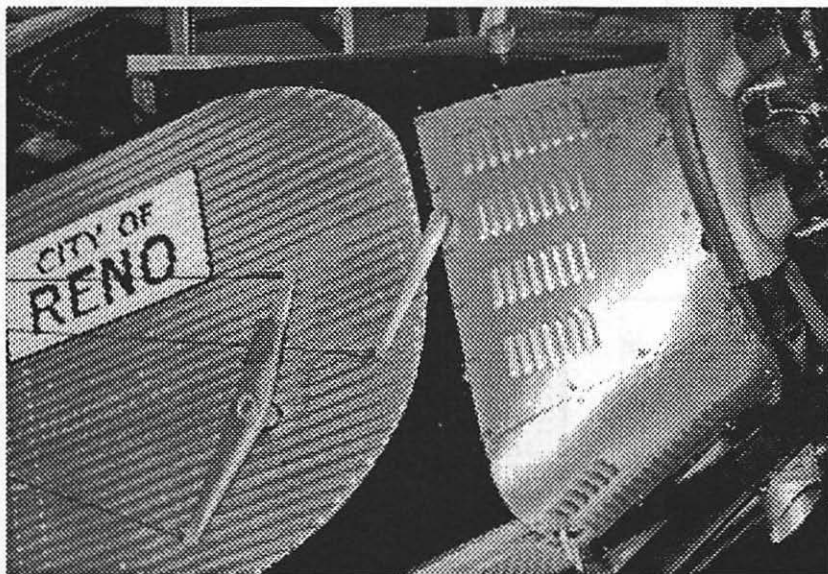
Scanners are much like fax machines. A piece of paper is fed into the maw of a machine and a bright light and optical sensors are used to scan it. But instead of sending the image across telephone lines to another fax machine, a scanner simply stores the image as a bit map on a hard disk. A typical scanner setup is shown in *Figure 4.4A*.



*Figure 4.4A.* Hewlett-Packard put together a HyperCard stack that does a good job of explaining the basic scanning process.

Until recently, scanners did a respectable job of capturing clearly defined line art – logos, black and white drawings, and anything else that was composed only of black and white. But they had trouble with photographs and other artwork composed of many shades of smoothly blended gray.

A black and white photograph presents the whole spectrum of tones, from the whitest white to the blackest black and with all the shades of gray in between. Subtle transitions are made in nearly infinitesimal steps as a photograph goes from one gray to another. In a phrase: a photograph is a continuous-tone image.



**Figure 4.4B.** This is a gray-scale image that was printed at 53 lines per inch on a 300-DPI laser printer. Compare it to the 1270-DPI, 80-lines per inch version on page 171, which was printed on a Linotronic 100 typesetter.

A new breed of scanners that can assign a density to each dot in the image it captures — in other words, how dark or light the dot should be to accurately reflect the image scanned — is allowing desktop publishers to get closer to continuous tone if not quite all the way there.

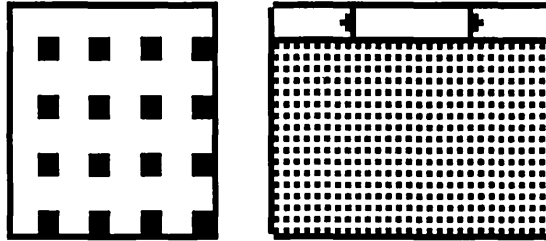
As you can see in *Figure 4.4B*, the best an ordinary scanner can do is *approximate* continuous tone, with the emphasis on approximate. Even with the naked eye you can see that the image is made up of swirling patterns; if you put the image under a magnifier, you'll see that those patterns are made up of dots.

That's because an ordinary scanner handles the differences in the density of an image by dithering. If a given area is a uniform shade of gray, the scanner simply repeats a small "dithering" pattern of white and black dots that approximate that grayness. Up close, the dithering pattern looks like black-and-white linoleum tile you might put in the kitchen. But viewed at a normal reading distance, the blacks and whites blend into shade of gray.

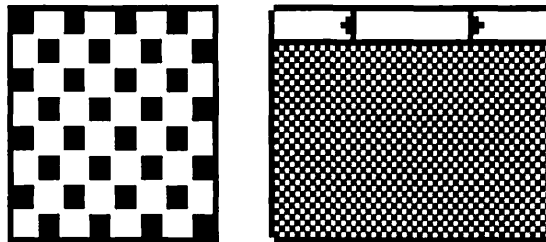
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An example of what you can do with dithering tiles is the Macintosh desktop, which is usually a uniform, medium shade of gray because of the dithering tile used to create it. You can experiment with the effects of changing the Mac desktop dithering tile using the **Control Panel DA**. Figures 4.5A through 4.5C show the results of a few alternate dithering patterns.

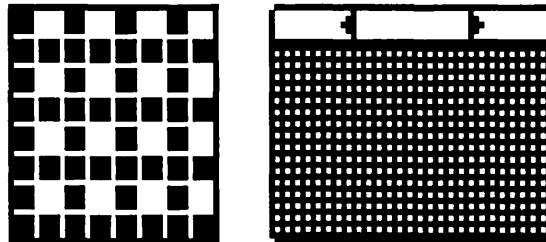
**Figure 4.5A.** A light dither with 16 of 64 dots filled in.



**Figure 4.5B.** A medium dither with 32 of 64 dots filled in.



**Figure 4.5C.** A dark dither with 48 of 64 dots filled in.



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Okay, so ordinary scanners convert the information about the darkness or lightness of a small piece of the image into a matching dithering pattern. When all the dithering patterns are put together – each one approximating the grayness of the corresponding area in the original image – the result is an approximation of the smoothly blended tones of the original photograph.

The number of gray levels you can represent increases with the size of the tile used. But there's a tradeoff: if the tiles get too large, the eye can distinguish them individually, which works against achieving smoothness.

In practice, a 300-DPI laser printer image can do no better than about 75 rows of dithering tiles per inch. That makes each tile 4 dots by 4 dots, for a total of 16 dots per tile to represent 16 shades of gray. And sixteen shades of simulated gray creates an image that's only marginal. It's below the low end of newspaper quality.

(The above paragraph should clear up the mystery surrounding the term "lines per inch" as it applies to scanned images in PageMaker's image control dialog box. Each row of dithering tiles equals a line.)

How does an ordinary printing press do so much better with half tones than a 300-DPI laser printer? Aren't half tones made up of dots, and far fewer than 300 dots per inch at that? True, but the size of the dots that make up a photographic half tone can vary. Halftones are created by rephotographing an image through a fine mesh or screen placed directly on top of the image. Each opening in the screen focuses the light reflected off the image into a dot whose size varies according to the darkness of that section. A very light area results in a very small dot. A very dark area is represented by a very big dot. The transition from shade to shade of gray is smooth, because the size of the dot is infinitely variable.

---

Unfortunately, laser printers and typesetters cannot vary the size of their dots, so the only way they can represent different shades of gray is via dithering.

Okay, so what's the difference whether a scanner dithers the image or records the gray-scale level of each dot in the picture, if in the end the image has to be dithered? Actually, there's none if the device producing the final dithering is a 300-DPI laser printer. Ah, but there's a vast difference if the device doing the dithering is a high-resolution typesetter.

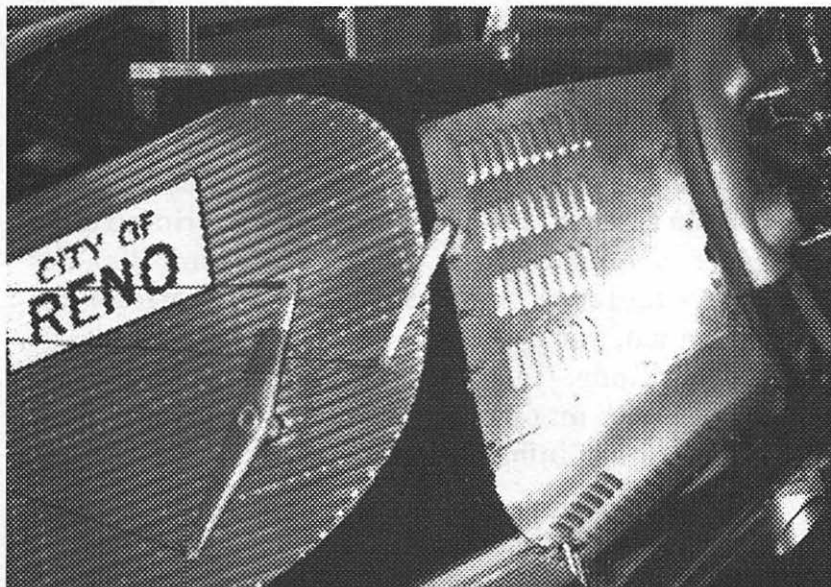
Why? Mainly because a gray scale scanner doesn't get locked into a dithering pattern of a particular resolution. In the example just discussed, when the ordinary scanner and its software were done dithering around, you had 75 rows of tiles per inch and each tile could be any one of 16 shades of gray.

But if a gray-scale scanner assigns a gray value to each dot in a 75-DPI bit map, all it needs is a device with enough resolution to render the entire range of those gray values. If 8 bits of information are assigned to each dot, then each dot can represent one of 28 values, which works out to 256 shades of gray. Now, if there was a way to print those 75 dots per inch in 256 shades, we'd be in fat city.

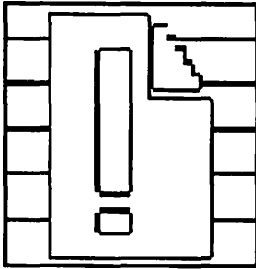
Well, on a high resolution typesetter, there is a way. If you use a 16 x 16 tile, each would have 256 dots, and thus be able to represent 256 shades of gray. On a Linotronic 100, with its 1240-DPI resolution, you can have 77.5 such 16 x 16 tiles per inch. Voila: you've got approximately the same number of tile rows as the 300-DPI laser printer example just discussed, but those tiles can represent 16 times as many shades of gray. That's why the photo looks so much better.

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The range of grays allowed by the scanners I'm familiar with ranges from as few as 1 bit (in other words, black and white or no gray scale) to 8. *Figure 4.6* shows the result of a 6-bit gray-scale scanned image from the Datacopy 830 scanner that was printed on the Lino 100. While 6 bits yields only 64 shades of gray, the quality is still pretty darned good. Compare it to the LaserWriter version on page 167.



**Figure 4.6.** Even though the resolution is only 150 DPI, the 64 shades of gray make this scanned image look as good as a photographic half-tone.



## **Overkill** Normally, with gray-scale scanners, you don't need more samples per inch (or DPI) than the screen density (or lines per inch) you intend to use. If you are going to

## **at 300 DPI**

print photos on a typesetter at 100 lines per inch, you should scan your images at about 100 DPI. If you scan at 300 DPI, you'll get a *much* larger file (9 times bigger before compression), but no noticeable difference in quality. So save space on your disk. There's no need to scan at higher than 100 DPI on a gray-scale scanner.

Well, gosh, is gray-scale scanning that effective? You bet. If you scanned at 4 bits per pixel and printed at 85 lines per inch using the 2540 DPI Linotronic 300, the scanner would store only about 115,600 bits of information per inch, yet the result will be close to a photographic halftone. To get similar results without gray-scale (i.e., with an ordinary scanner), you would need *1,849,600* bits of information per inch!

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Ah, but there's another piece to this equation. Remember that assigning 6 or 8 bits of information to each of 75 dots per inch takes a lot of processing, which will slow down your scanning. And unless you somehow compress the resulting data, the file produced is just larger than half a megabyte. And all of that data has to be processed when you print, which results in excruciatingly slow printing on high-resolution typesetters. Service bureaus will probably charge you more per page for printing halftoned pages, because you tie up their valuable equipment longer. A typical charge is \$1 per minute, and 30 to 60 minutes aren't unheard of wait times for printing gray-scale scanned images. Compare this to the typical \$5 to \$10 charge for a traditional photographic halftone.

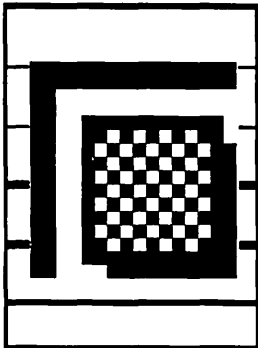
The previous paragraph provides plenty of reasons — they're called dollar bills — for not scanning images at higher resolutions than 75 DPI, or perhaps even for not scanning at all. But the hot tip on page 172 explains another more compelling reason for not cranking your gray-scale scanner up to 300 DPI: you won't really see an increase in quality.

What's the bottom line? If you want high-quality reproduction of photographs and other continuous tone art work from a scanner, you're going to need a gray-scale scanner and a hard disk with a lot of space, and you're going to have to print on a Linotronic typesetter. In other words, you'll pay a lot for the privilege of having your images included with your line art and type.

The alternative—having a photographic half-tone made and placed onto your pages just before they go onto the printing press—should be beginning to sound more attractive than scanner manufacturers paint it.

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Of course, there are other reasons to use a gray-scale scanned image. If you aren't going to a commercial printer and you need to have the best possible photographic images on the page as it comes out of your laser printer, you'll have more control if the image is stored in some kind of gray-scale format. If it's stored as a TIFF file, PageMaker itself can perform lots of image enhancement by altering the brightness and contrast of the image. TIFF files, unlike paint files, can also be resized freely without fear of the image being distorted.



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## **TIFF Files**

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An important issue when you're scanning images is what file format to save them in. Aldus worked with Microsoft in creating the Tagged Image File Format, better known as TIFF. TIFF files are created by many scanners, and PageMaker 3.0 and other applications such as ImageStudio can work readily with them. The TIFF format is somewhat complex, because it is designed to handle a number of different resolutions and levels of the gray scale. Indeed, TIFF supports powerful scanners that will go beyond today's 8-bit, 256 shades of gray to reproduce higher-quality photographic images — even color. It will be quite a while before that happens, of course. And even longer before affordable printers can reproduce them. But it's nice to know that the TIFF standard is robust enough to stand up for the foreseeable future.

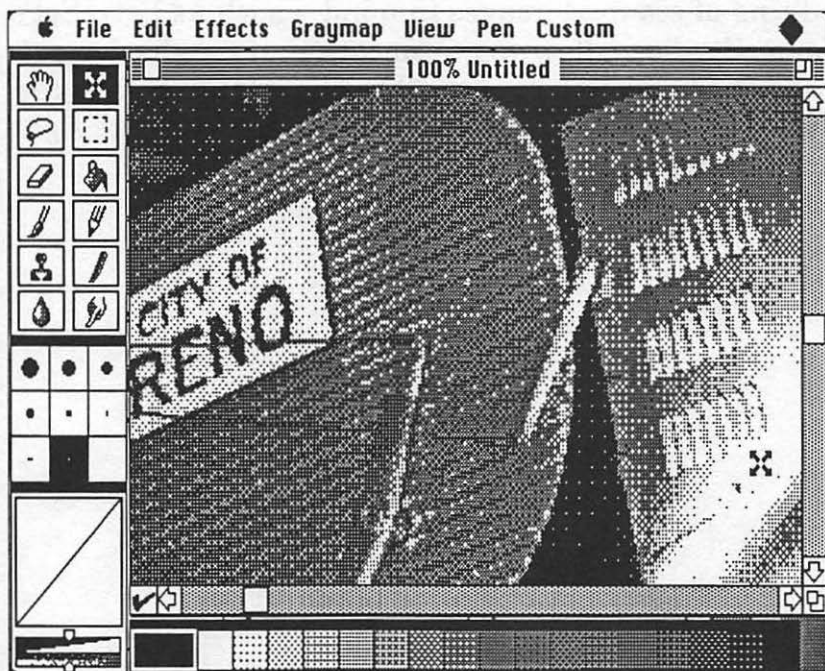
---

An alternative to TIFF for working with scanned images is the Encapsulated PostScript format. EPS files add the advantages of draw packages and PostScript special effects to the advantages of TIFF, but there's a tradeoff: an EPS scanned image will be about twice as big as the same image stored in TIFF.

Another compelling reason for gray-scale scanning is a field of endeavor that's just beginning to creep into desktop publishing: image processing. Wouldn't it be nice, for example, to combine line drawings with photographs? An architect might want to show how his proposed building would look in the context of a particular neighborhood. Wouldn't it be great if he could insert the line drawing of his architectural rendering into a scanned image of a photograph of a neighborhood? Well, he can. Unfortunately, the inevitable white space around the line drawing as it was cut to the clipboard would obliterate the irregular dot pattern of the photograph, and the results would look terrible. But software tools designed with the editing of scanned images in mind – such as LetraSet's ImageStudio – allow you to smooth that rough edge out. Indeed, in Chapter Five you'll see how ImageStudio can even combine two gray-scale scanned photographs, right on your Mac's screen.

Speaking of screens, that brings up an interesting question: how do you work with gray-scale images on an ordinary Mac Plus or Mac SE screen? The Plus and the Mac SE have the same problem as the laser printer: they only have one intensity of dot, and thus must resort to onscreen dithering patterns to simulate grays. (see *Figure 4.7*). If you're going to do a lot of gray-scale work, remember that the Mac II can display as many as 256 tones of gray on Apple's relatively inexpensive, standard high-resolution monochrome monitor. The images will look better onscreen than they will when they print. If you don't have a Mac II, my advice is to squint at the screen until the dithering patterns blur into a gray image when you're trying to picture the final result. Seriously — it works. And it had better, because you need to be able to predict what the final result will be from its approximation onscreen. At as much as \$30 or more for typesetting a gray-scale scanned image, you don't want to have to redo it several times.

*Figure 4.7. On the Mac Plus and Mac SE, programs like ImageStudio that work with gray-scale images can only approximate what you'll get when you print. On the Mac II with a gray-scale display, ImageStudio gives you a good preview of what the final printed image will look like.*



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## The utility of ordinary scanners

What are ordinary (as opposed to gray-scale) scanned images good for? Well, they're particularly great if you're throwing together a PageMaker flyer about the wonderful, mint-condition 1954 Packard you have for sale, or your jet-black dog who hopped out of the back of your pickup truck on Main Street last Thursday and hasn't been seen since (likes kids, answers to the name "Spot"). Realtors can put them to good use reproducing the photograph of a house for sale. And scanned images are also good for a newsletter on rough-hewn colored paper where the quality of a 300-DPI image isn't going to detract much from the overall look of the publication.

In my more naive days, I scanned the images of the PageMaker publications that you saw in Chapter One, expecting to be able to use most of the images in the PC version of this book — especially where the scanned page was composed only of type and line art. Unfortunately, the images were unsatisfactory even at 300 DPI. I ended up using 150-DPI scanned images, but only to show the printer position for half-tones and line shots. Even that limited use of scanned images cost me six megabytes of disk space. I've since gone to using only the low-resolution image that PageMaker incorporates into its publication file, and discarded the linked files.

On the other hand, you can make a pretty good case for the use of a scanner to capture an image that will be used repeatedly. AST has a beautiful version of their logo, for example.

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If you plan to scan your company's logo and use it in various sizes in a publication, you've got two additional things to consider. One is that the image won't scan perfectly. If you need to clean up a scanned image, software like ImageStudio, DeskPaint, Silicon Beach's forthcoming Digital Darkroom, or SuperPaint 2.0 will let you edit the scanned image at a full 300 DPI.

The second consideration before you spend a lot of time cleaning up a scanned bit map is that you would be better off with a logo stored in an object-oriented format. Chapter Five will show how Adobe Illustrator 88 makes that an easy task with most scanned logos.

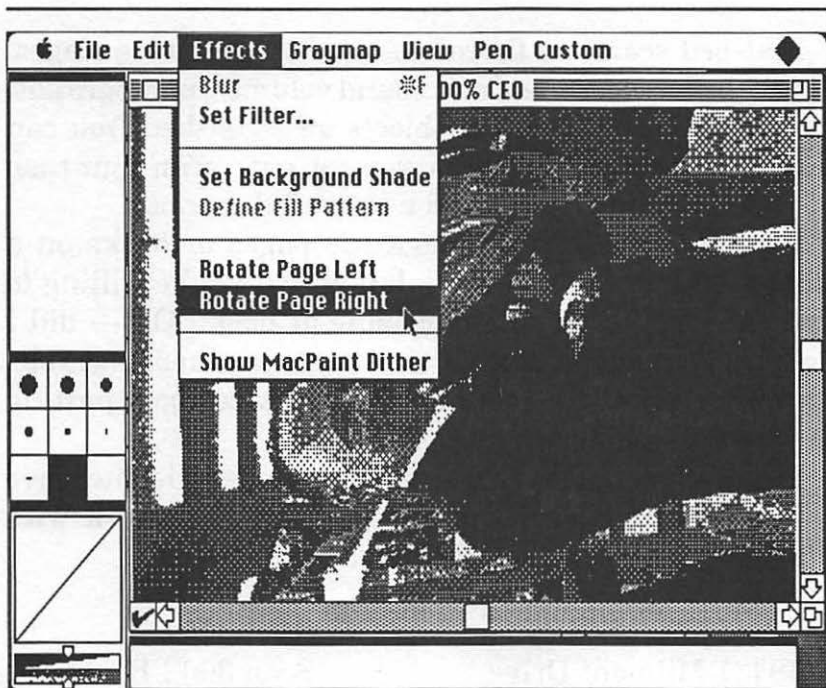
If you have enough memory, you can even use some of this software to solve a problem that comes up in the following discussion of document handling: what to do with an image that was scanned sideways. Image Studio is just one of the software packages that can rotate a scanned image file, as you can see in *Figures 4.8* and *4.9*.

## Document handling

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Scanners handle artwork one of two ways: by taking sheets one at a time with a roller arrangement much like a typewriter platen, or using a flat bed much like that of a photocopy machine.

Some sheet-fed scanners will read a stack of sheets in succession. But even when reading single sheets there can be trouble if a sheet is too thick, too small, or not perfectly square. Think of the kinds of things you can roll into a typewriter – that's what a sheet-fed scanner can scan. If the image on the paper is wide rather than tall, you'll have a problem. The maw on a sheet-fed scanner is designed to read 8 1/2 x 11 sheets short-side first, and there simply isn't more maw there to flip the page 90 degrees and feed it long-side first. As a result of being read sideways, the image will be flipped 90 degrees.



*Figure 4.8. If you have a piece of art that is too wide to fit into a sheet-fed scanner, you must flip it, and the image comes in sideways.*



*Figure 4.9. Fortunately, programs like ImageStudio can then right the image by rotating it 90 degrees.*

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Flat-bed scanners therefore have several advantages. You can place loose-leaf and bound volumes, photographs, magazines, and even 3D objects on a flat-bed. You can rotate them 90 degrees. Yes, you can even scan your tush if you so desire. Try *that* on a sheet-fed scanner.

Actually, you can do magazine pages or books on a sheet-fed scanner as well — but only if you're willing to cut the page out of the magazine or book. Oh — did I mention that sometimes a sheet gets jammed as it rolls through a sheet-fed scanner? Think twice about putting any irreplaceable art through one.

Finally, before I leave the topic of scanners, let me leave you with a partial list of the scanners that work with PageMaker 3.0 on the Macintosh.

Abaton Technology  
48431 Milmont Drive  
Fremont, CA 94538  
(415) 683-2226

Scan 300 SF  
Scan 300 FB

AST Research  
2121 Alton Ave.  
Irvine, CA 92714  
(714) 553-0340

AST TurboScan SF  
AST TurboScan FB

Datacopy  
1215 Terra Bella  
Mountain View, CA 94043  
(415) 965-7900

JetReader 220 SF  
Model 730 FB  
Model 830 FB  
Model 840 FB  
Model 840i FB

DEST Corporation  
1201 Cadillac Ct.  
Milpitas, CA 95035  
(408) 946-7100

PC Scan 1000 FB  
PC Scan 2000 SF

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**Hewlett-Packard**  
1910 Pruneridge Ave  
Cupertino, CA 95014  
(408) 973-1919

**ScanJet**

**Laser Optical Tech.**  
3004 Mission St.  
Santa Cruz, CA 95060  
(408) 426-7171

**Scanner-SF**  
**Scanner-FB**

**Microtek**  
16901 South Western Avenue  
Gardena, CA 90247  
(213) 321-2121

**MS 300A SF**  
**MS 300C SF**  
**MSF 300A FB**  
**MSF 300C FB**  
**MSF 300G FB**  
**MSF 400G FB**

**New Image Technology Inc.**  
9701-B Philadelphia Court  
Lanham, MD 20706  
(301) 731-2000

**MacScan SF**  
**MacScan FB**

**ThunderWare Inc.**  
21 Orinda Way  
Orinda, CA 94563  
(415) 254-6581

**ThunderScan 4.0**  
**(For Use with Apple**  
**ImageWriters only)**

**Warp Nine Engineering**  
2644 Patton Road  
Roseville, MN 55113  
(612) 633-4450

**VisionScan FB**

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## Display subsystems

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Let me apologize now, before I run you through 3000 words of text virtually without illustration to communicate the pluses and minuses of the most visual part of desktop publishing, display subsystems. As I mentioned at the top of this chapter, a photograph doesn't tell you much about the resolution, clarity, and speed of a display — it tells you about the resolution and clarity of the photograph and the printing process.

With this apology out of the way, I can with a clear conscience say that you can do just fine with the standard Macintosh screen of the Mac Plus and the Mac SE. That little nine-inch wonder is composed of 512 by 342 individual dots or picture elements (also known as pixels), which isn't very big in the wonderful world of graphics. But those small little screens are relatively sharp and clear for several reasons. The dots that make up that image are close together (72 dots per inch), relatively small, and the glass of the tube does not overly diffuse them (just enough to eliminate a bit of glare). The image ends before the tube curves away at the edges to avoid distortion. Finally, the luminance levels of the screen are sufficient for working in the brightest office, and they're adjustable from the front of the Mac.

One of the reasons for the comfort level associated with all Mac screens is that they follow the ergonomically correct notion that the combination of dark characters on a light background more closely matches the luminance of paper and thus will be less likely to tire the eyes. No more irises adjusting frantically as your eyes move between a relatively dark display, then a bright piece of paper, and then back to that dark screen again (could he be talking about the PC, Martha?).

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On the other hand, the standard Mac screen *is* small. You can't see the whole page at once and read body copy or do exact placement of graphics elements, which means continually switching back and forth between various views of the screen.

The standard high-resolution monochrome display of the Macintosh II is a nice improvement over the Plus and SE screens. The quality is virtually the same, and there's a big plus: the Mac II allows you to work with more of the page at once in each of PageMaker's views. For example, you can view an 8.5-by-6-inch area of a PageMaker publication in **Actual Size** view on the standard Mac II screen, compared with only a 6.5-by-4-inch area on a Plus.

There's an additional plus if you own a gray-scale scanner: the Mac II can display grays while the Plus and SE screens are limited to black and white. Displaying grays is only important if you plan to use software like ImageStudio to edit gray-scale images.

Color is also available on the Mac II, but its usefulness to most desktop publishers is limited. PageMaker 3.0 allows you to define different colors and display them on the screen for the use of spot color, but the match between screen colors and the final printed piece is apt to be poor. Illustration programs also allow you to manipulate color onscreen, but, again, the screen will not match final output. The way you get spot color is by printing a separate overlay for each color. But the overlays are printing on an ordinary laser printer or typesetter in black, and the final colors you achieve will depend on the printing press and inks used. You're probably better off studying a book of Pantone colors than the screen when you're trying to make aesthetic decisions about spot color.

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Another reason to avoid color is that color costs a lot more. For example, the Moniterm Viking 1 has 1280 x 960 resolution with 256 shades of gray for \$2395 list, while its color brethren the Viking 10 will set you back more than twice as much — \$4995 — for only 1024 x 768 resolution.

Still another, and probably the most important reason to avoid a color display for PageMaker work, is that color displays are inherently less crisp and harder on the eyes for word processing or the kind of detail work desktop publishing demands. Finally, when your Mac II is displaying color, it's manipulating several bits per screen pixel, which means your screen refresh is much slower.

The monitors people will most commonly think of buying specifically for desktop publishing with PageMaker are monochrome large-screen display subsystems, which include a display controller and compatible monitor. On both the Mac Plus and Mac SE, installing the display controller is a problem because the machines are sealed tight. Opening them up and doing the installation, even in the Mac SE with its open slot for add-ons, requires bringing your machine into a dealer, unless you're a real technoweenie and own the proper tools. The cable that connects the new video board to the big screen uses the Mac's security port (that little slit above the mouse port), so you may not be able to have a big screen and bolt your little Mac down at the same time. (Don't worry about bolting down the big screens—fear of hernia will be plenty of protection—they weigh a ton.) A Mac II, on the other hand, is designed to be opened up so you can insert additional boards.

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There are some drawbacks to adding a large screen display to the Mac. They tend to be anywhere from slightly harder to much harder on the eyes than the original Mac screen or the Mac II monochrome. It's easy to lose the cursor in all that vast acreage; you'll find yourself mousing around madly in order to pick up a blur of motion and relocate it. And large screens consume your desktop. (On the other hand, some people load their desk with a Mac II, the monochrome monitor for word processing and detail work, and a large screen color display just for the sheer awesomeness of what it can display. These are very rich people with very large desks, mind you.)

With all that said, consider the following compilation of opinions about some Mac large screen displays. I'll say it now and I'll say it again: figure out a way to sit down at a large screen display to work for an extended period before you buy it. Beauty, and readability, are in the eye of the desktop publisher. Besides eye strain, think about speed when you do your trial run. You may find yourself much more efficient because you won't have to change views continually. On the other hand, screen refresh will tend to take longer when you *do* zoom or scroll the screen.

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## **Viking Moniterm**

**List price: \$2395**

**Resolution: 1024 x 768**

**Mac II gray-scale shades: 256**

The Moniterm Viking gray-scale display for the Mac II gets high marks from everyone I've talked to. (The comparable monitor subsystem for the PC has a graphics coprocessor to boost performance and also drew raves once Moniterm got some hysteresis in the mouse driver on Bill Gates' suggestion. Honest.) One of the Viking 1's pluses is that the screen resolution in terms of dots per inch is the same as the original Mac screen: 72 DPI. Its steadiness and clarity also approach that of the original Mac screen. The Viking display tube is slightly etched, which makes it remarkably glare-free. And the phosphors exude a very pleasant color. I know these screens are not color screens, but put them side by side and you'll notice a definite difference in screen color.

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## **Radius Full Page Display (FPD)**

**List Price:** \$1995

**Resolution:** 640 x 864 pixels, 75 x75 pixels per inch

**Mac II gray-scale shades:** 2 (i.e., black and white)

The Radius FPD is one of the best large screen displays you can buy, with one drawback: it displays only a single page with its 640 x 864 resolution, while many of the others display two.

On the other hand, Radius actually extends over further via the original screen on a Mac Plus or SE. When you move the pointer to the edge of the screen, the cursor simply jumps into the original screen. You can see the full width of the screen, therefore, only it happens to be split between two monitors. Actually, the original monitor tends to get used for toolkits and palettes, leaving the FPD itself for an uncluttered look at your pages.

On a Macintosh II, the Radius FPD's single page limitation can be overcome via its virtual screen mode. When you move the pointer to the edge of the screen, it can quickly scroll over, giving you access to a total display of 1024 x 864.

Radius also makes a two-page display now that shares many of the same pleasant characteristics of the FPD. Its main drawback is that the image of the Mac desktop extends most of the way towards the edge of the tube. As the tube curves away sharply close to the edge, there's a good deal of distortion.

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## **Sigma Designs Laserview**

**List price:** \$2395

**Resolution:** 1664 x 1200 pixels, 125 x 125 per inch

**Mac II gray-scale shades:** 2 or 4

If you want maximum size at any cost—measured in terms of dollars or eye strain—consider the Sigma Design Laserview. In its high resolution mode, the LaserView covers (or should I say displays) as much ground as a dozen regular Mac screens. Of course, to achieve that coverage the text is very tiny, and the desktop extends to the edge of the tube, causing the focus to blur. And, at least for me, having that much wide open space under MultiFinder leads me to temptation and I quickly hit the Mac system's limit of the number of windows you can open at once.

An interesting aspect of the Laserview on the Mac II is its “standard resolution” view. With 832 x 600 dots spread out across 19 inches, the image becomes larger than life. But moving back and forth between resolutions is a pain. And if you lose sight of an icon or menu during a zoom, it's gone until you go back to high resolution mode.

The unit has both contrast and brightness mounted on the front of the display, a definite plus.

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## **Micrographic Images Megascreen Plus**

**List Price:** \$2495

**Resolution:** 1024 x 900 pixels, 72 x 85 pixels per inch

**Macintosh Plus only**

I haven't heard wonderful things about the Megascreen Plus. It requires the addition of a fan to your Mac Plus, which bothers some people. The Megascreen is relatively free of edge distortion, at least, because the image stops about an inch from the edge of the tube. But Jim Felici's review in the May, 1987 *Publish!* said the Megascreen's image shimmers so much you get this urge to keep turning it down (until you can't see it anymore?)

Felici also complained about the oblong brick effect. Because its screen resolution is 72 pixels per inch horizontally but 85 pixels per inch vertically, the Megascreen Plus squashes images (as if you dropped an oblong brick on them?) Actually, Felici was referring to the difference between two walls built from the same number of bricks in the same arrangement, but one with square bricks and the other with short, squat bricks. (In Felici's opinion, and in mine, Mac add-on displays really should use the same square bricks as the original Mac screen. Square pixels have the advantage of letting you rotate text without distorting its shape.)

What's the plus in MegaScreen Plus, then, eh? It's the ability to output video signals to a videotape for creating animation or adding Mac screen images to videotape productions. A version without the video option called the Megascreen II is available for \$1995.

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## **E-Machines, Inc. The Big Picture**

**List Price:** \$1995

**Resolution:** 1024 x 808 pixels, 82 x 82 pixels per inch.

**Mac II gray-scale shades:** 2 (Big Picture IQ has 256)

I've never had anyone specifically recommend the Big Picture systems, unless "Generally good but has some deficiencies" counts (Bruce Webster in the May 1988 *MacWorld*). Oh yeah, and *InfoWorld's* reviewer said she liked it because it didn't require the addition of a fan to your Plus and had the brightness knob on the front. On the other hand, I've heard it dismissed as tiring on the eyes, washed out, ghostly (it uses screen phosphor that glows for a long time after each refresh to reduce flicker), and troubled with visual flaws. Even the *InfoWorld* reviewer who liked it said her review unit occasionally suffered from a "wiggly and distorted" display.

On the other hand, do you believe everything you hear? I wouldn't, particularly when you can find out the real, completely subjective truth by sitting in front of a monitor and working for an extended period (or trying to). Most stores will let you spend an hour or more trying out their large screen displays, and I wouldn't even think of buying one from a store that wouldn't let me. In fact, I'd look for a store that carries several monitors and would grant me a home (office) trial, with the privilege of exchanging or of getting a complete refund.

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# Chapter Five

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## Programs that create graphics

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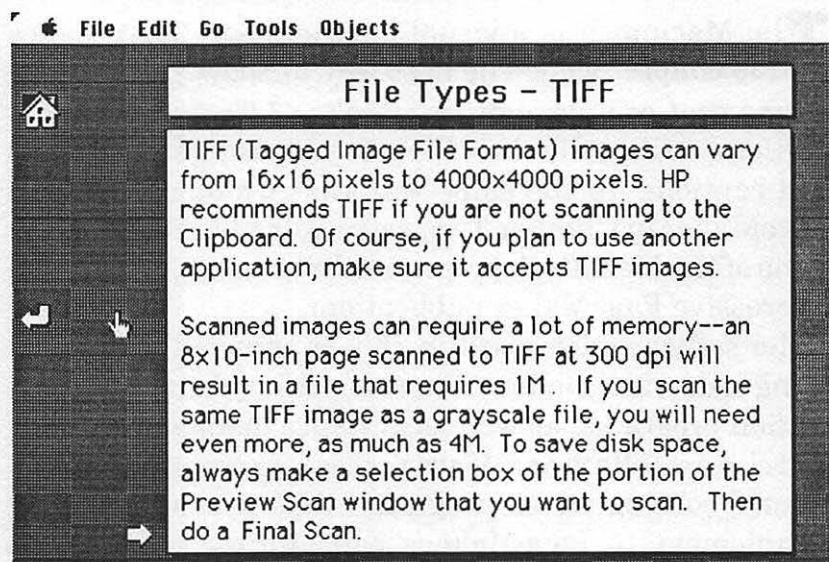
**T**he Macintosh is a visual environment. That makes this chapter easy. The best way to show you the programs that complement PageMaker 3.0's graphic capabilities is to actually show them to you, using screen shots and captions. In the same way that we quickly toured PageMaker in Chapter Two, we're going to take a look at some of the Macintosh programs that can help you create impressive PageMaker publications.

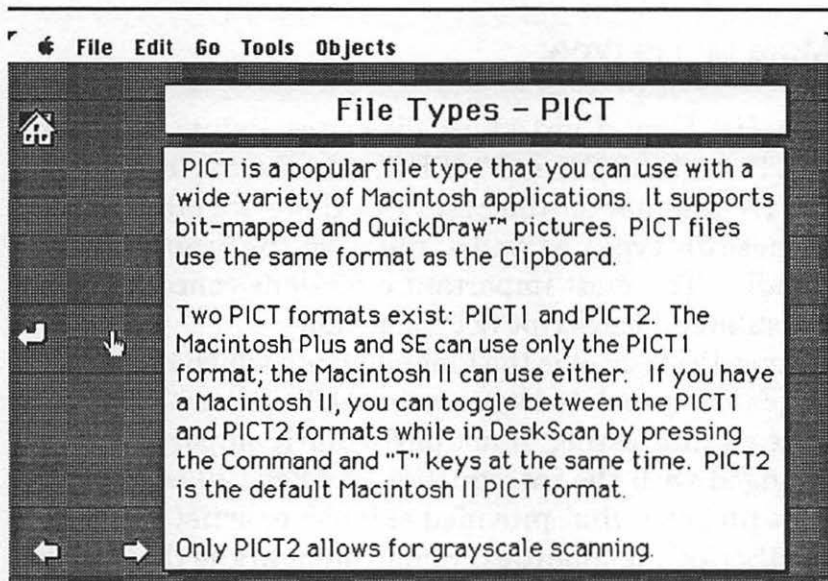
The software discussed in this chapter all has something to do with graphics. There are paint, draw, and illustration programs, as well as graphics management aids and clip art collections. Word processing programs form a second contingent of programs that are a necessary complement to PageMaker's capabilities, but I'm not going to discuss them here. Word processors are getting so powerful in their page-makeup capabilities that I'm holding discussion of Microsoft Word and FullWrite Professional until Chapter Ten, which deals with alternatives to PageMaker.

Another realm of programs that can increase your desktop publishing productivity enormously are Desk Accessories and other utility software — little programs that can make your use of the Mac more pleasant and efficient. A few of these are discussed in the Appendix.

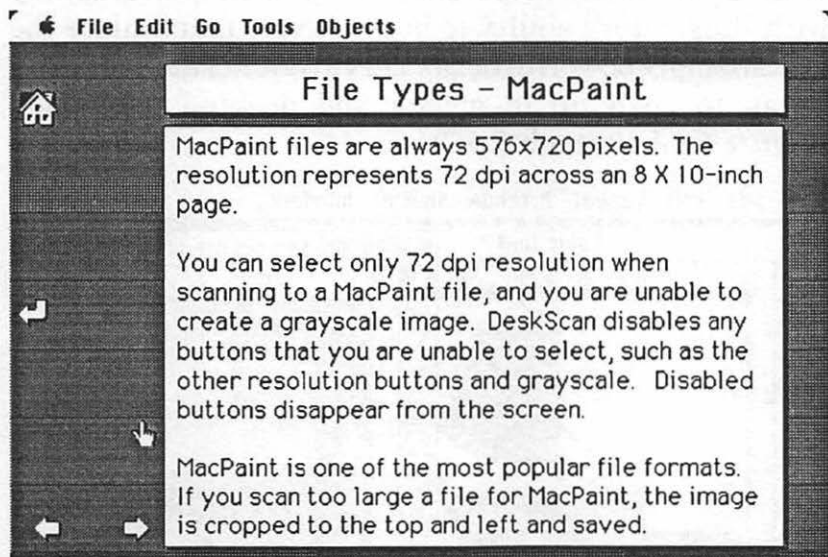
In order to get the most from this chapter, you need to understand something about the standard graphics files Mac programs generate and PageMaker accepts. I've seen no clearer introduction to the subject than that given in a public-domain HyperCard stack distributed by Hewlett-Packard with its DeskScan software (DeskScan is discussed beginning on page 218). Rather than reinventing the wheel, I'll start with the Hewlett-Packard descriptions in *Figures 5.1* through *5.3*.

*Figure 5.1. HP is a little misleading in this description of TIFF files. The DPI resolution of your gray-scale scan need not exceed the number of lines in the screen of your final halftone. On a 300 DPI laser printer, a 53 line screen and 75 DPI resolution file will look just as good as a 53-line, 150-DPI halftone.*





**Figure 5.2.** This description of PICT does not mention that the initial release of PageMaker 3.0 chokes on PICT2 color images. You can still use PICT2 files, however — open them in an older program like the original MacDraw, then save them as a PICT file before placing them in a publication.



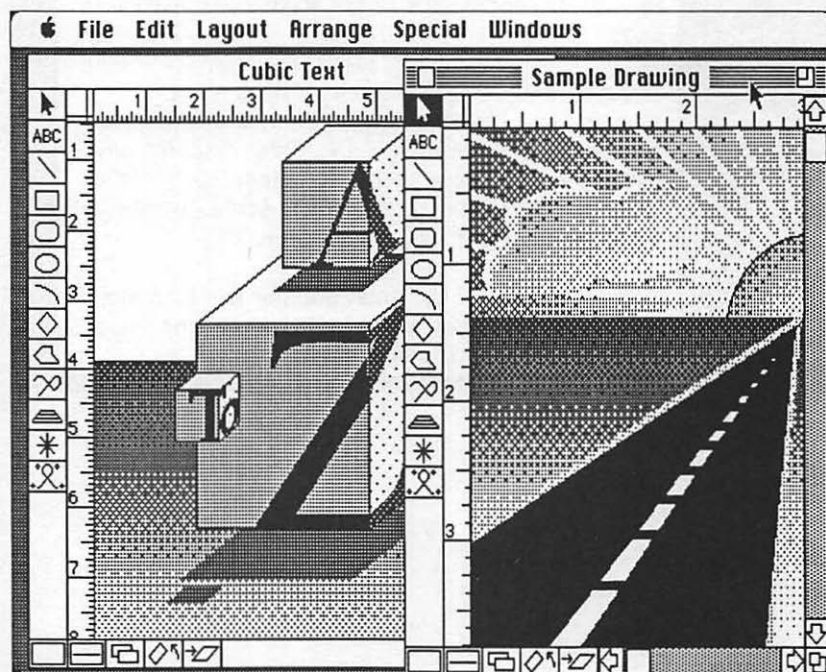
**Figure 5.3.** MacPaint files have their limitations, but as the card says, it's still one of the most popular file formats.

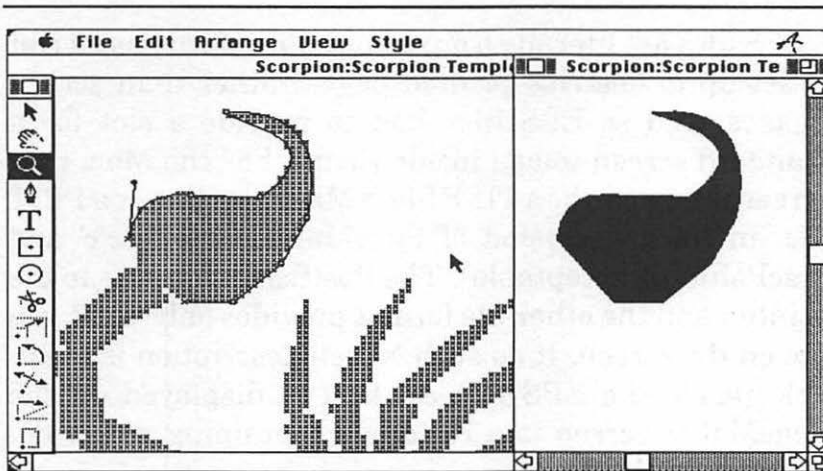
## More on file types

The HP HyperCard stack discusses Paint, Clipboard, PICT1 and PICT2, and TIFF files in the context of using the HP scanner for the Mac. But there are other aspects of these file types, as well as file types the ScanJet doesn't handle. The most important omissions concern the encapsulated PostScript (EPS) format.

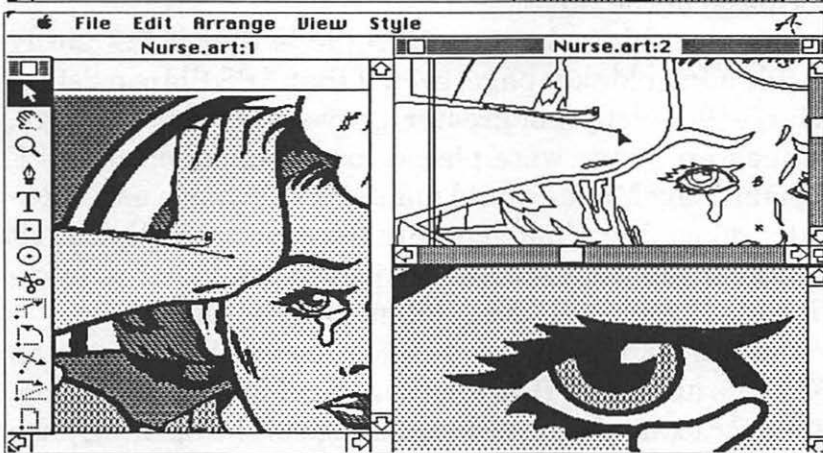
Since PostScript is the language into which PageMaker pages are translated when printed, EPS has always been at least interesting, if not particularly important. That changed with the introduction of Adobe Illustrator, the first program that provided extensive, artistic access to PostScript's capabilities. Some might argue that Cricket Draw (*Figure 5.4*) beat Adobe to the punch, but it was only with Illustrator's ability to interactively manipulate the tantalizingly powerful bezier curve that PostScript really began to open up to artists and desktop publishers (*Figure 5.5A* through *5.5C*).

*Figure 5.4. Cricket Draw opened much of PostScript up to illustrators, including the ability to manipulate text (as in this modestly famous image of text wrapped around cubes) and to create gradually gradiated screens.*

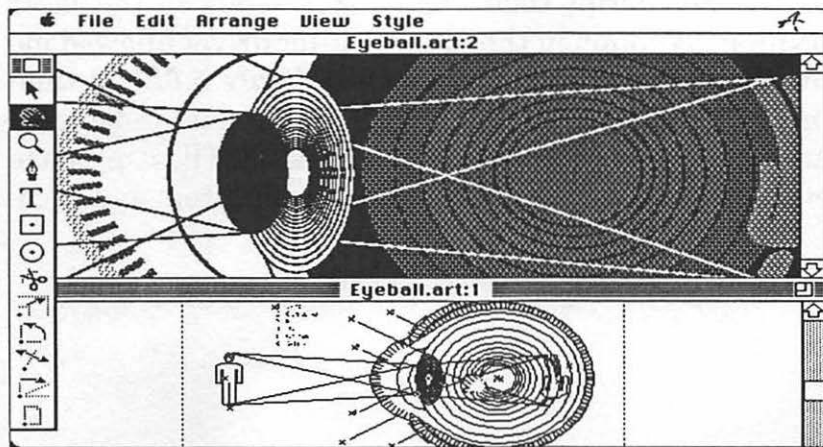




**Figure 5.5A.** One of the primary uses of Illustrator is to trace scanned images. Here a bit map in the shape of a scorpion is being traced with the pen tool. The pen tool lets the user trace irregular shapes smoothly with bezier curves.



**Figure 5.5B.** Here an illustration of a nurse is seen in three views. In Nurse.art:2 the bezier curves that make up her arm are being manipulated; this manipulation is reflected in Nurse.art:1.



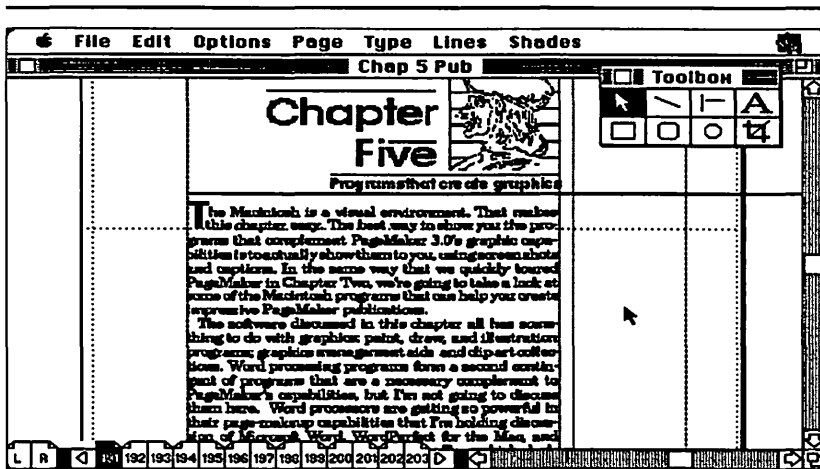
**Figure 5.5C.** Illustrator and other PostScript-based art programs are well-suited to scientific diagrams. The bottom half of the screen is the artwork; the top is the zoomed-in view of the artwork in print preview mode.

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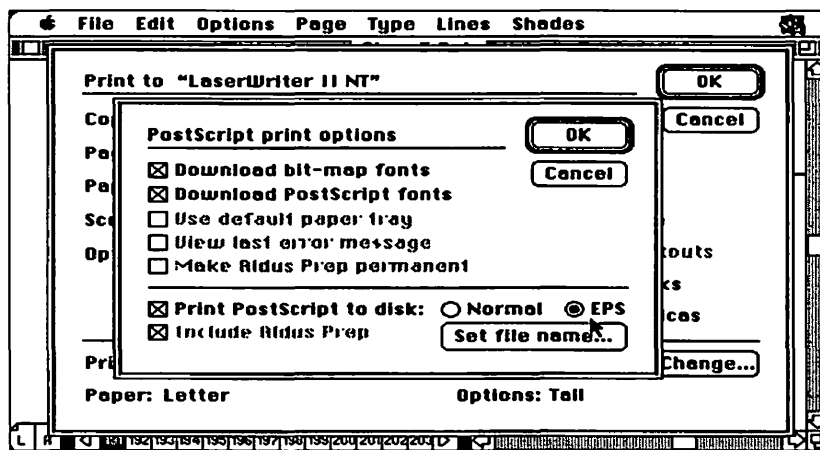
EPS files are literally a mixed bag. Standard PostScript is set up to describe printed pages rather than screen images, and so EPS files had to provide a slot for a standard screen image inside them. For the Mac, that screen image can be a TIFF file, a MacPaint file, or a PICT file (in the PC version of PageMaker, only TIFF and MacPaint are acceptable). The PostScript file goes to the printer, and the other file format provides only what you see on the screen. If no such screen description is available inside the EPS file, all that is displayed on the PageMaker screen is a rectangle containing a text description of the file.

One nice thing about an EPS file is that it fits nicely inside a PageMaker page, even if that EPS file consists of a large (64-kilobyte or greater) gray-scale scanned image. If such an image were placed in a publication in TIFF format, PageMaker would maintain the image as a separate linked file. That separate file could possibly be left behind if you went somewhere else to print your publication (as if you need more things to worry about).

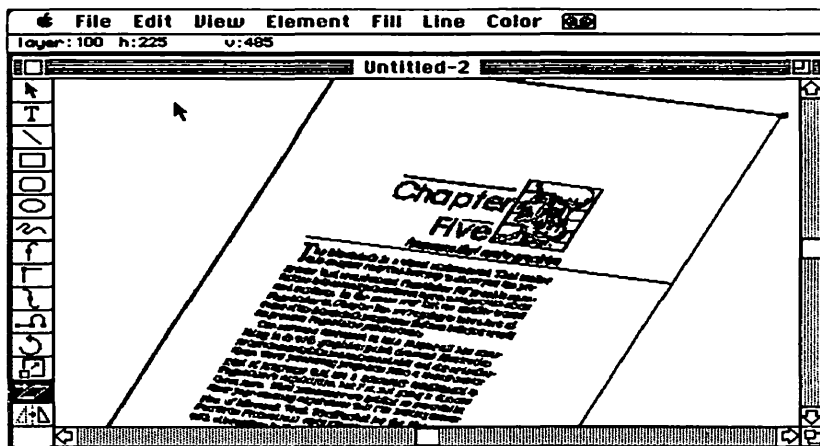
You can store a page of a PageMaker publication as an EPS file and move it to another PageMaker publication. Take for example the reduced image of the opening page of Chapter One shown in *Figure 5.6A*. The image began as the PostScript code PageMaker sends to the laser printer; an option in the Aldus printer driver allowed me to store it as an EPS file instead (*Figure 5.6B*). I then imported it into Aldus FreeHand, reduced it, and gave it an oblique angle (*Figure 5.6C*). This kind of floating-page effect is quite useful for the creation of posters and such.



**Figure 5.6A.** Here is the first page of Chapter Five in PageMaker.



**Figure 5.6B.** Holding down the Option key while clicking the print button brings up a dialog box that allows saving the page as an EPS file.



**Figure 5.6C.** Aldus FreeHand read the EPS file, and I used the shear tool to oblique the page. I call the effect the "Star Wars credits" look — it is as if the page were floating through the air.

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Although file standards abound, most programs use a proprietary format that isn't shared with other software vendors. Freehand, Illustrator, and Illustrator 88 can all manipulate EPS files, but store files in a proprietary format unless instructed otherwise. Thus, in order to place an illustration created with one of these programs into a PageMaker publication, you have to first use **Save As** or **Export** to create an EPS version of the illustration.

MacDraw and other non-PostScript, object-oriented drawing programs suffer from the same kind of split between proprietary and standard file format. If you want to place a MacDraw drawing in a PageMaker publication, you have to save it as a PICT file (which is actually a description written in the QuickDraw language that's built into the Mac).

I'll give more detail about these file formats as they apply to each program covered in this chapter. If you're interested in converting files from one standard format to another, look for the Hot Tip boxes in the sections of this chapter on The Curator, Illustrator 88, and Micrografx Designer.

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## **The program that started it all: MacPaint**

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Do you remember the Lisa? Bill Atkinson is the genius who created the graphic underpinnings of that ahead-of-it's-time machine. Atkinson knew that systems software programmers rarely got much recognition, but he became understandably upset when his managers at Apple hogged the limelight. (You might recall that Time magazine put the Lisa on its cover as Man of the Year and every computer magazine raved about the new machine, but there was scarcely a mention of Atkinson's name.)

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One of the things Apple cofounder Steve Jobs did to persuade Atkinson to join his so-called “band of pirates” — who were creating the “people’s alternative” to the very expensive Lisa — was to promise him that he would have a large share of the limelight, and that he could really put his mark on the new computer by writing one of its primary application programs instead of having his work buried in the ROM bowels of the machine.

If you’ve ever wondered why Atkinson’s face comes up when you launch MacPaint, that’s why.

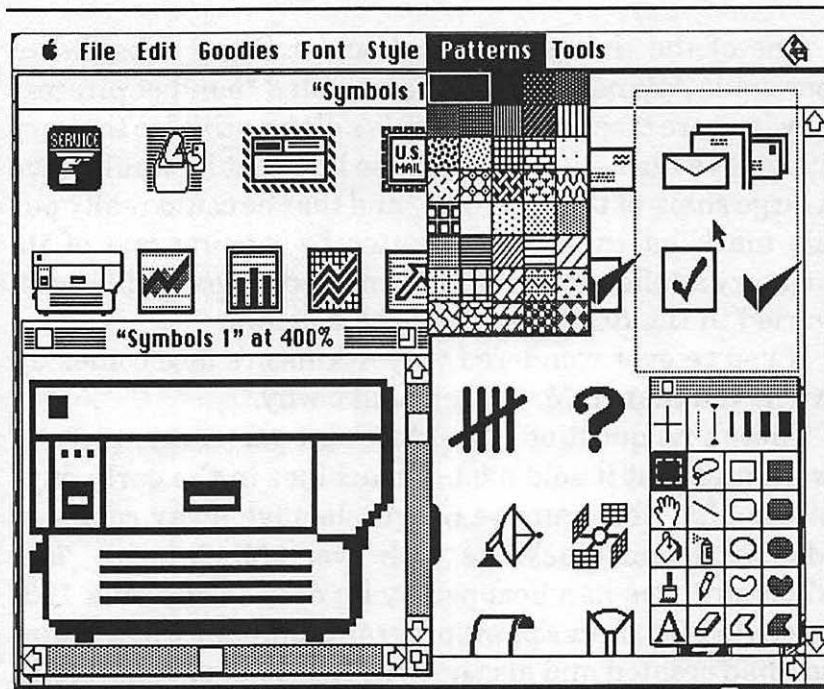
There’s no question that MacPaint was a fine piece of work and that it sold a lot of machines in the early days of the Mac (for many years, Apple gave away copies of MacPaint and MacWrite with every Macintosh). But MacPaint was handicapped by its need to run on a 128-kilobyte Mac. Later paint programs built on what Atkinson had created and also had the luxury of assuming 512 kilobytes or more of memory. Thus it is that MacPaint lost ground and began to seem rather primitive.

As you’ll see in *Figures 5.7A* and *5.7B* on page 200, the recent rewrite of MacPaint by the Apple spin-off Claris Software has improved MacPaint, but not enough to put it back at the front of the pack. A desk accessory called DeskPaint (*Figures 5.8A* through *5.8B* on page 201) is more powerful even though encumbered by the constraints that face all DAs.

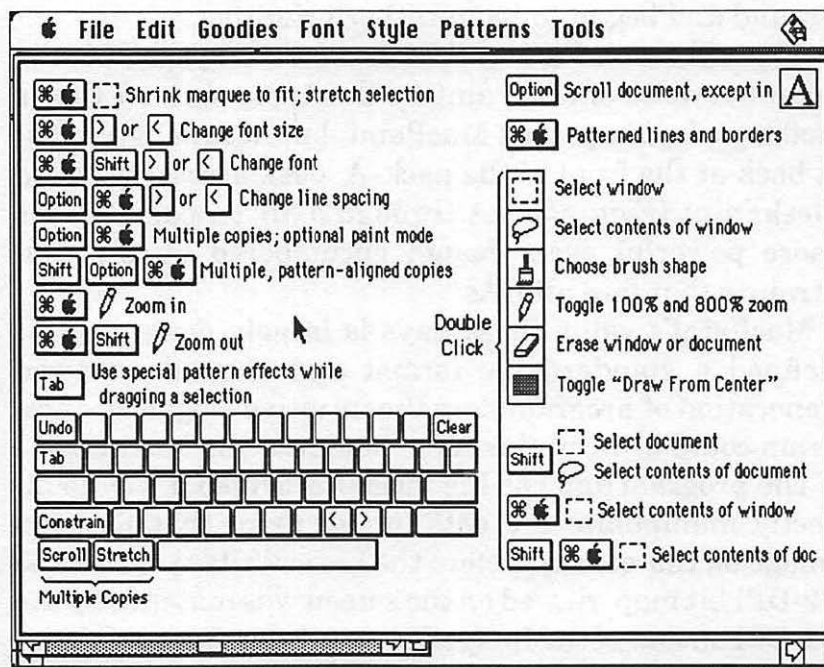
MacPaint’s value these days is largely past-tense. It defined a standard file format and showed an awed generation of programmers the intuitive elegance a program could have on this new computer, the Macintosh.

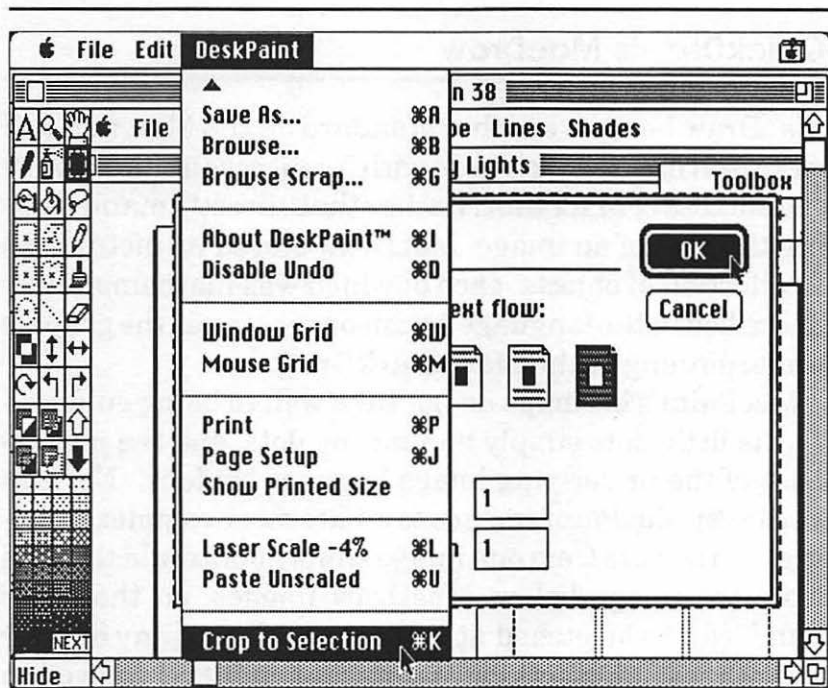
The program and the file format provided a way to directly manipulate the dots (or bit map) that form an image on the screen. Before the LaserWriter printer, the 72-DPI bit map viewed on the screen was matched by the 72-DPI output of the ImageWriter printer. It was an easy world then, but not yet ready for desktop publishing.

**Figure 5.7A.** In the lower left, the 400% view shows MacPaint II's new ability to zoom in gradually. The Tools palette has been "torn off" and dragged to the lower right, and the Patterns palette is being torn off and dragged to the upper right corner.

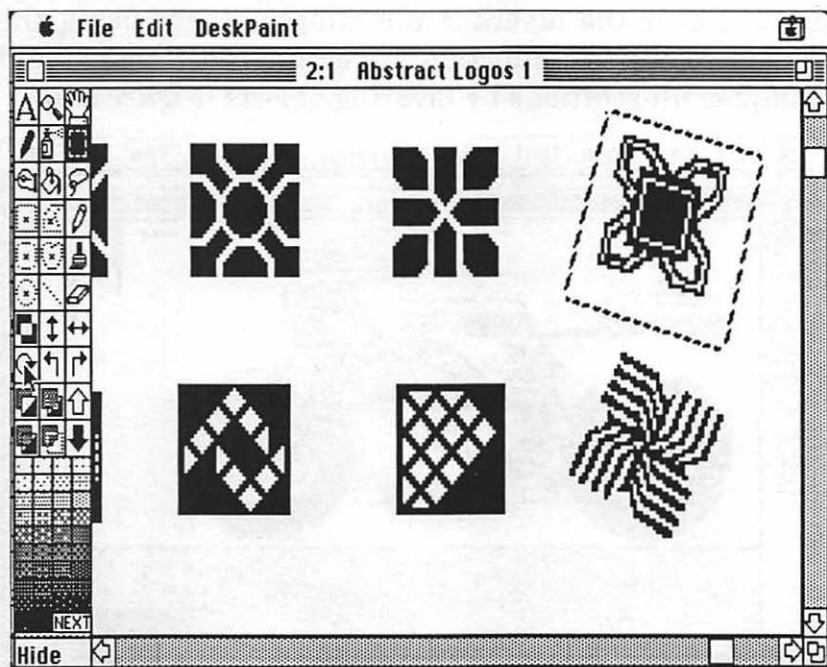


**Figure 5.7B.** Anyone familiar with the original MacPaint will notice improvements in this shortcut summary, among them: a constrain key (for erasing in a straight line) and double-click shortcuts.





**Figure 5.8A.** During production of the book, DeskPaint was very handy. For example, if I wanted just a dialog box from a screen dump, I selected it and used the Crop to Selection choice in the menu.



**Figure 5.8B.** Even though it's just a desk accessory, DeskPaint can rotate selections to an arbitrary degree.

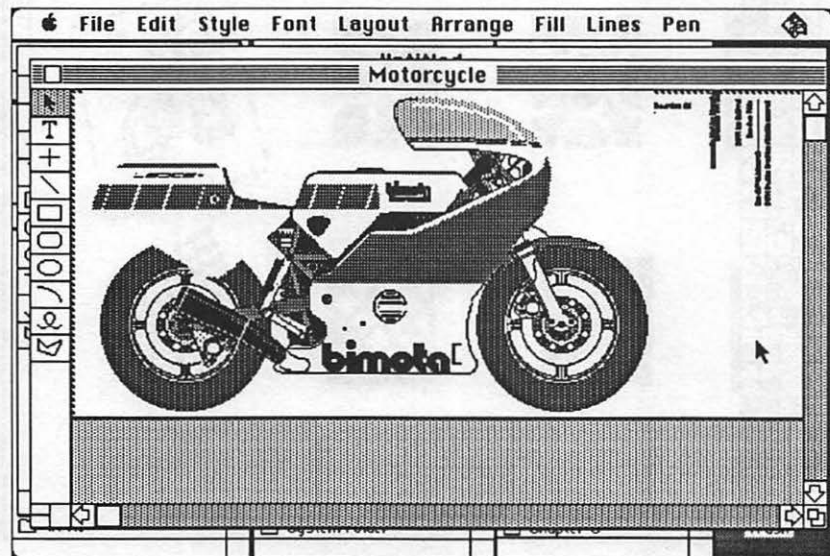
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## QuickDraw's MacDraw

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MacDraw became another standard on the Mac, and Bill Atkinson had as much to do with its success as he did with the success of MacPaint. Rather than directly manipulating the dots of an image, MacDraw stored its pictures as a collection of objects, each of which was mathematically described in the language Atkinson created as the graphic underpinning of the Mac, QuickDraw.

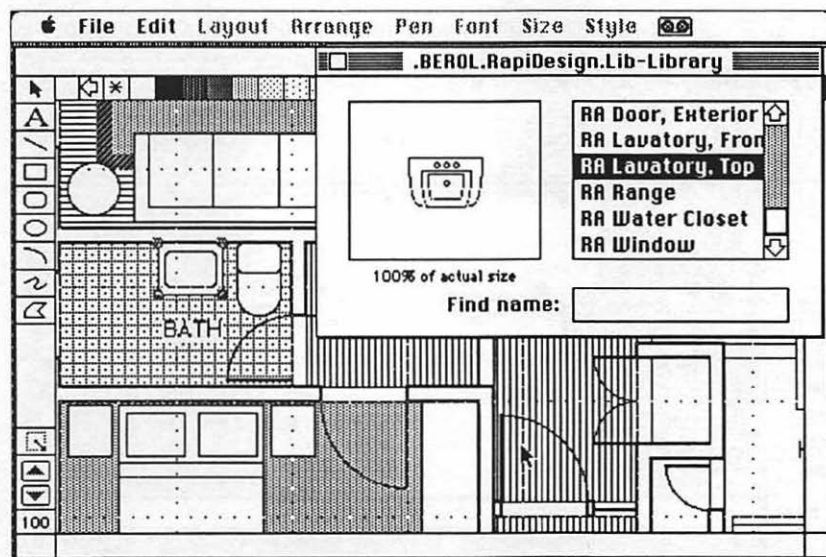
MacPaint's bit maps do not take well to being enlarged — the little dots simply become big dots, and the jaggedness of the underlying image becomes obvious. Nor can you layer MacPaint images to create more complex drawings — the dots from one image simply obliterate the dots from the image below. MacDraw images, on the other hand, can be stretched at will without losing any of their smoothness. Objects can be stacked and even moved to the top or bottom of the stack, which gives you complete control over the layers if you simply repeat using the **Bring to the Top** function. It becomes possible to build complex illustrations by layering objects (*Figure 5.9*).



*Figure 5.9.* The original MacDraw has nearly finished redrawing the objects that make up a motorcycle illustration (from the DrawArt clip art collection).

When the LaserWriter printer was sprung on the world about a year after the memorable "1984" Mac advertisement, MacDraw's advantages became clearer. It was easy to translate QuickDraw into PostScript as the MacDraw image went to the printer, and thus MacDraw images could be printed at the printer's full resolution. MacPaint images could take advantage of the extra resolution only if you created them four times larger than you intended to use them and packed the 72-DPI image to 288 DPI by reducing to 25 percent as you printed.

The new version of MacDraw from Claris is going to be with us for awhile. MacDraw II supports color on the Mac II, draws on-screen as much as 10 times faster, supports libraries (Figure 5.10), and allows you to manage your objects in layers. Putting objects in separate layers allows you to work on just a few objects at a time as you create a complex illustration. The lack of clutter and faster redrawing that result should be a blessing for the many people who still put MacDraw through its paces.

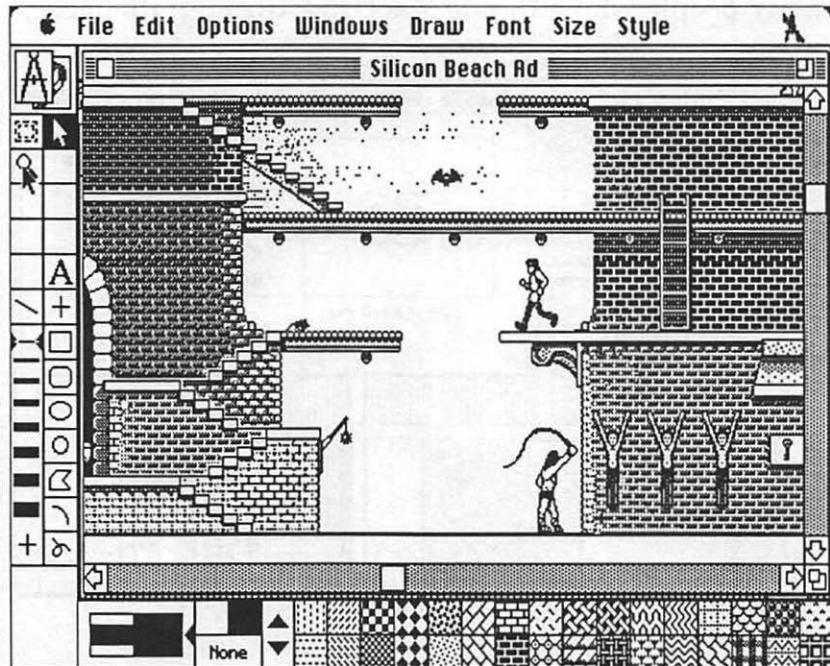


**Figure 5.10.** MacDraw II has added a number of features, including a symbols library, which is usually found only in CAD-CAM software.

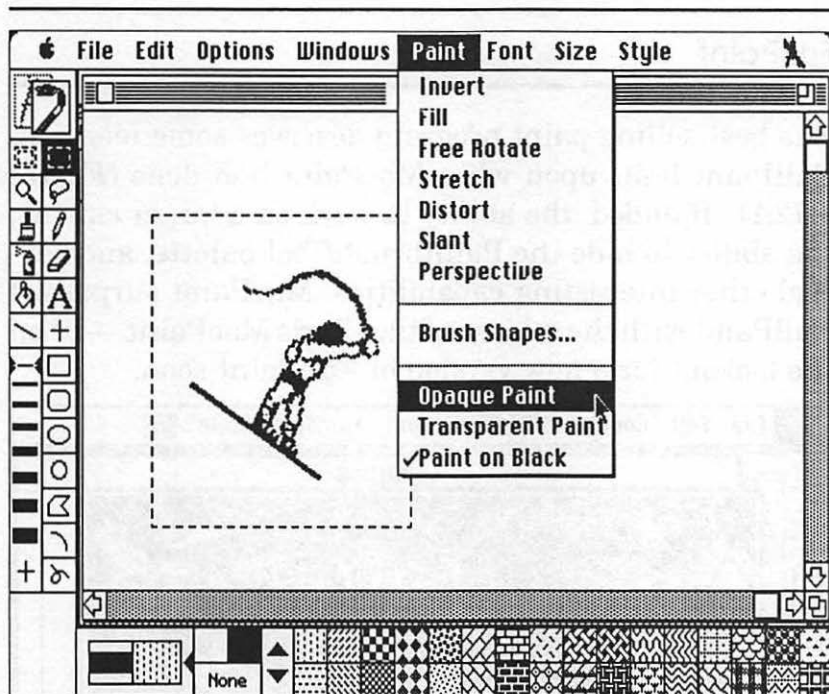
## SuperPaint

Silicon Beach Software's SuperPaint was the next program to point the way for the evolution of Mac illustration programs (Figures 5.11A through 5.11C). One of SuperPaint's innovations was its two-layer architecture: one for the manipulation of bit maps and the other for object-oriented drawings. SuperPaint also had a high-resolution mode called Laser Bits, which allowed you to manipulate a full 300-DPI image, bit by bit. Its magnifying-glass approach to zooming in for detail work soon eclipsed MacPaint's FatBits as the metaphor of choice for zooming. And SuperPaint had many other advantages, including the ability to open several files simultaneously.

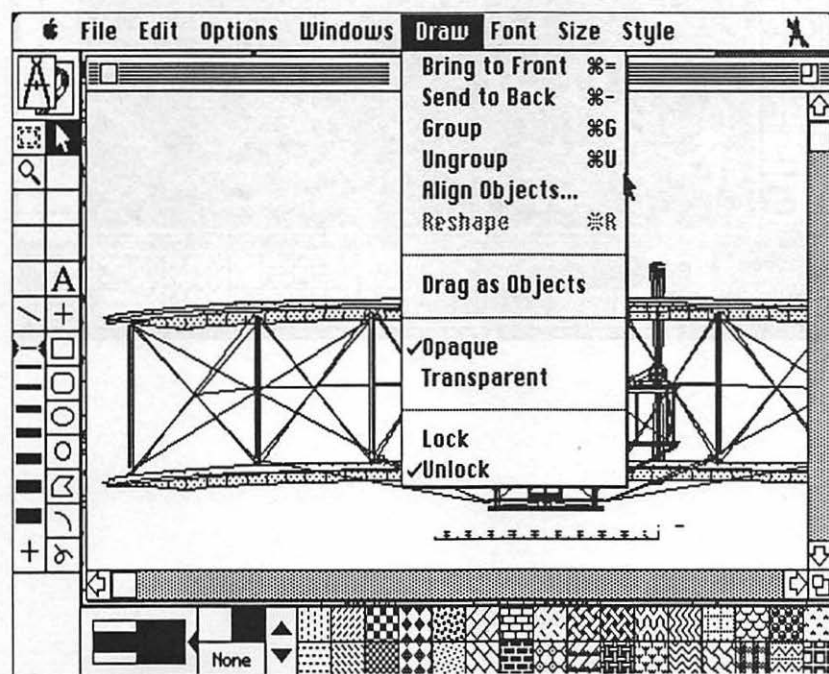
SuperPaint 2 adds several capabilities, including support for Encapsulated PostScript files, bezier curves, and an autotrace routine that will automatically turn a bit map into an object-oriented drawing.



*Figure 5.11A.*  
SuperPaint was used to create all the graphics seen in Silicon Beach's entertaining games, including Dark Castle, shown here.



**Figure 5.11B.** SuperPaint, like DeskPaint, allows you to zoom in and freely rotate a selection.



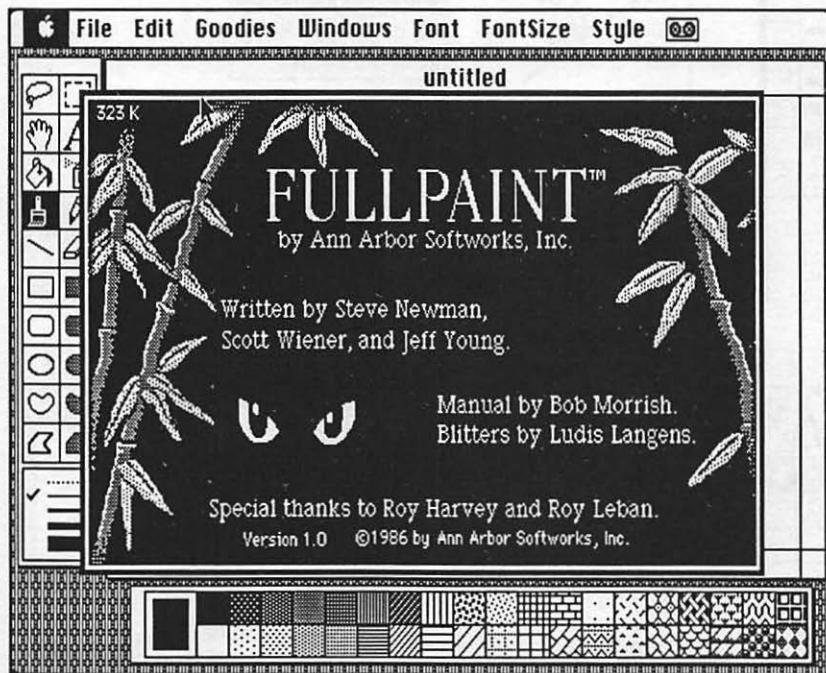
**Figure 5.11C.** What sets SuperPaint apart from other paint programs is its "draw" layer. You can see the drafting tool icon has replaced the paint brush in the upper left, to show that the draw layer is active, and the Paint menu is replaced by Draw.

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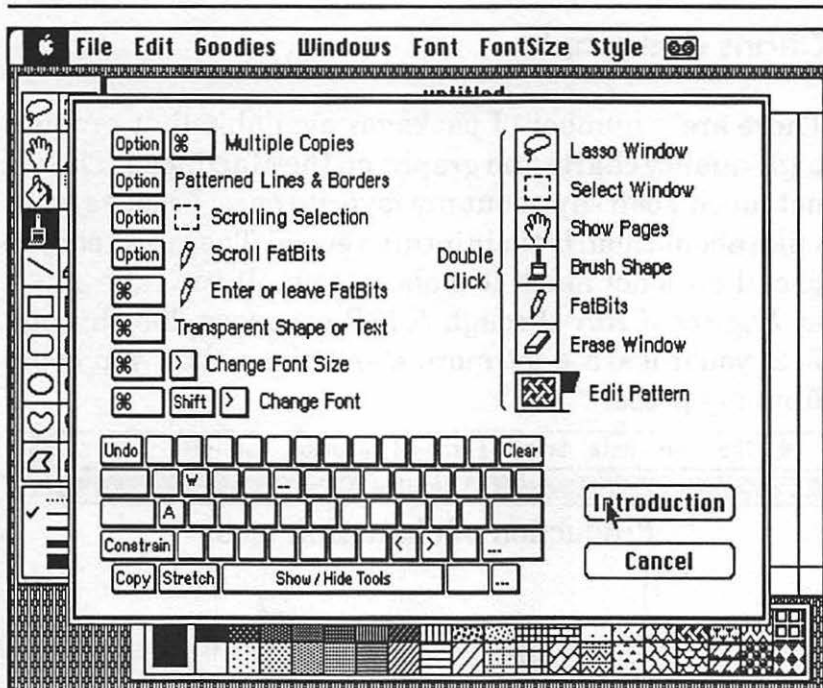
## FullPaint

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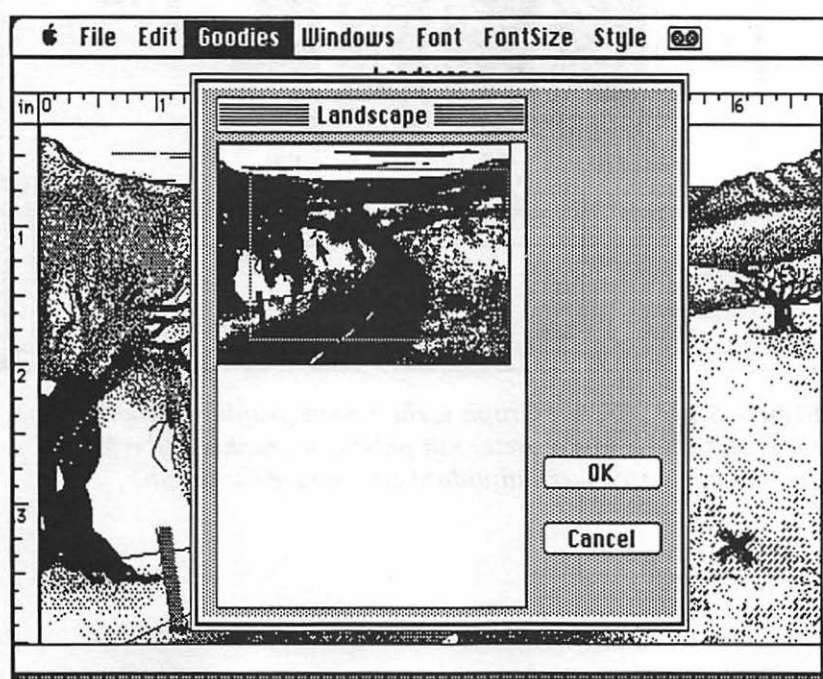
The best-selling paint program deserves some mention. FullPaint built upon what MacPaint had done (Figure 5.12A). It added the ability to work on a larger canvas, the ability to hide the Paintbrush/Tool palette, and several other interesting capabilities. MacPaint surpassed FullPaint with the release of the Claris MacPaint — be on the lookout for a new version of FullPaint soon.



**Figure 5.12A.**  
FullPaint's start-up screen shows off the program's ability to create "reverse" illustrations: white on black.



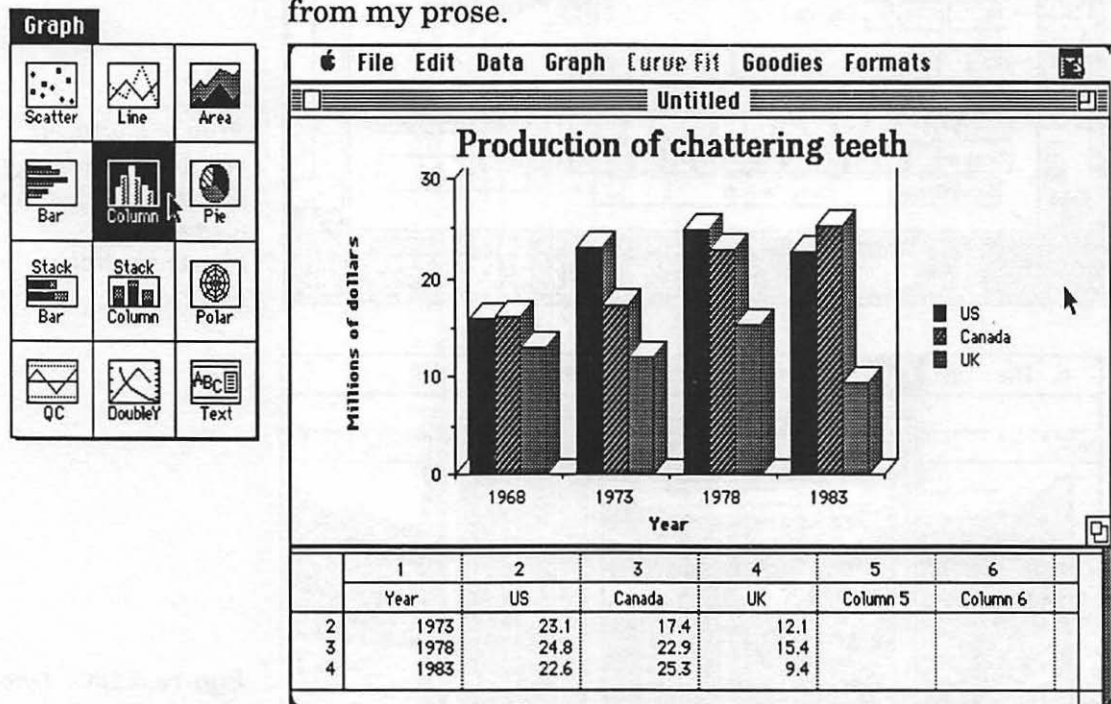
*Figure 5.12B. If you were wondering where Claris got the idea for the Shortcuts dialog box ...*



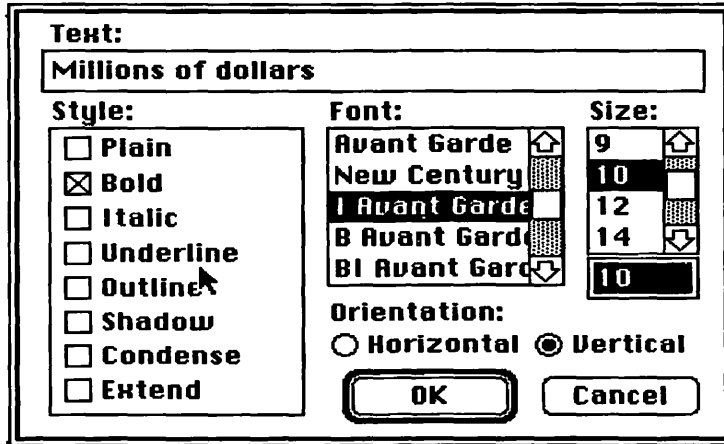
*Figure 5.12C. One of the original attractions of FullPaint was that its electronic canvas was a full page. A selection box lets the artist choose which part of that full page will be the active window.*

## Charts and graphs

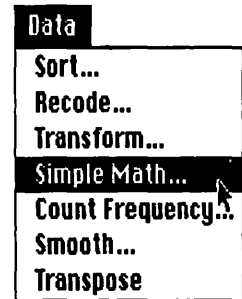
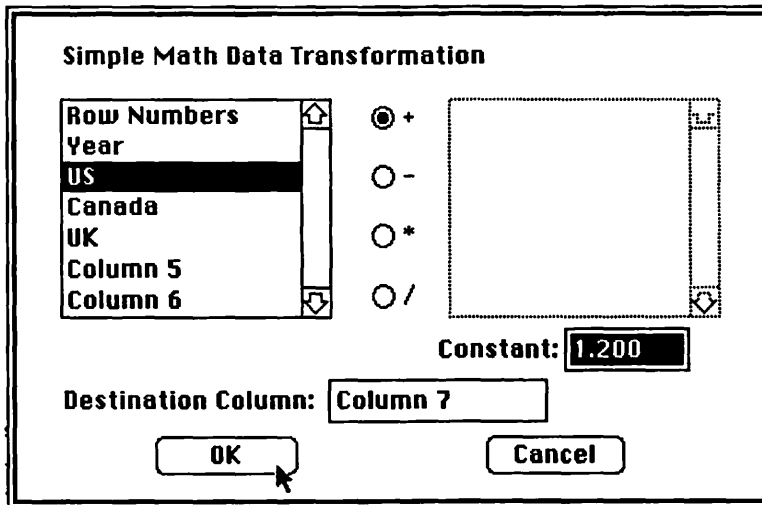
There are a number of packages available that produce high-quality charts and graphs on the Macintosh. There's not much I can say about my favorite ones, because what I like about them is their intuitiveness. They're so easy to use, there's not much to elaborate on. If you take a look at *Figures 5.13A through 5.17B* on pages 208 through 212, you'll learn a lot more about them than you could from my prose.



**Figure 5.13A.** Cricket Graph is the easiest graphing program I've ever run into. It has a pretty full palette of graphs, and a fair amount of control over individual elements of the graph.

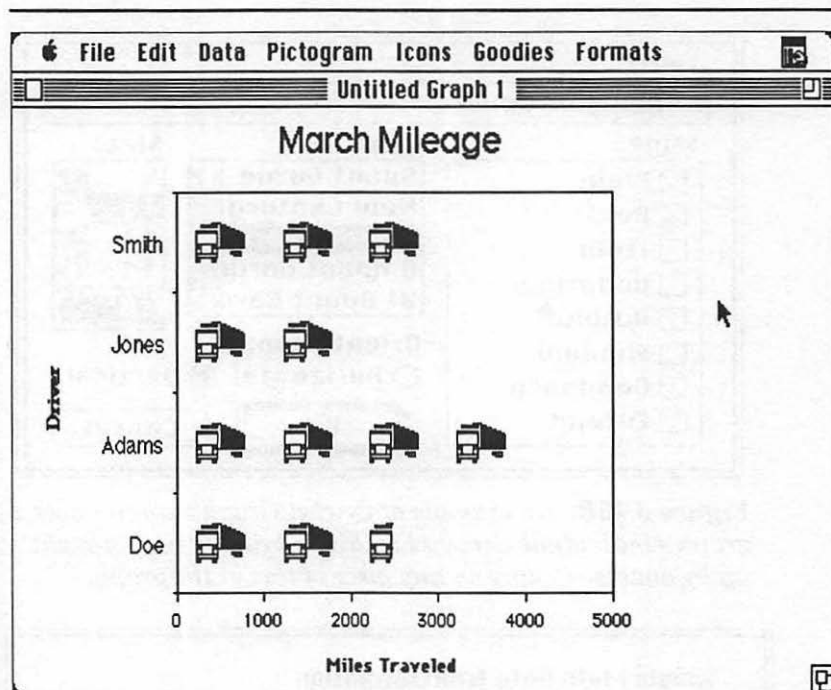


*Figure 5.13B. An example of Cricket Graph's control over a graph's individual elements is this text dialog box, brought up by double-clicking on any piece of text in the graph.*

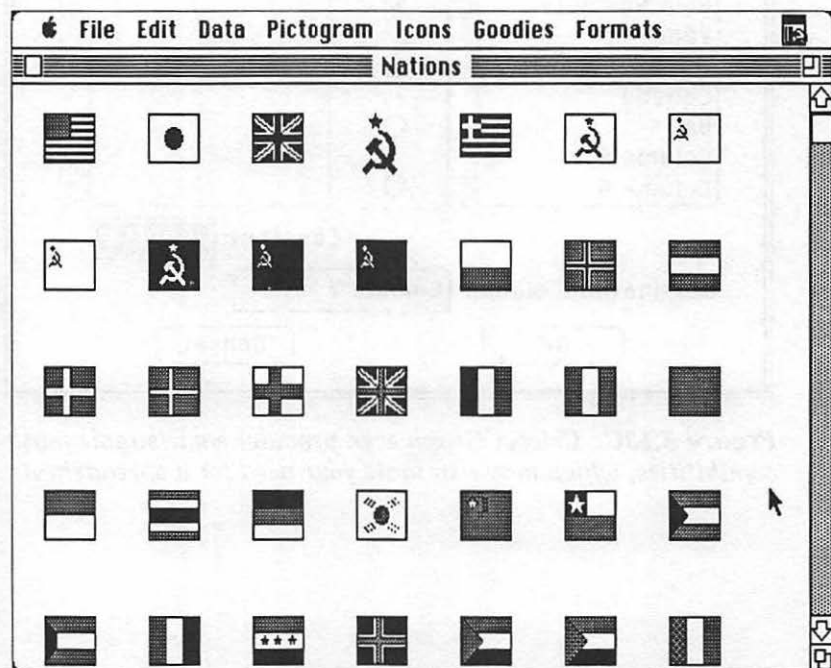


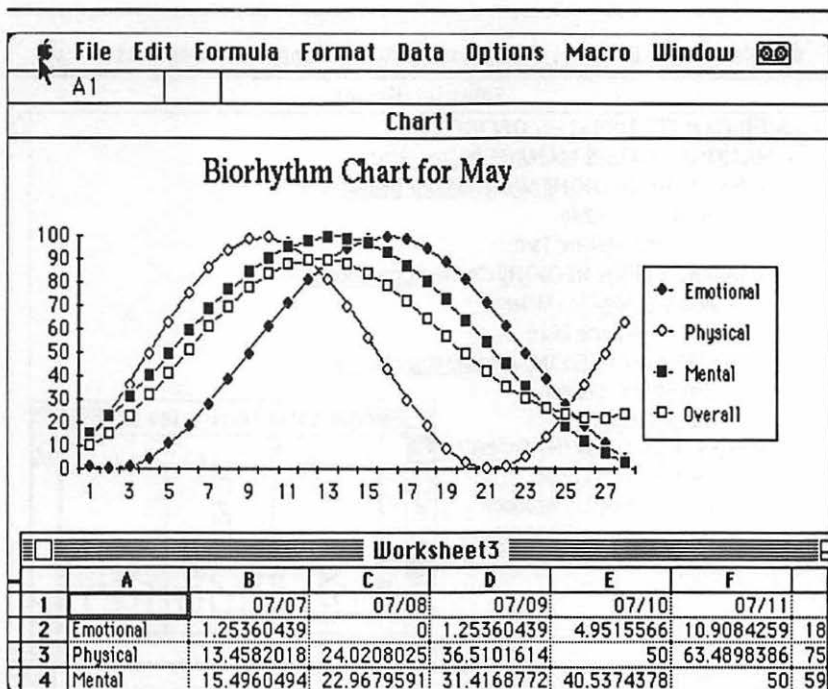
*Figure 5.13C. Cricket Graph even provides some simple math capabilities, which may eliminate your need for a spreadsheet.*

**Figure 5.14A.**  
Cricket Software's  
*Pict-o-graph* lets  
you substitute icons  
instead of simple  
bars. That way, the  
graph conveys  
something about the  
subject matter as  
well as the data  
trend.

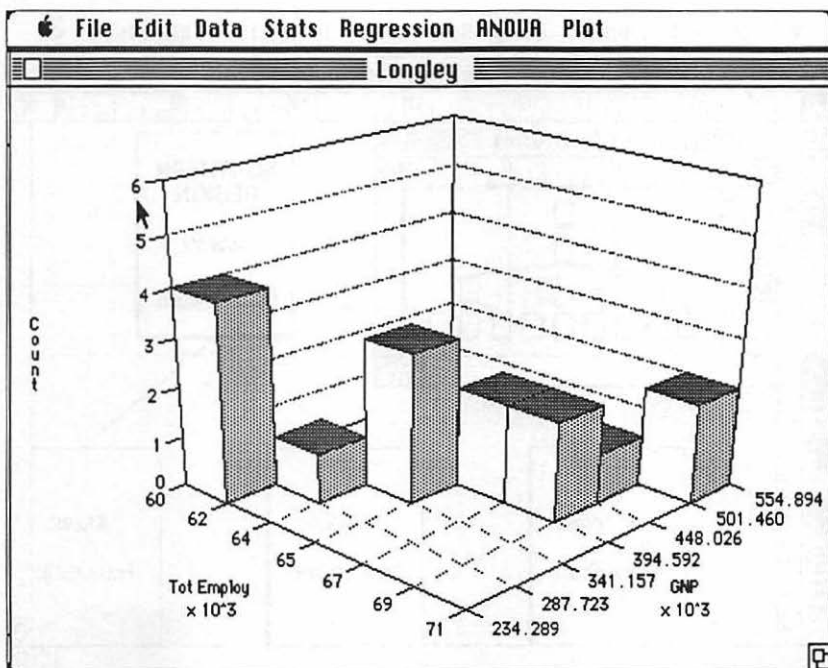


**Figure 5.14B.**  
*Pict-o-graph's*  
library of icons is  
extensive, including  
this collection of  
maps. And if you  
don't find what you  
need, the software  
includes an icon  
preparation utility.  
You can create any  
image you wish and  
graph with it.



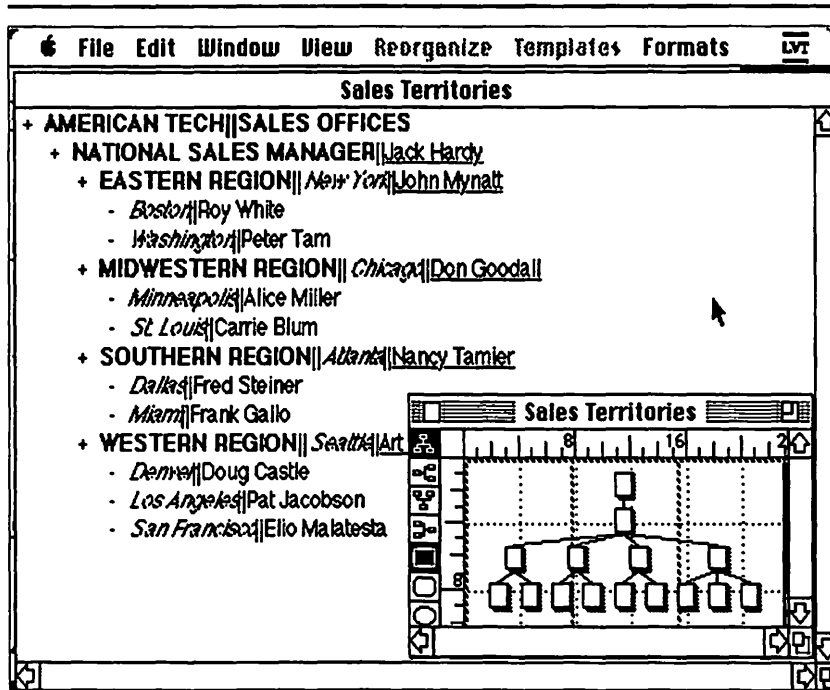


**Figure 5.15.** Microsoft's Excel spreadsheet has sophisticated graphing built-in.

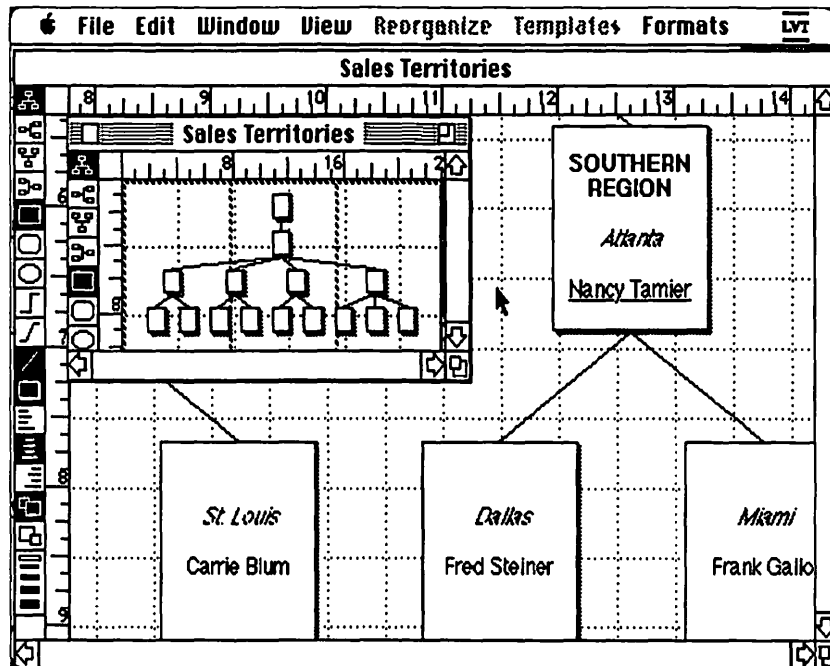


**Figure 5.16.** If your speciality is one of the social sciences, Cricket Draw's StatWorks program can ease the task of publishing statistical information.

**Figure 5.17A.**  
*Some people think Symantec /Living VideoText's More software is just an outliner. But it is also very good at converting the hierarchy of an outline into an organization or "tree" chart.*



**Figure 5.17B.**  
*Another view shows what the organization chart looks like up close.*

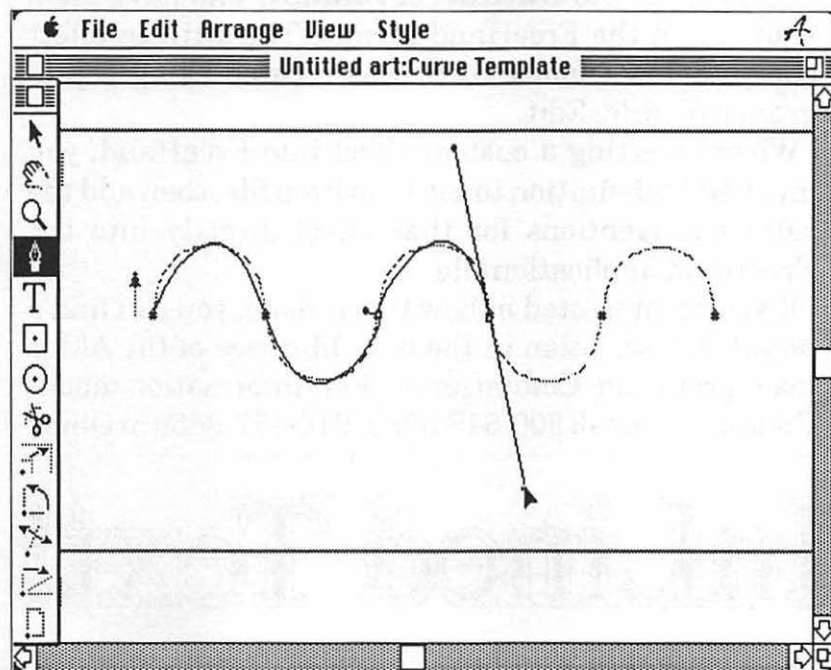


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## Illustrator and FreeHand

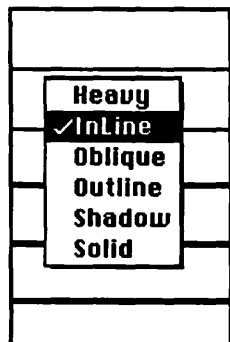
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Adobe Illustrator was a ground-breaking program. It gave artists access to many of the special effects lurking within the PostScript language without making them learn how to write PostScript programs. Its one drawback was that the user had to learn a new way to draw, for which there was no analogy in the world of traditional art. Using MacPaint was like using brushes and pencils, and MacDraw was only a little further afield from the world of the artist, based as it was on concepts used by architects and engineers using CAD-CAM packages on larger computers. But using Illustrator's pen tool and handles to manipulate the shape of smooth curves was completely novel to all but the designers of computer typefaces (Figure 5.18). So were the tools that allowed the artist to skew, rotate, and scale. Thus it was that Illustrator became known for being hard to learn.



*Figure 5.18. There is no real-world analog for how Illustrator's pen tool works, which is why it was labelled "hard-to-use" by the computer trade press. Curves can be made to match any desired shape by pulling on and tilting the long handle that extends from each point on Illustrator's bezier curves.*

Aldus FreeHand, which had the advantage of building on Illustrator's foundation, has many of the same capabilities as the original Illustrator along with the ability to manipulate color. Instead of forcing you to draw by placing points and manipulating handles, FreeHand provides a more familiar tool: a pen that lets you simply draw. FreeHand is also quite good at manipulating text, as you'll see in the following Hot Tip:



## Freehand Text Effects

FreeHand is pretty good at manipulating text — you can tilt it, stretch it, rotate it, and basically treat it like any other graphic element. If you're something of a Mac hacker, you can even create effects similar to **Outline**, or **Shadow** and have them show up in the FreeHand menus. The **InLine** effect shown below (*Figure 5.19*) was created using a program called ResEdit.

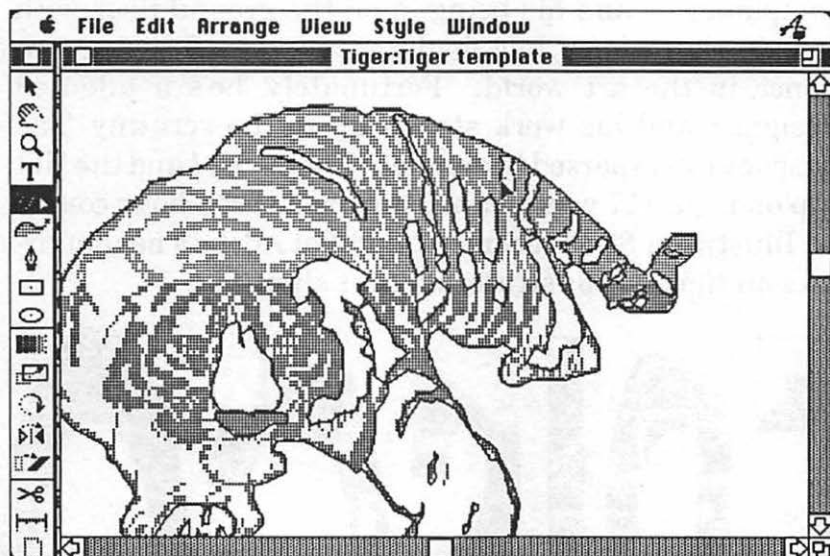
When inserting a custom effect into FreeHand, you must add a definition to the UserPrep file, then add the calling conventions for that effect directly into the FreeHand application file.

If you're interested in how this is done, you can find a detailed description in the data libraries of the Aldus user group on Compuserve. For information about Compuserve, call 800-848-8990 (614-457-8650 in Ohio).

*Figure 5.19. An example of FreeHand's ability to manipulate text.*

# InLined Text!

Illustrator 88 is Adobe's answer to FreeHand. To make it easier to get going, and sometimes easier to get the job done, Illustrator 88 includes a freehand tool much like the pen in FreeHand. It also includes an autotrace capability that will do a reasonable job of tracing the outline of any piece of art that can be scanned into the Macintosh (Figures 5.20A and 5.20B).



**Figure 5.20A.** Illustrator 88 is easier to use than the original Illustrator. A free-hand drawing tool lets an artist simply draw. Just below it is an "auto-trace" tool that will trace simple bit-mapped shapes automatically. It is incapable of tracing a whole tiger, but it can handle stripes.



**Figure 5.20B.** Although not finished, preview mode shows the traced tiger is going to work out fine.

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Designer David Smith is one of the most enthusiastic proponents of Illustrator 88. He's not an unbiased observer, however. He designs on-screen icons for Adobe (as well as for other software, including Danny Goodman's Focal Point stack for HyperCard). His illustrations are featured in Adobe's promotional materials. His close association with one of the premiere graphics software companies — and his being in on the ground floor with these new tools — has doubtless increased his prominence in the art world. Fortunately, he's a talented designer, and his work stands up to the scrutiny. The wisdom interspersed throughout *Figure 5.21* and the Hot Tip on page 217 was gleaned during a three-hour course on Illustrator 88 that Smith taught at Adobe's headquarters on the day Illustrator 88 first shipped.

*Figure 5.21. One Illustrator 88 trick David Smith likes is to use font outlines as a cookie cutter to create special effects like this one: the word "San Francisco" has been used as a cookie cutter on a drawing of Victorian houses.*



David Smith says people have a hard time with Illustrator — and particularly with the pen tool — because there is no real-world analog for it. But he has a few tips that should make it easier.

## Illustrator Made Easy

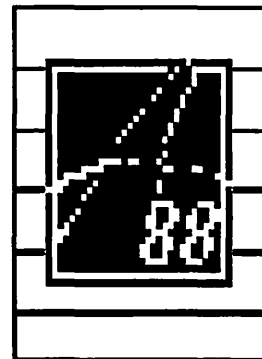
The key for drawing bezier curves with the pen tool is to not let up on the mouse button, Smith says. You make the first click and hold the button down as you drag in the direction the curve segment is going to go.

Changing directions? You have to signal, just like in a car. Signal by holding down the option key as you click and drag in the new direction.

Smith says people find Illustrator clumsy if they keep moving up to the pull down menus and tool palette. The key is to take advantage of the keyboard shortcuts. For example, if you're drawing with the pen and want to select an object, he says, just hold hold down the command key to turn the pen into the selection arrow.

And although Smith has praise for Illustrator 88's new AutoTrace and Freehand tools, he cautions that sometimes it makes more sense to use one of the other tools. "You wouldn't trace a circle — you'd use the circle tool." Both the AutoTrace and Freehand tools tend to produce too many points. "If you can use fewer points to draw a curve, do," Smith says. The difference shows up in smoother curves.

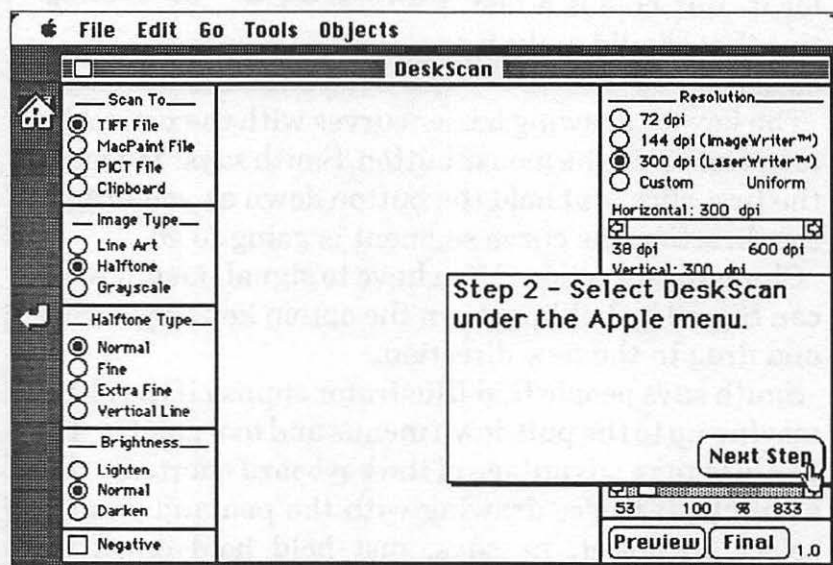
When you do use those tools, says Smith, call up the **Preferences** dialog box from the **Edit** menu and set **Freehand Tolerance** and **AutoTrace gap distance** to as many pixels as you can and still get acceptably accurate results. Once again, you'll get smoother curves.



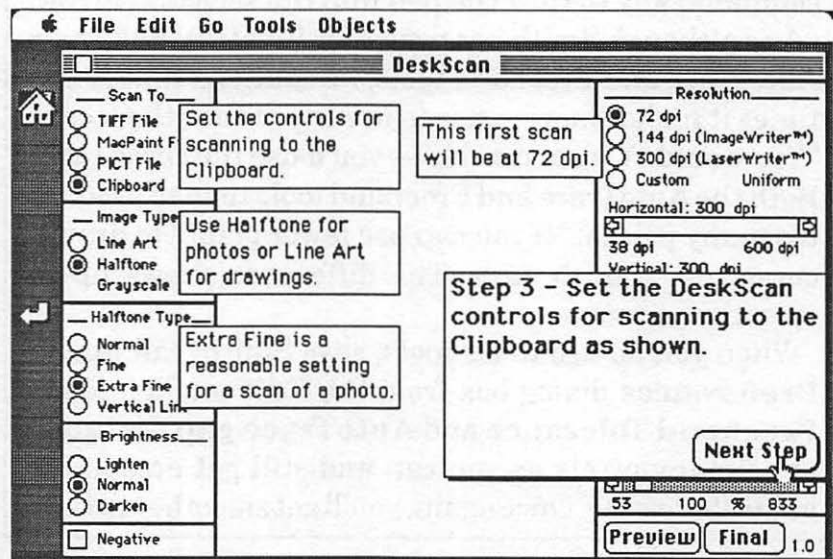
## DeskScan and DeskPaint

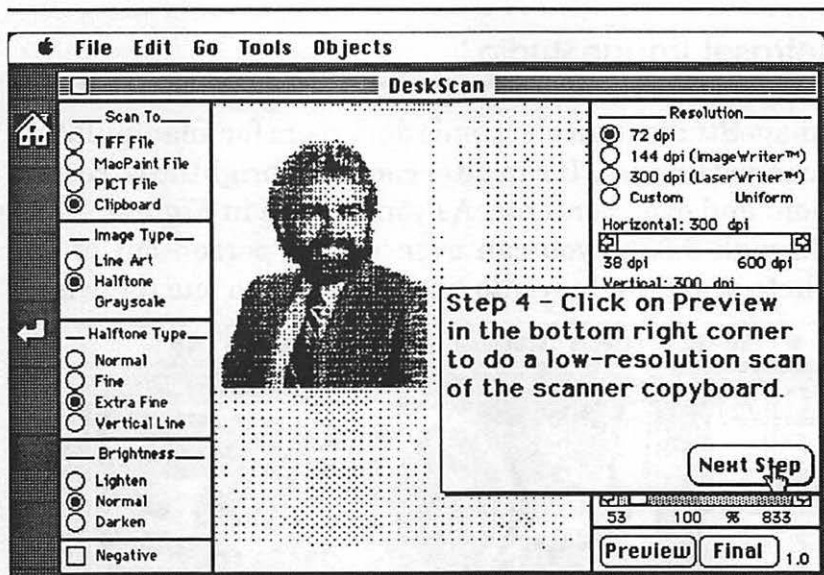
Hewlett-Packard's software for the manipulation of scanned images is typical. Once again, I turn to the HyperCard stack that HP distributes with its scanners (*Figures 5.22A through 5.22D*).

**Figure 5.22A.**  
HP's public domain  
HyperCard stack  
explains the  
workings of the Mac  
software for its  
ScanJet scanner.

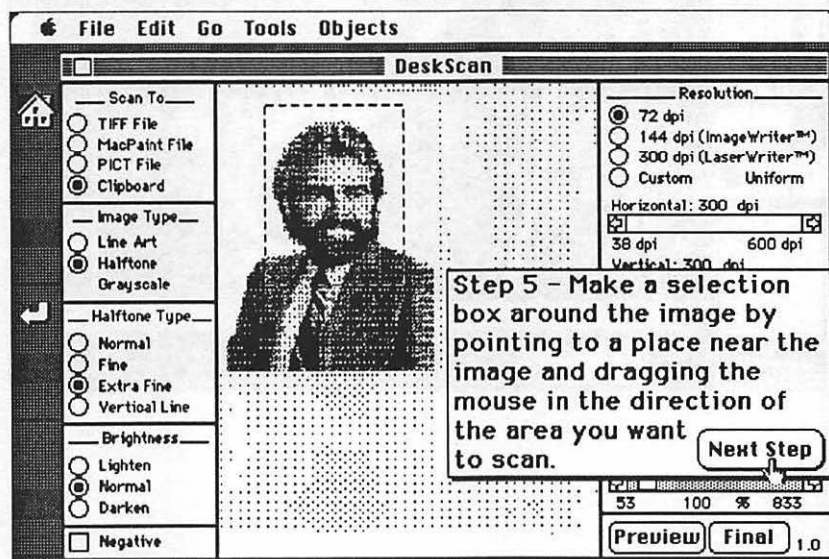


**Figure 5.22B.**  
Step two.





*Figure 5.22C.  
Step Four.*



*Figure 5.22D.  
Step Five.*

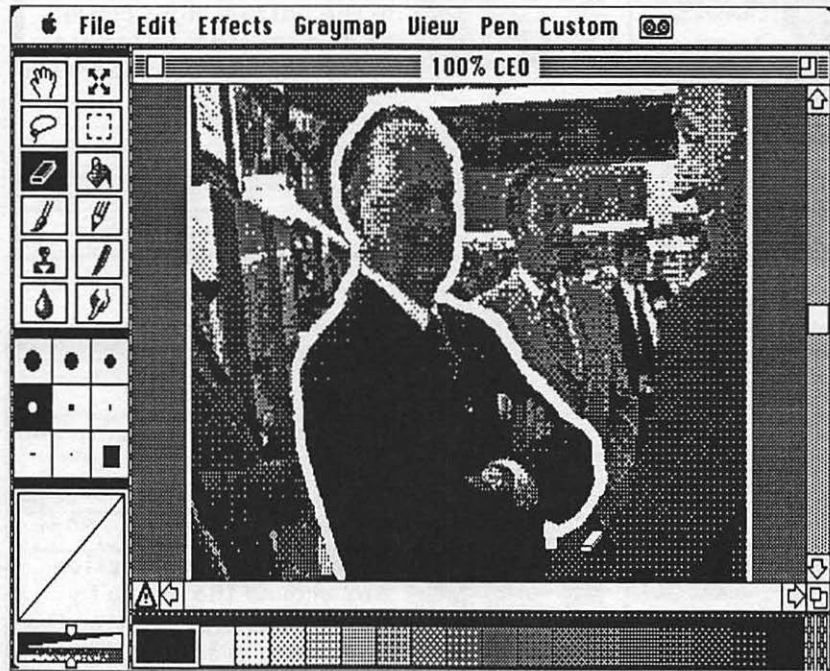
One surprise was HP's inclusion of a utility that converts PC Tagged Image File Format files to Mac TIFF format. All of the TIFF files I've created were done on my Datacopy JetReader, which is hooked to an AT-compatible machine, and then transferred over to the Mac. But PageMaker has handled every PC TIFF file effortlessly.

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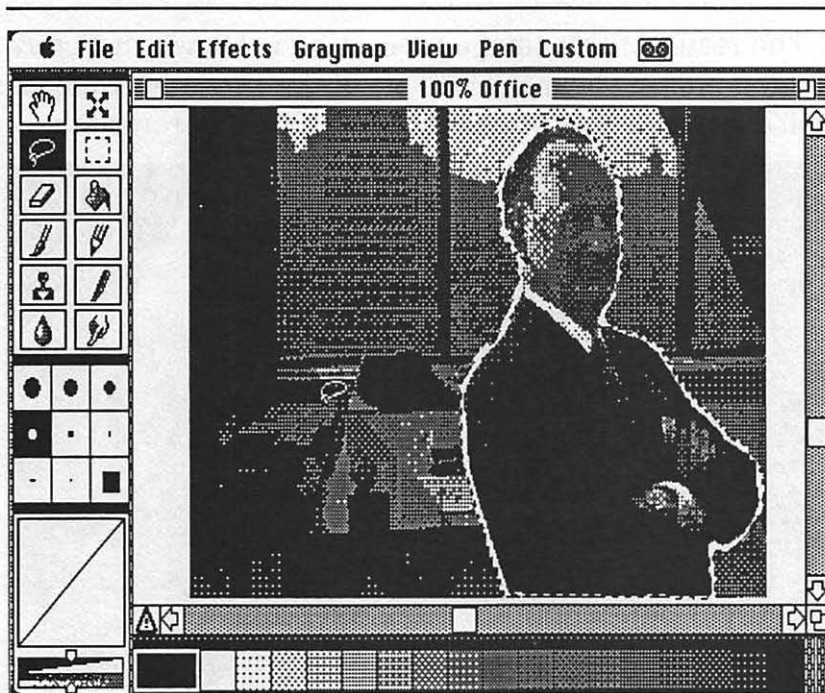
## Letraset ImageStudio

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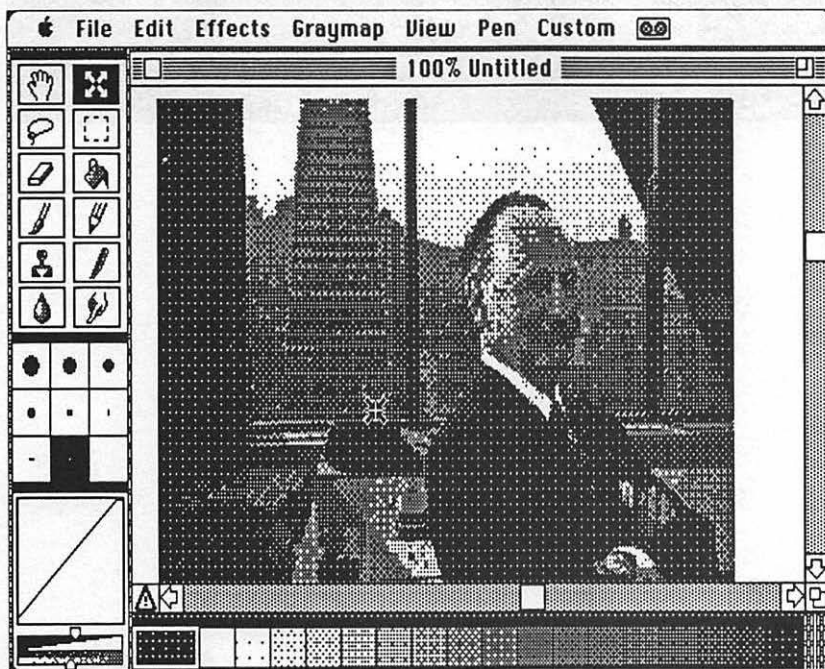
ImageStudio is an electronic darkroom for manipulating scanned images. It can alter contrast, brightness, resolution, and even contents. As you can see in *Figures 5.23A* through *5.23C*, you can even take a person out of one photo and drop him into another with no one the wiser.



**Figure 5.23A.**  
*First, the eraser tool is used to separate the CEO from the cluttered background of a trade show.*



**Figure 5.23B.** Sophisticated Cut and Paste capabilities let ImageStudio fill in the white space around the CEO with the background of the office you've dropped his image into.

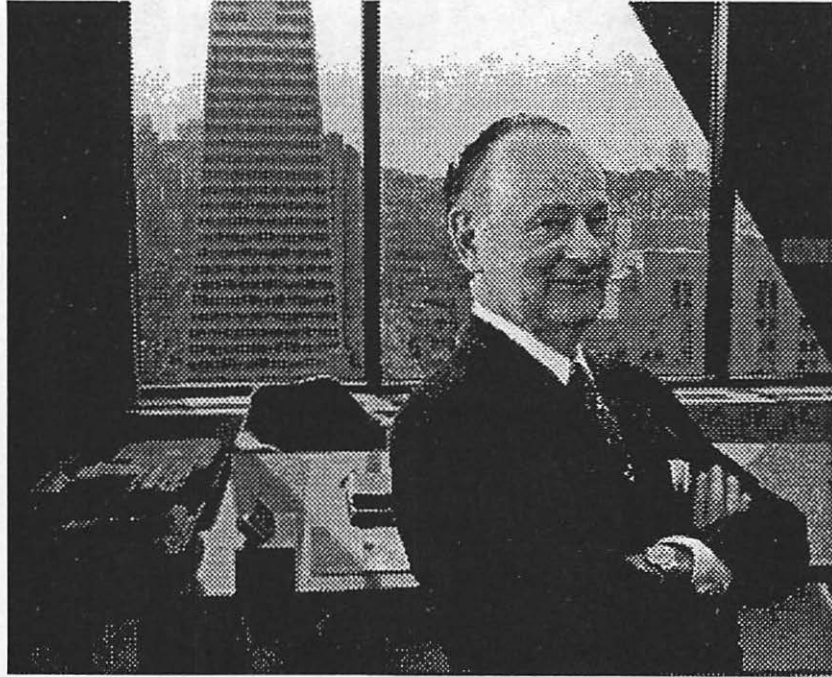


**Figure 5.23C.** Finished. You can't really tell that the CEO has never seen the inside of this classy San Francisco office. Notice that ImageStudio has been used to lighten the image.

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The result of this image processing is shown in *Figure 5.24*. If it didn't bear the look of 300-DPI scanned images, you'd swear it was a real photo, not an electronic fake.

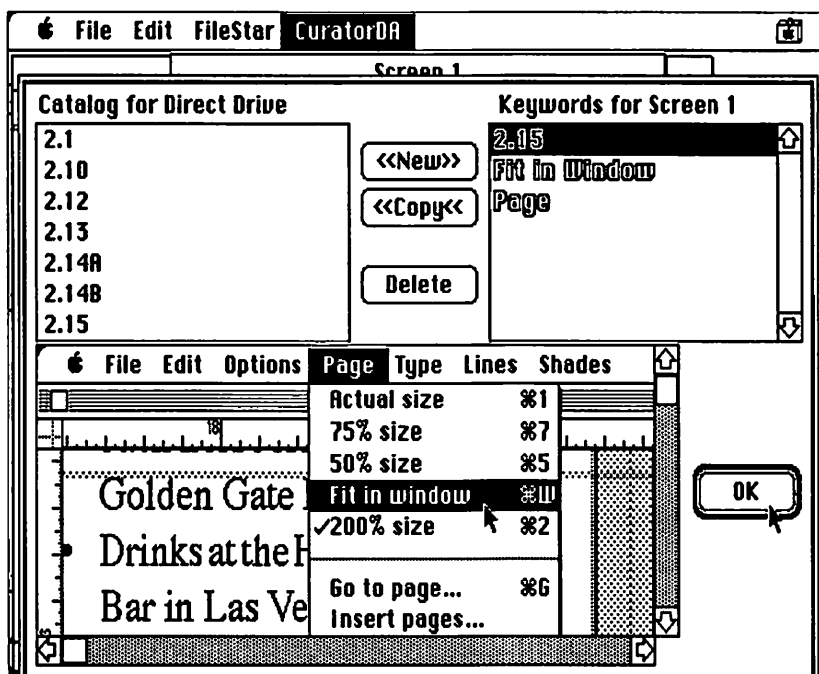
*Figure 5.24. The result is a photo with your CEO in a proper, uncluttered environment. It's difficult to tell that any image processing magic has taken place. And when printed on a Linotronic typesetter, the result can be nearly as good as a halftone.*



## Managing all that clip art

One of the problems I have encountered in desktop publishing is managing all the art that seems destined to fill every available megabyte of disk space I possess. There are many collections of clip art available (see *Figures 5.26A* through *5.26F* on the following two pages for a few samples), which I collect voraciously because having a canned illustration of anything you might name saves me the embarrassment of proving I can't draw.

One of the tools I used to track the illustrations in this book was Curator (*Figure 5.25*).

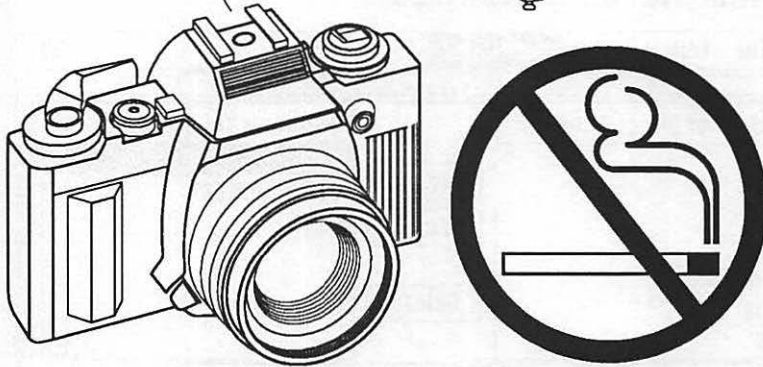


*Figure 5.25. To keep track of all the graphics in this book, I used Curator. Although I liked its keyword search ability, its speed was a problem. I soon found myself resorting to DeskPaint's browse command to open all paint files in a folder until I saw the one I wanted.*

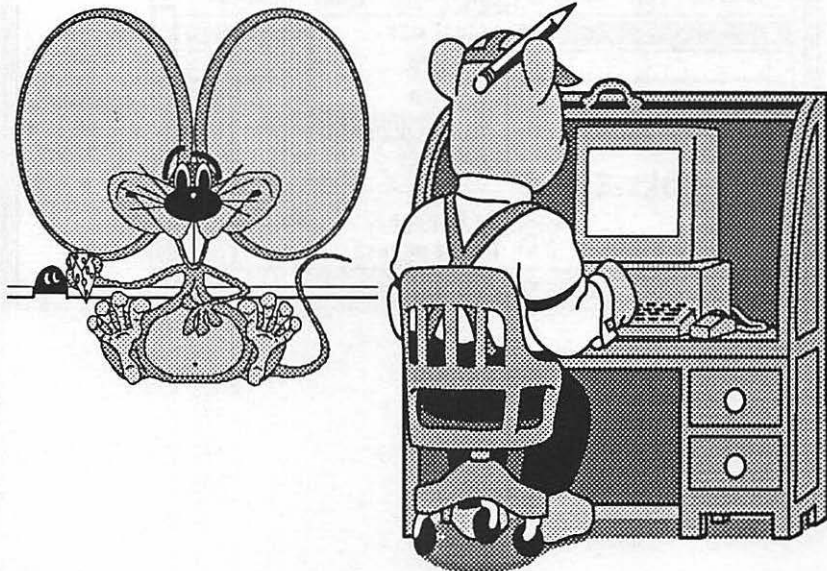
**Figure 5.26A.** *The Nagel-esque woman and the piano are in the public domain. I downloaded them with my modem from Compuserve; they were created by artistic members of the Adobe special interest group.*

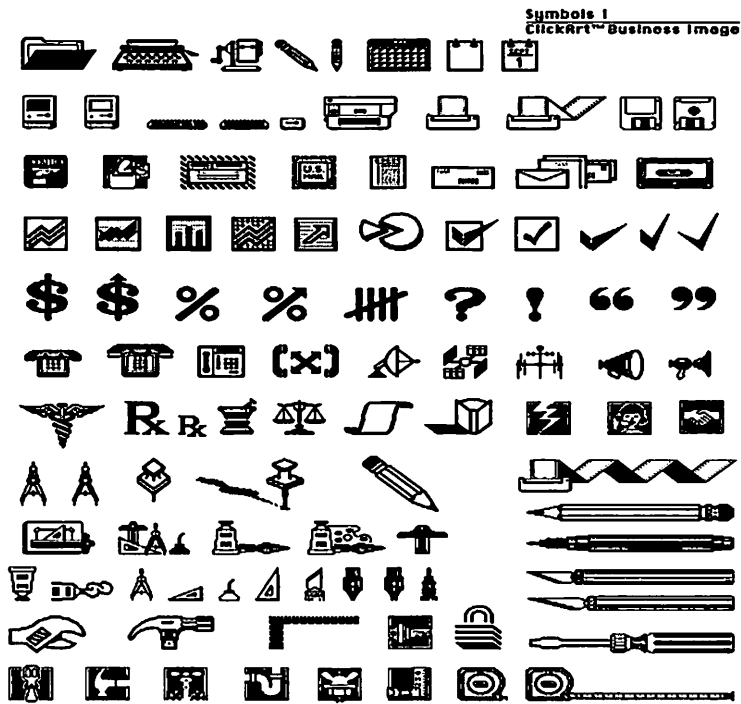


**Figure 5.26B.** *A camera and no-smoking icon from T/Maker's PostScript ClickArt collection.*

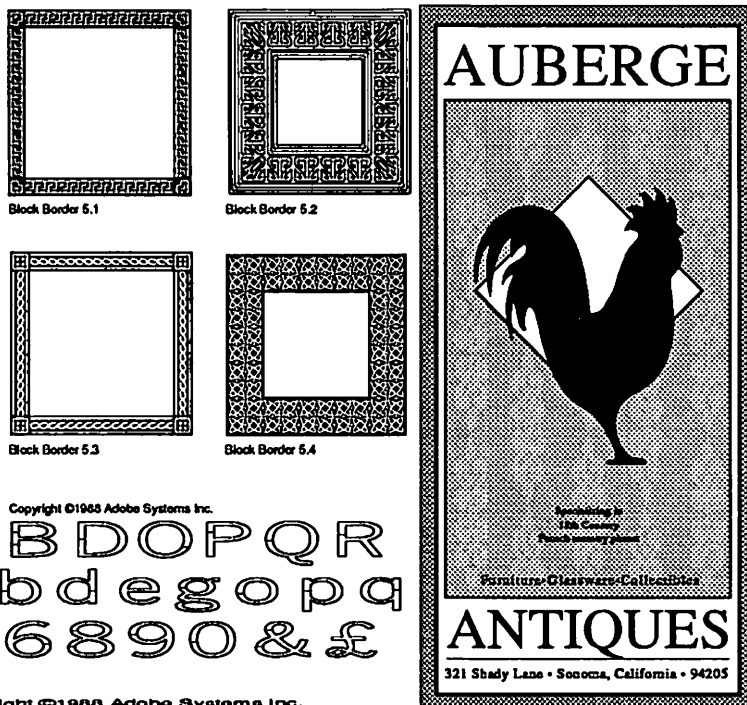


**Figure 5.26C.** *The cartoon mouse is from volume one of Desktop Graphics DrawArt clip art collection. The bear of an editor is from Graphics & Symbols 1, sold by 3G Graphics.*

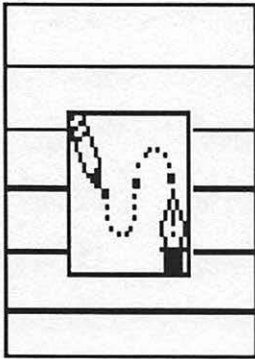




**Figure 5.26D.**  
T/Maker also has its MacPaint ClickArt. The collection of symbols is from the Business Image disk.



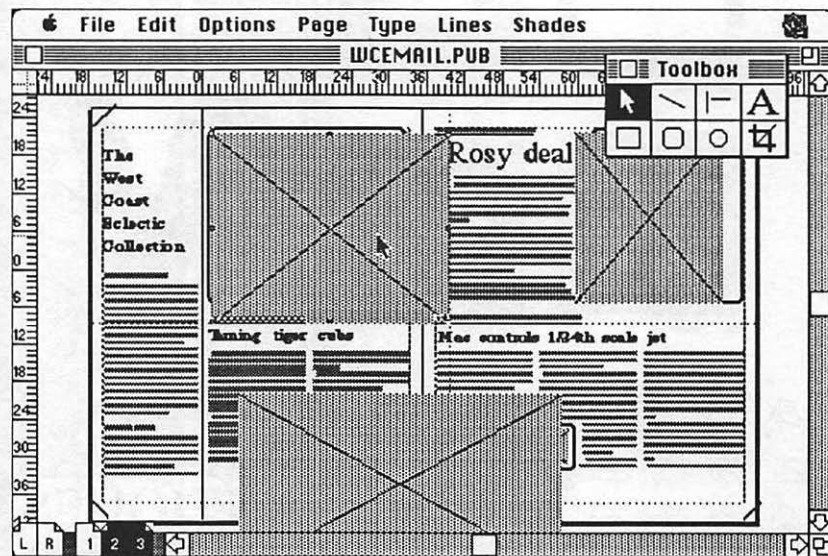
**Figure 5.26E.** The antiques poster is part of the Adobe Illustrator Gallery collection, number one. The borders and font outlines are from Adobe's Collector's Edition I disk.



## PC to Mac Conversion

Mac PageMaker files can be read on the PC, and PC PageMaker files on the Mac, but there's a problem: the object-oriented files (MacDraw and Windows Draw) don't transfer. The Mac's PICT files display as a box on the PC, and Windows Draw files have the same problem on the Mac (*Figure 5.27*). But there are solutions. The latest version of Micrografx Designer includes a PostScript printer driver that can translate anything you can copy through the Windows clipboard (including Windows Draw and Designer files) into an EPS file that can be used in PageMaker on the Mac. If your problem is moving MacDraw files from the Mac to the PC, check out Illustrator 88, which includes a PICT-to-EPS conversion utility.

**Figure 5.27.**  
PageMaker publications can move from the PC to the Mac, but object-oriented files don't survive the trip — they show up as gray boxes. See the hot tip on conversion.



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# Chapter Six

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## Creating business reports

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**P**ageMaker is going to be used for business reports; there's nothing I can do about it. I can warn you that you're going to spend more time than necessary if you take the PageMaker plunge, but it won't do any good once you've gotten started. PageMaker is seductive. The reports you turn out will be impressive. There will be no turning back.

Actually, things are better on that score with PageMaker 3.0. The addition of style sheets makes formatting easy, once you've set up the appropriate styles, and the automatic flow of text from page to page makes layout far quicker than it was in the days of PageMaker 2.0 when you had to work page by page. It would be very easy to standardize a report style across a company, and that idea has a great deal of merit.

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The argument against using PageMaker is that your reports will communicate your message only marginally better than they did before. They will be more browsable. They will be more attractive; they'll give people warm fuzzy feelings as they look at the pages. But when it comes down to actually reading the thing, most of that goes away. All the design and formatting in the world won't change the words that pass from your fingertips on the keyboard into the brain of the reader of the report. With apologies to Marshall McLuhan, the medium isn't really the message. On the other hand, the medium is the seducer that gets us set up to accept the message.

Okay, I'll concede the advantages of attractive looking reports. The real danger is the escalation. Once you've moved up to guns, you can't go back to rocks and clubs. In this particular arms race, the first weapon was the letter-quality printer. It made the nine-pin dot matrix printer obsolete, unless your aim was to give people the impression you were a die-hard techie, a Lotus 123 whiz.

Then they moved in the heavy artillery — the lasers. No longer could you get away with white-out fluid, that's for sure. Indeed, even mono-spaced (nonproportional) characters like Courier became gauche — a sign you couldn't afford a cartridge on your HP LaserJet printer. And then the Mac moved into business, and people started designing their reports. Imagine that, designing reports. Where was the time-and-motion man, who should have been Johnnie-on-the-spot, asking where all that extra time was coming from? Was it coming from time that should have been spent researching the report or writing the report? Was it eliminating time that should have been spent communicating with your coworkers and underlings to find out what was really going on — which is what would be in your reports, if only you weren't too busy making them pretty. Good grief.

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Once it starts, the spiral is ever upward. Once you started doing those snazzy reports using Microsoft Word and the Macintosh, everybody in your department had to switch from WordStar and an Epson FX-80 to keep from looking bad. So what's to keep the guy three offices down from bringing in PageMaker and a little bit of design sense — the final escalation short of typesetting? Not a thing.

That's why I'm writing this chapter. Not because I think using PageMaker for ordinary business reports is the best use of time, but because I think its use for such purposes is inevitable. I might as well make it as easy as possible for you, so you can get back to your real job.

We'll begin by looking at an annual report, which is the ultimate business report. For something like an annual report that goes to the outside world, the use of PageMaker and some thoughtful design makes a lot of sense. An annual report's appearance can be crucial to the perception of your enterprise by influential members of the outside world: analysts, journalists, and investors.

Then we'll look at several design alternatives for ordinary business reports. Finally, we'll consider the report template that comes with PageMaker 3.0.

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## An Annual Report

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To get us started, let's examine a typical example of a PageMaker-produced annual report from the real world. Marketing director Butch Coyne and designer Scott Arndall of the San Jose Repertory Company, whose work we saw so much of in Chapter One, decided that if PageMaker was good enough for programs and magazines, it was good enough for an annual report.

The president's message starts things off, setting the tone graphically as well as rhetorically (*Figure 6.1*). The page is simple and attractive. Its format will be followed by each of the pages that come after, so it will pay to spend a moment dissecting it. A quarter-inch-wide rule tops each page, done in a 30-percent screen of a second color. The page's headline sits flush left about a quarter-inch below that. The headline sits a half-pica above a hairline that crosses the entire page; that hairline is separated by only a quarter-point from a 4-point rule that extends the width of the headline. A two-line drop cap just like the ones used to start the chapters of this book begins the text. And the page is anchored at the bottom with another four-point rule.

Although the basic grid of the pages is two-column, it has an underlying secondary three-column grid. The picture of the president and executive producer of the company shown in the lower right corner of the page takes two columns of a three-column grid, with one column devoted to a caption that really pops because it's in all that white space.

## PRESIDENT'S REPORT

In only six seasons San Jose Repertory Company has established itself as one of the leading arts institutions in Santa Clara Valley. As Trustees of your resident professional theatre, we are obviously very proud of this accomplishment. Our pride, however, comes not only from our artists, but also from our community. It is through your generosity and support, along with your steadily growing attendance, that has allowed San Jose Rep to establish a national reputation for the presentation of contemporary and classical dramatic works. Grants and donations to San Jose Rep during the fiscal year of 1985-86 nearly doubled from the previous season.

We wish to express our appreciation to all of the individuals, agencies, foundations, and companies who have recognized our worth through their financial contributions. I would like to personally thank those people who have joined the President's Circle, as well as the San Jose Rep Associates and the many hardworking members of Applause, our volunteer fundraising organization.

In a time when the Bay Area's economy has been questioned, we have also seen unprecedented support of our theatre from governmental agencies and foundations, including the California Arts Council / National Endowment for the Arts, the City of San Jose Fine Arts Commission, The Community Foundation of Santa Clara County, The Valley Foundation, The William and Flora Hewlett Foundation, The David & Lucile Packard Foundation, The Hugh Stuart Center Charitable Trust, and the Twin Creeks Foundation.

Throughout 1986 the increasing variety of cultural opportunities available to area residents has further proven to be a key factor in the successful redevelopment of Downtown San Jose. The artistic presence of San Jose Repertory Company, especially, has served as an impetus for local employers attempting to recruit top personnel to Silicon Valley. The gratitude of these firms and their recognition of our importance has been reflected in an increased number of Corporate Sponsorships.

San Jose Repertory Company was privileged last season to present the Mervyn's Family Classic production of *Quilters*; *A Man for All Seasons* was co-sponsored by Tiburon Systems, Inc. and Northern Telecom / BNR; and, our Grand Performance of *Cyrano de Bergerac* was sponsored by Merrill Lynch. In spite of the enthusiastic audience response to these successful productions and an increase in ticket revenues, we are still faced with the need to expand our programming beyond the dates available to us in the city-owned Montgomery Theatre.

As planning for our new theatre facility continues, we gratefully acknowledge your growing support of our artistic endeavors. Funding the arts on a professional level is a tremendous community challenge. But you have our promise and our resolve. San Jose Rep will continue winning through the excellence we present on stage.

*Elaine Knoernschild*

Elaine Knoernschild  
President



Executive Producer James P. Reber  
and San Jose Repertory Company  
President Elaine Knoernschild  
on the new theatre site.

**Figure 6.1.** As usual, PageMaker was used to create the master two- and three-column grids for the design of this page, and it was printed by a LaserWriter printer. The photo is a film half-tone reproduction done by a professional printer.

## FINANCIAL REPORT

**F**iscal year 1985-86 was a turning point for San Jose Repertory Company. For the first time in three consecutive seasons, the Rep did not end its reporting period with an operating surplus. After careful scrutiny, the reasons for the revenue shortfall do not seem unreasonable.

San Jose Rep is, in fact, following a natural path of maturity comparable to other resident professional theatres throughout the United States. Nearly one-half of our increased operating expenses for 85-86 can be traced directly to the fact that we have just completed our first year under a full LORT Equity contract.

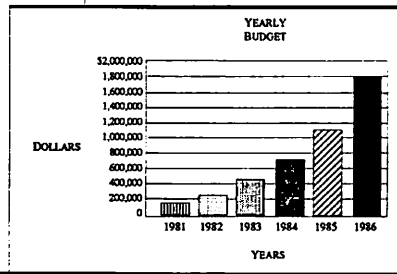
Another significant factor contributing to last season's revenue figures was a major change in the Rep's overall accounting system with regard to prepaid expenses; this decision was affirmed by our auditors and is further explained in their notes to our financial statements. This accounting revision resulted in accruing four months of unbudgeted expenditures within the development area. These internal changes will allow us to provide the Board of Trustees with more accurate financial data on a more regular basis.

For the past seven years San Jose Rep has experienced tremendous growth, both financially and artistically. We are now at a point in our development where our growth will slow down dramatically. This is due chiefly to the lack of our own performance space. As long as we remain tenants in the overcrowded Montgomery Theatre, we cannot expand our programming -- the key to increasing our earned revenue. Subsequently, we must focus our attention on bettering our management of resources and personnel in an effort to utilize our income more effectively.

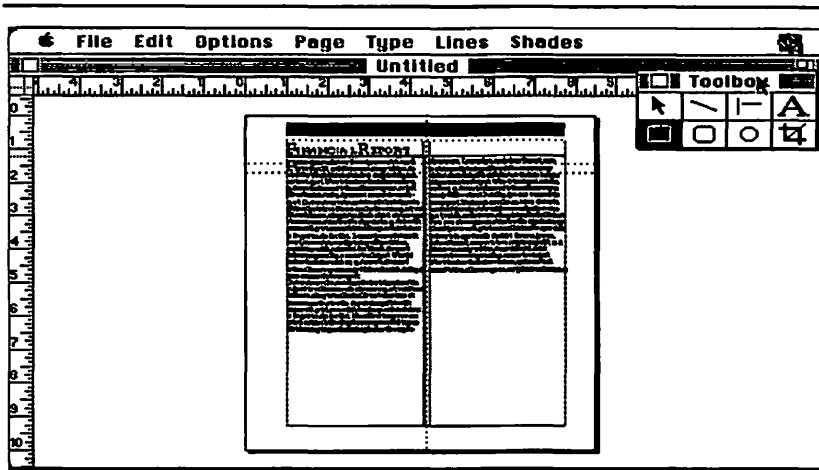
In accordance with these aims, in May of 1986, we acquired a DEC PDP-11/27 mini-computer. This donation of hardware from BR Communications, arranged by Rep Trustee Roy A. Sasselli, has allowed us to install an office-wide computer network. With the use of state-of-the-art software created by Performing Arts Technology in Berkeley, the theatre now has greatly increased capabilities in the area of fundraising and marketing. The P.A.T. system also tracks all expenditures through its general ledger and accounting packages.

As the 1986-87 fiscal year begins, San Jose Repertory Company is much stronger in the area of financial management. This will allow the theatre and our Trustees to proceed with the important task of eliminating our accumulated deficit and raising the funds for our new theatre complex in downtown San Jose.

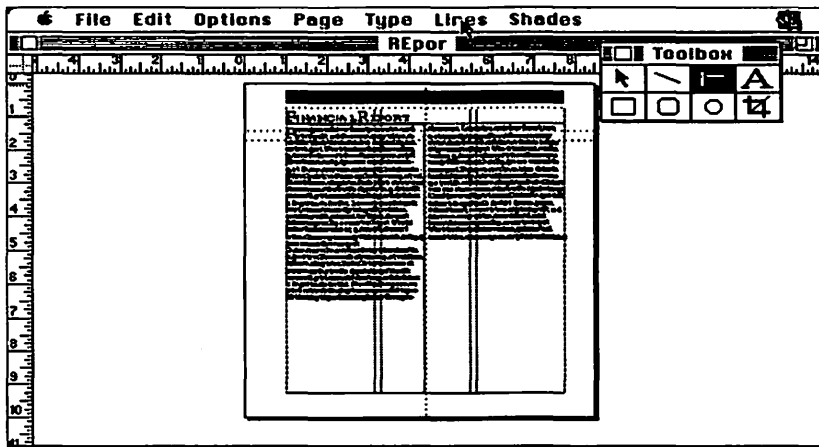
**Figure 6.2. The San Jose Repertory Company Annual Report's page 8 continues the look established on page 1 — a two-column grid guides the layout of copy, while graphics get a three-column layout.**



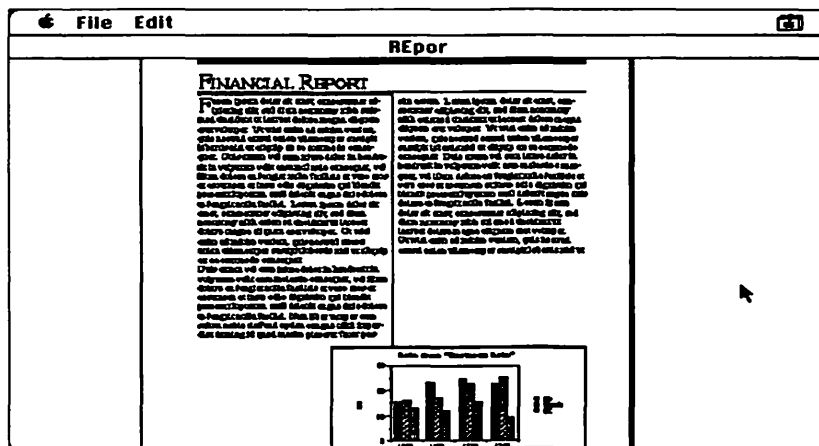
The pattern continues on the pages that follow. The Financial Report (*Figure 6.2*) is identical in layout to the President's Report. The technique for creating a page like this is illustrated by the sequence of PageMaker screen images on page 233 (*Figures 6.3A through 6.3C*).



**Figure 6.3A.** Copy is laid down on a simple two-column grid. The hairline rules at the top and down the middle of the page are actually master items from the left-hand master page.



**Figure 6.3B.** The Options menu is used to change the Column guides from 2 to 3. The two-column text is not affected. A white box is laid into the right two columns to hold the gap, obscuring the hairline down the middle of the page.

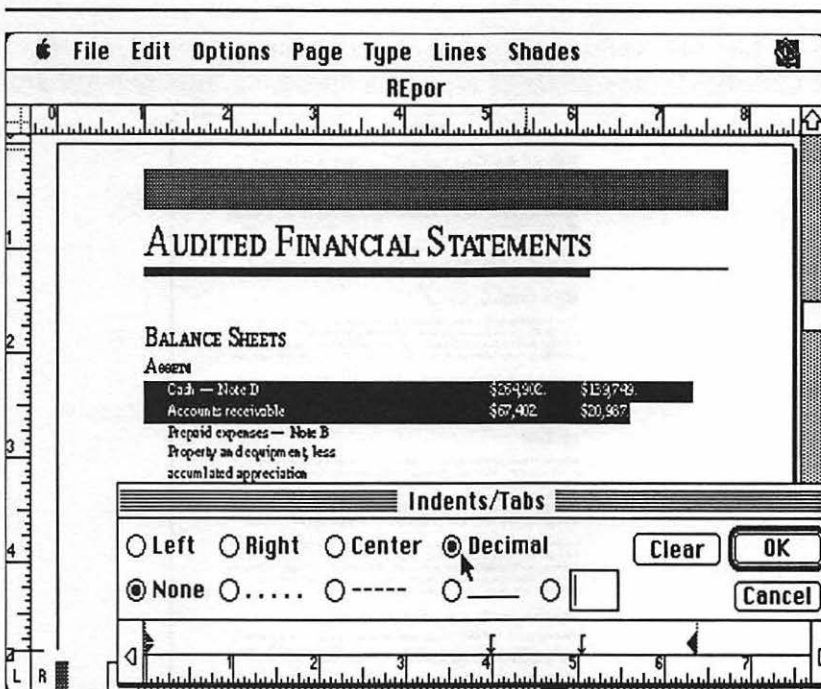


**Figure 6.3C.** Finally, I place the graph, which was generated by Cricket Graph.

The financial statement page (*Figure 6.4*) is considerably different than the previous two pages, but is built on the same two-level grid structure. It has the same signature rules top and bottom, of course, for consistency. The columns of numbers are built on a three-column grid. But the illusion of a two-column layout is created by the two-point rules that run halfway across the page.

**Figure 6.4.** *The numbers on a financial chart like this one are lined up using the Decimal option of the Indents/Tabs tool, as shown in Figure 6.5.*

<b>AUDITED FINANCIAL STATEMENTS</b>		
<b>BALANCE SHEETS</b>		
	June 30	
	1986	1985
<b>ASSETS</b>		
Cash—Note D	\$264,502	\$139,749
Accounts receivable	67,429	20,834
Prepaid expenses—Note B	122,964	208,265
Property and equipment, less accumulated depreciation—Note C	57,992	27,690
	<b>\$513,287</b>	<b>\$396,539</b>
<b>LIABILITIES AND FUND DEFICIT</b>		
Accounts payable and accrued expenses	\$178,973	\$ 94,517
Unearned admissions revenue	579,103	439,245
Deferred grant revenue—Note D	110,476	
Fund deficit	(555,265)	(137,223)
	<b>\$513,287</b>	<b>\$396,539</b>
<b>STATEMENTS OF ACTIVITY AND CHANGES IN FUND BALANCE</b>		
	Year Ended June 30	
	1986	1985
<b>REVENUE AND SUPPORT</b>		
Admissions	\$ 874,537	\$ 639,503
Grants	639,779	386,331
Other	93,580	92,315
	<b>Total Revenue</b>	<b>1,607,916</b>
<b>EXPENSES</b>		
Production costs	833,323	519,699
Development	372,214	303,035
General and administrative	364,897	261,738
New theatre project—Note D	55,524	
	<b>Total Expenses</b>	<b>1,625,958</b>
Revenues over (under) expenses	(218,042)	88
Fund deficit at beginning of year	(137,223)	(137,311)
	<b>FUND DEFICIT AT END OF YEAR</b>	<b>\$ (137,223)</b>
<b>STATEMENTS OF CHANGES IN FINANCIAL POSITION</b>		
	Year Ended June 30	
	1986	1985
<b>CASH PROVIDED BY OPERATIONS</b>		
Revenues over (under) expenses	\$(218,042)	\$ 88
Add depreciation, a non-cash expense	7,980	6,058
Changes in certain assets and liabilities:		
Accounts receivable	(46,595)	(20,834)
Prepaid expenses	85,302	(121,747)
Accounts payable and accrued expenses	84,436	75,561
Unearned admissions revenue	139,838	154,338
Deferred grant revenue	110,476	
	<b>163,433</b>	<b>93,464</b>
<b>FINANCING ACTIVITY</b>		
Additions to property and equipment (net)	(38,282)	(13,877)
	<b>NET INCREASE IN CASH</b>	<b>79,887</b>
Cash balance at beginning of year	139,749	59,862
	<b>CASH BALANCE AT END OF YEAR</b>	<b>\$264,502</b>

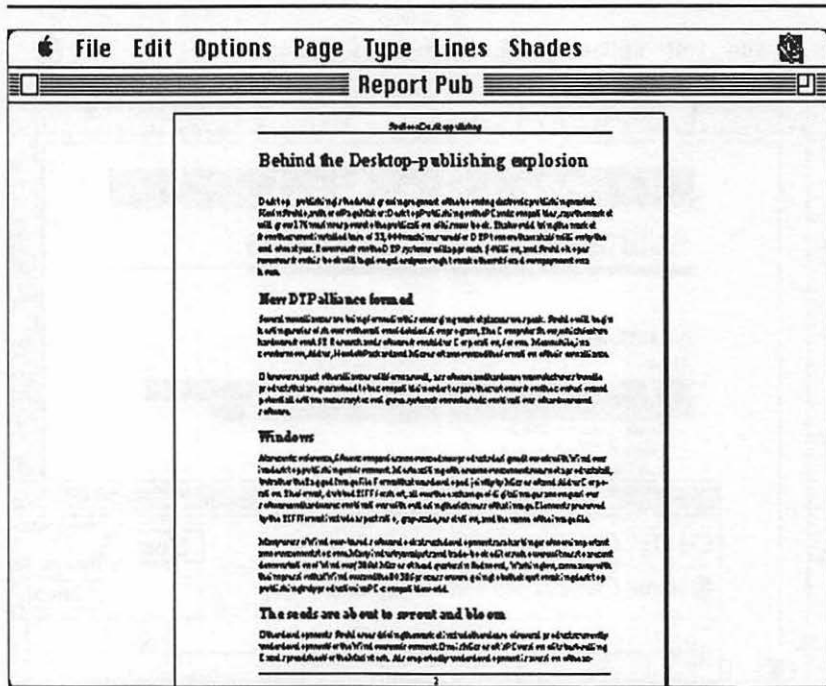


**Figure 6.5.** With *Decimal* selected, the Indents/Tabs tool can line up numbers for tables of figures. If you're importing your numbers from a tabular source such as Excel or a formatted word processing document, you may not need to use the Indents/Tabs tool at all.

## Examining some options

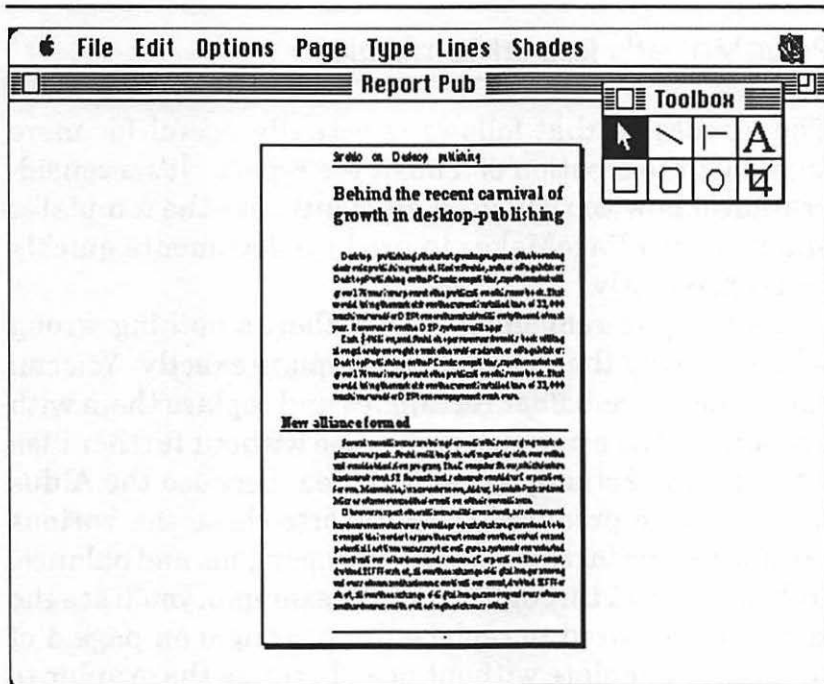
Rather than talking about what your business reports might look like, I'm going to take advantage of the desktop publishing system at my disposal and show you what they might look like. The captions for *Figures 6.5* through *6.9* will explain the particulars for each report format. Remember, too, that imitation is the sincerest form of flattery. If a colleague puts out a dynamite report, use PageMaker to mimic it. You certainly aren't restricted to the few variations on the next few pages. For more ideas, look back at the real-world PageMaker publications in Chapter One. For example, the attractive document that pictured Senator Paul Simon was an annual report.

**Figure 6.6.** The simplest report format is much like what you could do with MacWrite — you simply use larger, bold type for the subheads of the report. Since you've got them, you might as well use a rule too, top and bottom, to set the main page off from the header and footer you create on the master page.

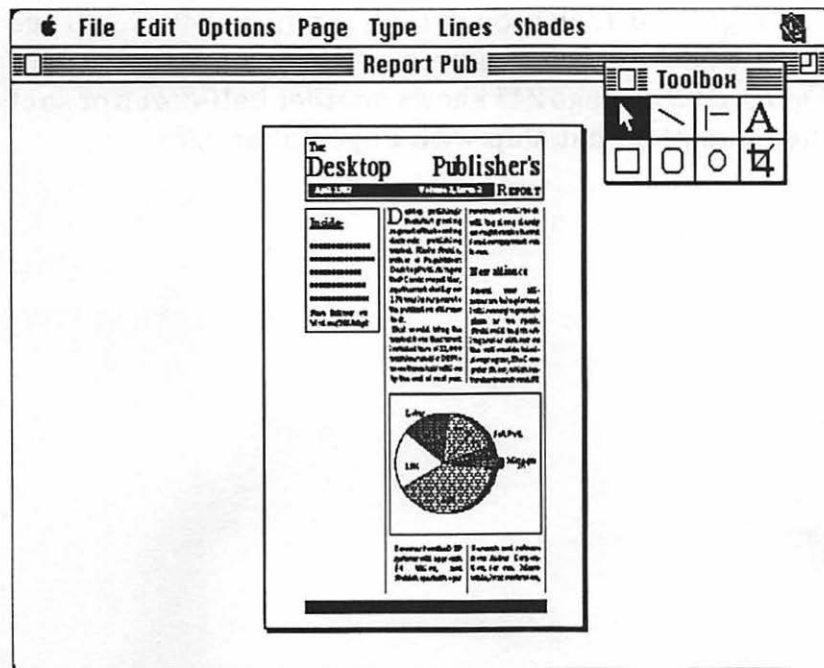


**Figure 6.7.** You can change the look of a report considerably without complicating your life much by moving it into a two-column format. Use PageMaker's Autoflow feature, and simply pull the columns of text down to make room for the headline on the first page.





*Figure 6.8. An alternative to the two-column format of Figure 6.7 leaves a blank column of white space on the left. The white space is interrupted only by the rules and large, bold type of a subhead. This is the same concept used in the layout of this book.*



*Figure 6.9. Finally, there's nothing stopping you from using classic newsletter layout on your report, or even legal-size paper.*

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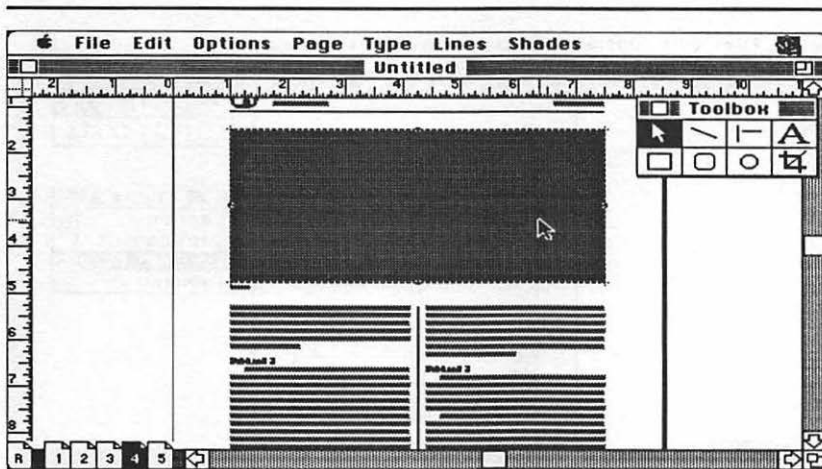
## PageMaker's Report Template

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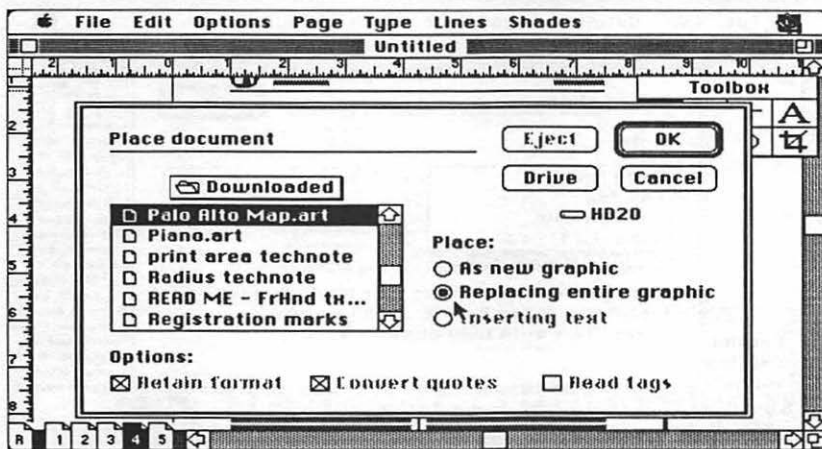
The discussion that follows is actually useful for more than just the creation of a business report. It's a consideration of how you can most efficiently use the templates shipped with PageMaker to produce documents quickly and consistently.

One thing to remember is that there's nothing wrong with following the PageMaker template exactly. You can select the space-holder rectangles and replace them with graphics of the exact size and shape without further idea ado. This is actually not a bad idea, because the Aldus designer who produced these reports chose the various layouts in part for their pleasing proportions and balance. In *Figure 6.10A* through *6.10C*, for example, you'll see the sequence required to replace the rectangle on page 4 of the report template without need to resize the graphic to fit the layout.

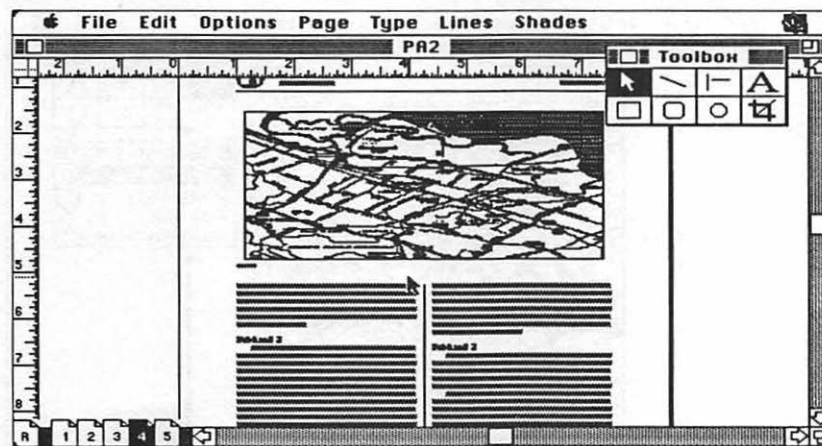
In *Figures 6.11A* through *6.11C* on page 240, you'll see three pages of the business report template. Finally, *Figure 6.12* on page 241 shows another half-dozen or so of the templates that ship with PageMaker 3.0.



**Figure 6.10A.** To replace a placeholder graphic in a PageMaker template, first click on it to select it.

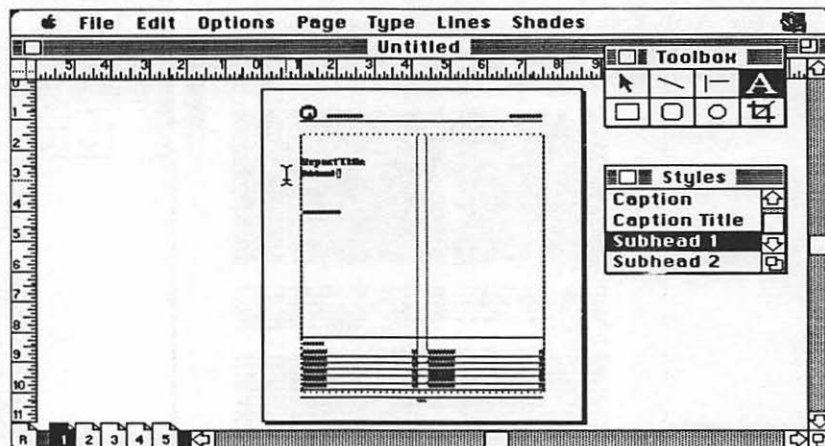


**Figure 6.10B.** Place the graphic as always, but remember to click on Replacing entire graphic. If you forget, the graphic will load to your cursor rather than replace the placeholder. If so, click on the toolbox to clear the cursor and try again.

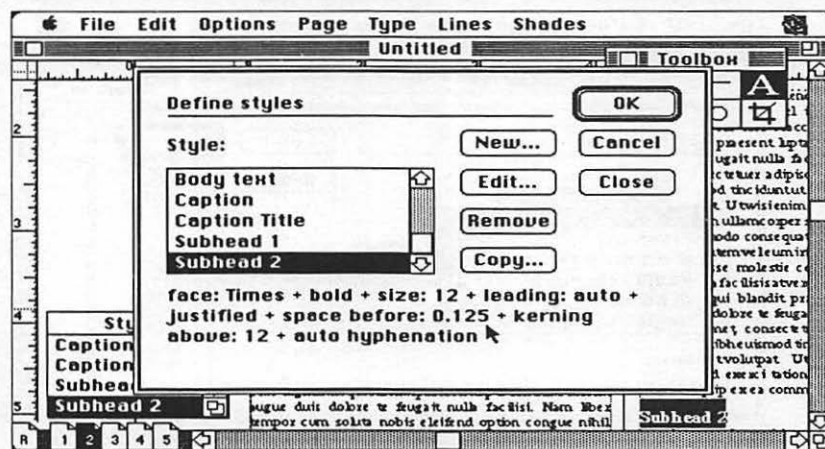


**Figure 6.10C.** When you do it right, the graphic appears at precisely the desired location and shape. But watch it. What was once a long map is now squat. Beware of changing proportions when you use the automatic replacement feature.

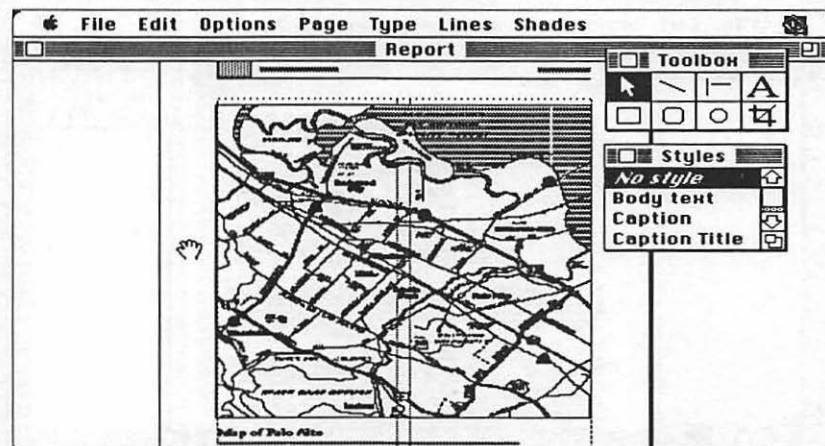
**Figure 6.11A.** The title page of the report template has a very clean look. Notice that the professional designer who created the template wisely chose white space over a large table of contents.



**Figure 6.11B.** The templates all include style sheets to make production easier.



**Figure 6.11C.** The map from Figure 6.10C assumes its actual proportions when it is used with the full-length illustration page of the template.



# PageMaker Grows Up

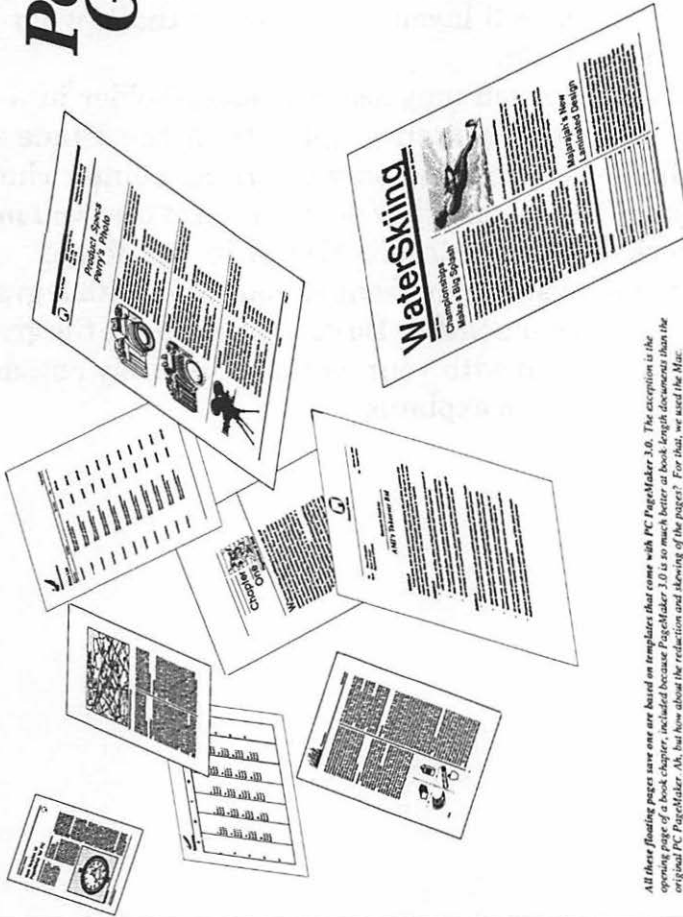
but PC version still lags behind the Macintosh

by Kevin Strzlo

**W**hen PageMaker and graphical interfaces appeared on DOS, the premise was that desktop publishing was no longer solely the province of the Macintosh. Ah, but the promise wasn't fully fulfilled. PageMaker on the PC fell short. For one thing, Windows was slow, which held PageMaker's speed to a walk unless you had a very fast PC. And within Windows, PageMaker was slow. I wanted to illustrate a report, there was only one third-party drawing program. If you needed to include a chart, well, the only graphing package had been slow and not just a little. And there was no one who could do it full for the processor. So much for the Windows' advantages of cut and paste and easy switching among applications.

Fonts were also a problem. Most DOS users still used LaserWriter, and LaserWriter, and HP's LaserJet, and Apple's LaserWriter, and Apple users take for granted LaserJet fonts on disk were available, but they were expensive, and getting them installed was a significant problem for most people. In contrast, PageMaker on the PC included a primary conversion to the PC's standard fonts and smooth installation as part of the package.

Even those who used the Apple LaserWriter and its plethora of Adobe PostScript fonts for the Windows environment: What You Saw Was Not What You Got.



All these floating pages save one are based on templates that come with PC PageMaker 3.0. The exception is the opening page of a book chapter, included because PageMaker 3.0 is so much better at book-length documents than the original PC PageMaker. Ah, but how about the reduction and skewing of the pages? For that, we used the Mac.

BUSINESS SOFTWARE

August 1988

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**Figure 6.12.** This spread — which I produced using PageMaker 3.0 for the August issue of Business Software magazine — gives a feel for the range of templates that ship with PageMaker. Each of the floating pages, save the page from this book that's stuck in the middle, was built from one of the supplied templates.

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You'll notice that the page icons of the report reflect single pages rather than side-by-side pairs of pages. That's because business reports are rarely printed in the side-by-side format. As a consequence of not having to worry about how facing pages work as a unit, you can choose a page of this report layout purely for its fit to your sequence of material, rather than for its position in the template. The layout for page 3 does not need to come after page 2. And there's nothing wrong with using several of the page 3 layouts in a row if that's what your material calls for.

Occasionally, you may select a space-holder in a template, pick your chosen graphic from the **Place** commands file selector, and only when the pointer changes instead of the selected box do you realize that you meant to check **Replace Entire Graphic** but forgot. As a result, you're sitting in front of your Mac with a graphic loaded onto your pointer. Do you have to place the graphic before you go on with your work? Absolutely not, as the following Hot Tip explains.

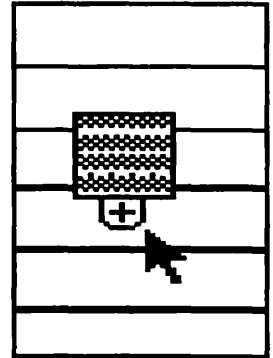
It happens all the time. In trying to raise a windowshade of text, you accidentally click on the “+” at the bottom and load the cursor with text. Are you forced to live with your mistake, which means placing that text and then deleting it? In trying to move a graphic to another part of the page, you accidentally latch onto one of its handles and resize it. Do you have to manually try to undo the damage?

**Darn  
It!**

In both cases, the answer is no. PageMaker is quite forgiving of the little mistakes that plague any kind of detail work like desktop publishing. In the case of accidentally loading the pointer with text or with a graphic, you don't have to place it to get the pointer to change from the text or graphic icon back to an ordinary arrow pointer. Simply move the pointer to the toolbox and click on any of the tools. The cursor will assume the appropriate shape for the tool, and your mistake is behind you.

In the case of accidental stretching, moving, or resizing of any element on the page, you can simply pull down the **Edit** menu and hope to see your last action listed after the word **Undo**. Assuming you try to undo the damage immediately, things will return to their pre-mistake fate.

Try that with a bottle of spilled milk or an ad slick that you've accidentally sliced the corner off of with a razor blade. Ah, the advantages of desktop publishing.



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## Copyfitting

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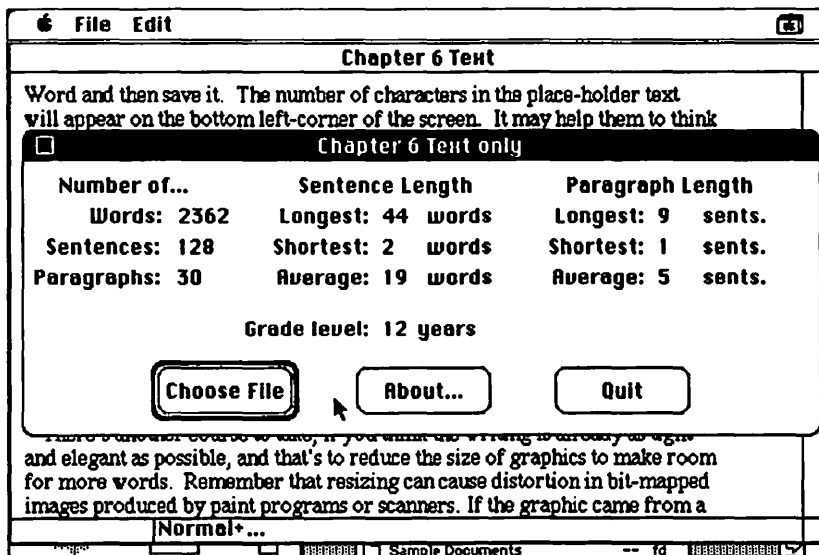
If you take the course of following the PageMaker template layouts essentially unchanged, you're going to find yourself with a need to do some serious copyfitting. The main thing to remember about copyfitting is that it's better to trim and condense than it is to stretch. One of the unsung benefits of cutting a piece to fit a layout is that it often improves the writing. It's rare copy that doesn't benefit from tightening. If you have a few sentences to trim from a full page of text in order to make the copy fit the layout, you're actually in ideal shape. Eliminate unnecessary detail. Trim those little asides that seem like gems when they're pouring from your fingers but overload the sentence when you read it back later. Cut words that end in "ly" — adverbs are the least necessary element in most business writing.

Whatever you do, resist the temptation to alter the spacing or the point size of body copy just to make it fit. You should choose type size and leading for aesthetic reasons and for readability, not to squeeze more words into a layout—It's a very bad habit to get into. It's less troublesome on a report where you can change all the text. If you try it in a newsletter or brochure and end up with stories set at different sizes, and lines in adjacent columns that don't line up, you'll definitely detract from the overall appearance of your publication.

A better approach is to give a character or word count to the people writing the text and try to make them stick to it. It's particularly easy to determine the character count when you're working with a PageMaker template: simply count the characters in the place-holder text. One way to do that is to use PageMaker's **Export** command to write the "greek" text to disk as a Word 3.0 file, load the file into Word and then save it. The number of characters will appear on the bottom left corner of the screen.

It may help your writers meet their length requirements if you give them a word rather than a character count. Typical English prose contains about six characters per word. This file currently contains 13640 characters and 2362 words, or about 5.8 characters per word.

Some word processors and several Desk Accessories can deliver a word rather than a character count of the placeholder text if you export it from PageMaker as a text file. The Shareware DA ProCount will give you a count of all words in a text file or all words of four or more characters in length. (This implies that pros are above counting *little* words. The pros I know count them all, particularly when they're working at a per word rate.) The TextCount public domain DA even provides a quick take on the clarity of the words when it counts them. Its author Kirkpatrick uses the Gunning Fog Index to provide an estimate of the level of the writing. As you can see from *Figure 6.12*, this chapter is rated 12th grade level. You don't want to achieve as high a rating as you can, mind you. If you go much higher than 12th grade level, people will get lost trying to follow you (thus the "fog index" moniker).



*Figure 6.13. Many useful public domain programs are available, including this word count and fog index DA. Another category of software, called "user-supported," can be obtained free, but the author asks for a small fee if you decide to keep using it after giving it a try.*

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When you've got the final text in hand and want to see how close your writers came to the correct length, an easy way to go is to select the placeholder text and use the **Replace Entire Story** option when you're placing the writer's file. The copy will flow to the end of the document and you'll see instantly if you've got too much or too little.

Remember that you still have to go through the text to change the appropriate lines to subhead style unless your writer tagged the text ahead of time. If that's the case, remember that the tags will only take effect if you check the **Read tags** option at the bottom of the dialog box.

If the copy comes in too long, you tighten it, and it's *still* too long — and you'd rather not lop off whole sections to make it fit — you can always reduce the size of graphics to make room for more words. Or you can enlarge the template's graphics if you need to make up a copy shortfall. Remember that resizing can cause distortion in bit-mapped images produced by paint programs or scanners. If the graphic came from a draw or PostScript-graphics program, you still have to think about the aspect ratio as you resize. In many cases — particularly in the somewhat inflexible world of business reports — it may seem tempting to change the graphic's aspect ratio (the relationship of height to width) by stretching the graphic to fit. Well, it works for El Greco, right? Yes, but this is business, not the Prado. It's simply not a good idea to elongate a scanned image of your boss or reduce it until she looks as squat as a fire plug.

To put it as plainly as possible, here's a rule of thumb: think twice about resizing any graphic that represents something in the real world, unless the graphic's purpose is purely decorative. If you do have to resize, you can maintain a graphic's original proportions by pressing the Shift key as you drag its resizing handle.

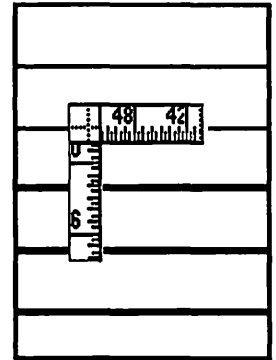
When you're reproducing a document, there's often a need

to space one element a precise distance from another. PageMaker does not make you do your spacing

by figuring distance from some fixed point. Instead, it provides a ruler you can move.

The "zero point" of the ruler is always kept in the upper left corner of the PageMaker desktop (this is the only ruler I know of that you can never misplace). Simply click there and drag the end of the ruler to the point from which you want to start measuring. To get a reading from the ruler, drag a guide to where you want to end measuring. If that end point of your measurement is a predetermined distance — say you want text to start two picas away from a graphic — then you've set up the guide for that text to snap to.

## A measured approach



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Unfortunately, in the formal layout style of most business reports, graphics must often correspond exactly to the width of one or two columns. You may find yourself choosing a new graphic that's wider than it is high if a copy shortfall makes you switch to a two-column graphic to take up more space. A graphic suitable for a one-column placement will probably not work as a two-column graphic. You could stretch it with the Shift key down to maintain its original proportions and then use PageMaker's cropping tool to make the larger (but still vertical) graphic fit. But the cropping tool should be used primarily to improve the composition of your graphics, not to squeeze oblong pictures into square holes.

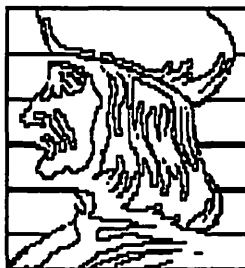
Up until now, this discussion has assumed you're placing computer-generated or scanned graphics on the pages of your report. But there's nothing that says you can't leave those place-holding boxes on the page and have the printer replace them with photographic half-tones right before he or she slaps your pages on the printing press. In fact, as discussed at length in Chapter Four, that might be the best course, because a half-tone will tend to be higher in quality than even the best gray-scale scanned image. You can place scanned images of those photos on the page anyway, to show the printer their proper position and cropping (PageMaker's interactive cropping tool is hard to beat for achieving the best possible crop for the layout). If you do, remember to maintain the aspect ratio when placing the scanned image by holding down the shift key.

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# Chapter Seven

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## Creating long documents

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**H**ow can I begin to describe the magnitude of this project? Doing a 300-plus-page book with as many elements as this one has — the Hot Tips with their wrap-arounds, the large library of graphic images to be managed, the 300 captions to write and lay down, the several pages of call-outs, the dozens of subheads with dividing rules, more than 100 pieces of art that had to be marked for page placement, reduction percentage, and whether they were to be half-toned or shot straight with the stat camera — is something only a crazy person would attempt alone on a tight deadline. Meet a formerly crazy person.

Actually, it's a lot easier the second time around. I'd already done a version of the book for PageMaker 1.0 on the PC, so I came into this one with a page design and much of the artwork from my research on real-world use of the Mac already pasted up and sized. It was also easier because of the improvements made in PageMaker 3.0, particularly the addition of style sheets.

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Thinking back on the original PC PageMaker book is somewhat unpleasant. Without Christine to coordinate the passing of art to her brother-in-law Don for pasting on boards, without Christine to figure the reductions, without a brick wall of a deadline because promotion money had already been spent, and without the nearly indescribable need to get the project out the door just to get life back to normal, I'd still be working on that book today. (We're still in the 1980s, right?)

And even with the Mac smoothing the way, this book was no piece of cake. Turning out camera-ready pages is similar to turning out software — it's incredibly easy for deadlines to slip. There's always a final ten percent to be done, and that final ten percent seems to take 90 percent of your time.

What should you charge if someone wants you to turn over camera-ready pages, like the ones used to produce this book? Let me give you a couple of ballpark quotes. Communique, based in Palo Alto, California, wanted about \$150 a page. Kristen Ransom would have done the design, however, so unless you're in her league you shouldn't expect quite as much. But certainly \$75 a page would not be unreasonable for a high-quality book with many illustrations, tables, and wraparounds. For a 320-page book, that totals \$24,000 (add \$3000 for Linotronic typesetting instead of laser type). This jibes with the \$50,000 figure provided to me by an Addison-Wesley accountant for a typical textbook (going by the "desktop publishing should save you 50 percent" rule of thumb).

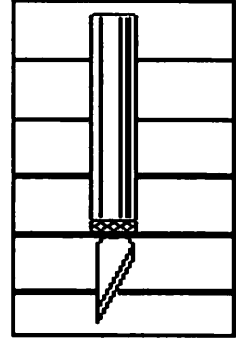
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This is a book about desktop publishing, and I'd like to expand your concept of what it's all about by introducing you to a few new tools: an X-Acto knife, cardboard paste-up boards, glue, and a ruler.

True, there's not much call for manual paste-up when you have a capable program like Page-Maker around, but there's some. In the production of this book, for example, all of the real-world publications in Chapter One had to be physically pasted on boards. If you look in the desktop publishing magazines, you'll probably see an ad for a kit of real cut-and-paste tools that you can buy through mail-order. Or you can go down to your local graphics shop and pick out what you need. While you're there, don't forget a sheet of the stuff pronounced "bore-ko"— a green pad that heals itself after each cut you make with your X-Acto.

That's another advantage of electronic desktop publishing: it can't ruin the furniture unless your computer blows up or something.

# Manual tools



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If you're planning to produce a computer book, let me warn you that most computer books are simpler and not expected to be beautifully designed: therefore, a typical camera-ready budget is much lower, in the general area of \$10,000.

So, if someone asks you to do camera-ready pages for, say, \$10 a page, show them this part of the book where it says "\$30 a page is a more reasonable figure" and save yourself a lot of grief. Let me tell you, that first book cost me \$10 a page just for the hypertension therapy I had to undergo to recover from it. Let me recommend a trip to Calistoga, California for a series of mineral mud baths and massages for anyone who has just finished producing a book under deadline, or Spain, which is where I'm going soon after this one is off to the publisher. (Oops — I meant right *before* this got off to the publisher.)

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## Lessons to be learned

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The most crucial lesson I've learned is the importance of clean copy. Granted, once you've placed a major amount of text in PageMaker, you've got this incredible desire to let it stay, just as you've placed it, because placing it is a lot of work. If substantial edits are made at this stage, however — which roughly corresponds to the blueline stage of traditional production methods — you will probably be better off editing the text in your word processor and placing the file again, for a couple of reasons.

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For one, the PageMaker text editor is simply not up to making a major edit. If you're changing five words in a paragraph, okay, use the PageMaker text tool. But if you're making 100 edits instead of five, you should have edited the word processing document far more carefully before you placed it into a publication. You might as well export the text and do the edit in your favorite word processor, assuming it accepts Microsoft Word format or that a PageMaker export filter exists for it. Even though you'll have to place the text again, if you're lucky the PageMaker autoflow feature will make quick work of it. Even if you have to place the file manually after doing the edit, it will probably be faster overall, just because you won't have to wait for the PageMaker text editor to catch up to your keystrokes, or struggle with editing wide lines on a relatively small screen, or make 100 separate cuts and pastes to do a change your word processor's search and replace feature could handle in a flash. Finally, word processors check spelling; PageMaker doesn't.

I'll discuss the word processing problem and other reasons why another program might be a more reasonable choice for a book-length project in Chapter Ten.

## **Indexing and the table of contents**

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I thought PageMaker's ability to export text would make it relatively easy to use another program to create an index and table of contents for this book, but I was wrong.

Unfortunately, it turns out that having to export in order to create those necessary elements of the book was a less-than-satisfactory solution. I would have given my copy of the International Paper Company's *Pocket Pal* if only PageMaker had given me the option of maintaining page breaks when I exported. Since the export facility lacks that feature, I had to indicate manually where the page breaks came in the book.

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I also had to do separate exports of the text of each Hot Tip and caption, then manually cut and paste them into the proper place, because that text wasn't threaded into the main flow of the chapters. As a result, indexing the book was a lot more work than it could have been. On the other hand, it *can* be done (despite PageMaker's lack of table of contents and indexing features) if you're willing to work at it.

An alternative to exporting is the method I used to work on the PageMaker 1.0 for the PC book (until 3.0, PageMaker on the PC lacked the export feature). For that book's index I went through the pages one at a time and typed the words I wanted to index into WordPerfect on the PC. I entered a hard page return each time I turned a manuscript page, to keep the indexed words on the correct pages. From there, it was a simple matter of running WordPerfect's excellent indexing utility, reading the resulting file back into PageMaker, and laying the columns of type out in a suitable three-column format.

The table of contents for that book was produced much the same way — I simply typed in each subhead as I was indexing the book, marked it according to what level subhead it was (rule across the page, rule that stops at the gutter, or no rule), and then used WordPerfect's ToC utility. There's no question that the retyping approach would have been more efficient for creating just a table of contents (even given PageMaker 3.0's ability to export), and I'd call the manual versus exporting approach just above even for an index. Try one chapter one way, the next chapter the other, and decide for yourself.

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## The Book's Design

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This book is a good example of designing pages around the elements you have to work with.

For example, I was forced to use this column width in the original PC book because that was the width of the major graphic element in the the book — the hundreds of screen shots. It is not possible to resize a bit map to any arbitrary width — as I've discussed elsewhere, you can see the discrete widths available that don't distort regular patterns in bit maps by holding down the ⌘ key while dragging a bit-map's handle. A tip on page 85 tells how to increase the number of those discrete widths available. If I hadn't discovered that trick, this book would have been much more work, because I would have had to throw away the PC book design and start fresh.

In any case, I was pretty much stuck dealing with a main text column width about one inch less wide than my page. That was okay — that left me a second one-inch column of white space. I used it for elements designed to draw a reader into the text — the icons that mark the hot tips, for example, and the majority of the captions. Even the important subheads made use of that white space by violating it with a rule, notifying the reader that a change in topics had taken place.

I made the white space a true column because it made laying out the captions, or typing them with automatic PageMaker word wrap, so easy. Unfortunately, while that decision saved me a lot of work during production of the first book, this time around that second column probably made it tougher, since it prevented me from using PageMaker's autoflow feature. PageMaker does not flow text automatically into designated columns — it will only flow text automatically into *all* columns.

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The dominant graphic image, of course, is the outline of the famous typographer Aldus, which is superimposed on the opening page of each chapter. Aldus is the father of modern typography and a suitable person for the company that coined the term desktop publishing to name itself after. In the title screen of PageMaker 2.0 on the Mac and PageMaker 1.0 on the PC, a similar image of Aldus appeared over a similar pattern of 1- and 2-point rules. I simply altered the paint image by making it a jagged outline using the Windows Paint **Trace Edges** command, flipped it horizontally so old Aldus wouldn't break a graphic rule of thumb by looking off the page, and picked up the horizontal rules as a frame for the type. Obviously, had I picked up the solid image of Aldus used on the PageMaker 3.0 title and main help screens (see *Figure 2.26* way back on page 64), the basis for my dominant graphic image and the design I built around it would have gone out the window, so I didn't update that particular part of the book.

When I first created the design for the PageMaker 1.0 on the PC book, it was just a happy coincidence that I had the 36-point and 14-point Dutch type I needed to work well within those outlines. (I didn't use a PostScript printer on that book, just to show that it could be done, and PC PageMaker didn't come with Bitstream's Fontware — which can build the particular size type you need — until Version 3.0.) It was a simple case of fortuitous copy-fitting. I'm not sure what I would have done if the largest Dutch at my disposal had been 24-point, because in that case copy-fitting the kicker under “Chapter One” and in each chapter thereafter would have been tougher. Quick: give me three or four words totalling no more than 18 characters that describe Chapter One. (PageMaker in the re...er, Real World PageMak...um, Real World PM 3.0 — is that okay?) You can write a headline to fit any space, but you've got more flexibility with more characters.

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## Picking up the Aldus theme

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Once I had the visual tone of the book established with the opening page of the chapter, my next challenge was to tie in the other pages visually. I tried to do that with a similar design for the Hot Tip markers — you'll notice that nearly every one is an outline of an object laid over a box of rules, and that if the drawing has eyes they look into the page.

The subheads that have a 1-point rule above them and a 2-point rule below — that is, subheads that happen to fall at the top of the page — also echo the line treatment of the Aldus illustration that starts each chapter.

Finally, there is the matter of the most numerous graphic images in the book: screens of PageMaker. I couldn't really do much about those, could I? Fortunately, the designer who created the image of Aldus had created an image that went reasonably well with the look of those pages.

## Layout

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The layout of this book was fairly simple. During the design phase, I had established these guidelines:

- 1) Whenever possible, figures should follow immediately after their first reference in the text.
- 2) As an alternative, figures and corresponding references could be on facing pages.
- 3) The least desirable, but unavoidable alternative for sets of four or more illustrations, was for a reference to figures on the following spread of pages.
- 4) The key to achieving this placement of figures was to use a ragged bottom margin. Translated into a rule of thumb, that meant it was okay to leave a half-page or more empty in order to keep a figure and its reference together on the following page.

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5) There was a half-pica of air between a figure and text. Rules were equally close to subheads.

6) Captions were tightly placed below figures: only a quarter-point of leading separated them.

7) When the main text of the chapter resumed immediately below a caption, it had to be spaced 1 pica down to make a visual break between the caption and the text.

8) In the hot tips, there was to be a half-pica of air between the Hot Tip text and the 1-point box that contained it.

9) Captions began with the figure reference in 10-point bold italic, followed by the body of the caption set in 10-on-12 italic. Any words that needed emphasis within a caption were set roman — bold caused them to jump too strongly out of the text.

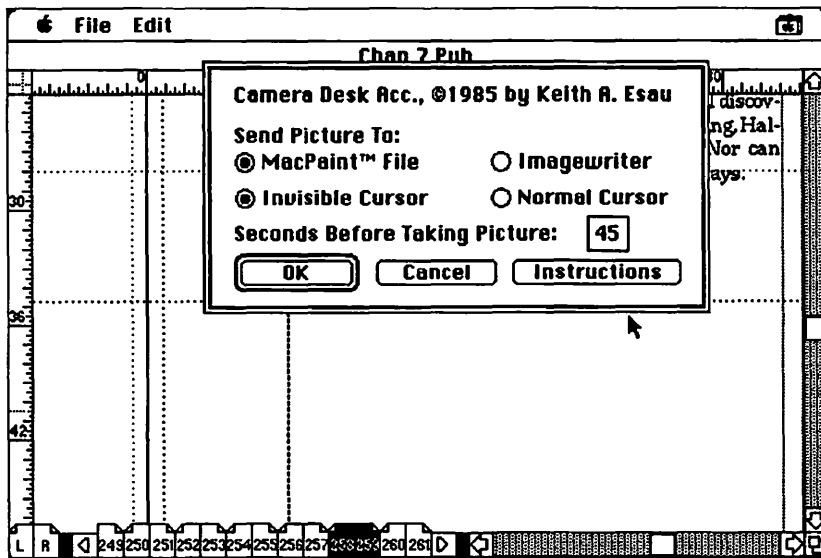
10) Within the body copy of the chapters, references to words that actually appeared on the PageMaker screen were set bold to differentiate them.

When it came time to do this book, I figured I wouldn't have to worry about any of the above points, because I could capture most of the rules in a PageMaker 3.0 style sheet. Certainly, I could have captured all but the first three in Ventura Publisher on the PC style sheet, although some (number 9, for example) would require more than one style to achieve. An Interleaf Publisher property sheet would have let me capture and automate all 10 rules. Unfortunately, PageMaker provides no means of incorporating graphics into style sheets, which even Microsoft Word style sheets can do to a limited degree. Thus, I was able to capture only the last four of the rules as PageMaker 3.0 styles.

On the other hand, I was very glad PageMaker's style sheets were added. It made my life considerably easier. Suddenly, typographical changes were a simple matter of a click on some copy and another click on the style palette.

If you're writing a long book or a manual about a software product, you will need to capture lots of screens. The software supplied with the Mac includes a screen capture utility, of course. You can capture a screen to a file simply by pressing **⌘ + Shift + 4**. But that built-in F-Key won't let you capture the screen when a menu is pulled down or a dialog box is visible, making it pretty useless for software documentation.

A public domain program named Camera (*Figure 7.1*) captures screen images including menus and dialog boxes, but it has shortcomings. For one, you have no control over the name of the MacPaint file it writes the image to. Camera simply names the files **Screen 0** through **Screen 9** consecutively, and stops working when all ten names are used. Camera also has a problem with anything but the standard Macintosh "beep", as I discovered when I tried to capture a screen with a soothing, Hal-like "Dave" as my system warning sound. Nor can Camera capture gray-scale or large-screen displays.



*Figure 7.1.* Camera has a timer. You set it to go off, and then you have as many as 60 seconds to pull down menus, bring up dialog boxes, or do whatever you need to before it dumps the screen image to a file in the current folder, which is usually the system folder.

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If you need to capture the image seen on a large-screen display or a Macintosh II gray-scale or color image, the best solution I know of is contained in an interesting utility called Screen Dump II. However, it has the drawback of not working when a menu is pulled down. And don't try to print those captured color screens after placing them in PageMaker — the initial release of PageMaker 3.0 freezes.

Once I had all my screens captured, there was the problem of managing them. I found Curator to be particularly powerful for this purpose because of its key-word database, although it built that database a bit slow for my taste. I also tried various scrapbook substitutes, including PictureBase and SmartScrap.

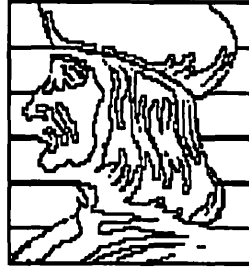
If you wish to keep your screen images free of pattern distortion, you can't copy them to PageMaker through the Clipboard. Only when you use the **Place** command does PageMaker on the Mac allow you to adjust a bit map after you've placed it to a size that won't distort the regular patterns.

Oddly enough, the on-screen effect of letting PageMaker resize a bit map with the ⌘-key/drag combination will be to distort the graphic slightly onscreen, but pay no attention — PageMaker can't have it both ways (correct on the screen *and* on the printed page). Once placed, you can resize the bit map in discrete jumps by dragging the corner handle with Command still held down. You can also resize it to any size by simply dragging that handle, but the regular patterns of the bit map will be distorted when you print the image.

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# Chapter Eight



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## Service bureaus and printers

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**I**n the years since PageMaker was first introduced for the Macintosh, an industry has arisen. Most of these businesses started in dorm rooms, as young entrepreneurs began to rent time on their LaserWriter printers. For 10 bucks an hour and 50 cents a page you could use a Macintosh and a LaserWriter, and the young entrepreneurs soon found themselves buying more Macs and more LaserWriters to keep up with demand. Pretty soon they were renting storefronts and hiring the guy down the hall who was studying graphic design. The designers would help the customer get going in PageMaker for \$40 an hour or so, and for a similar fee maybe even set up a template for a newsletter. The entrepreneurs soon found themselves buying an Allied Linotype Linotronic typesetter to keep their designers and their customers happy. And that made them a full-fledged graphics house.

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Aldus Corporation, which very much encourages the companies that have jumped into the PageMaker fray, calls these companies *Service Bureaus*. A service bureau is a great place to go for PostScript typesetting, to use a scanner, to try out new software (they'll just charge you rental time on a Mac), to attend a design or desktop publishing class, buy fonts or other specialized desktop publishing software, or to have a designer redo the look of your publication.

## Typesetting

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When you bring your files down to be typeset at a service bureau, make sure you have everything. You don't need PageMaker. But you will need to know what fonts are in your document. Linotronic typesetters come with only the four basic PostScript fonts — Courier, Times, Helvetica, and Symbol. If you've used anything else, they'll need to know about it. They probably have most of the Adobe fonts on the Lino's hard disk, but the Lino operator will still have to install the screen fonts in the system file of the Mac attached to the Lino. (Most service bureaus use Suitcase to bring in fonts as needed, to avoid the problem of font ID conflicts. For example, the Avant Garde font used for this book's subheads has the same font ID number as an ImageWriter/screen font called Cartoon.) If your document incorporates any TIFF files, make sure you've got them with you as well.

You'll also need to show the Lino operator a test printing of the document that was done on a PostScript laser printer. They ask for it to ensure the Lino output is what it's supposed to be. Plus they want to make sure their customers are not wasting their money. If they let you do your proofing on a Linotronic typesetter at \$10 a page, they might make a lot of money the first time, but it would be the only time.

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It's possible that some small discrepancies will crop up between your test print on a laser printer and the Lino output. If so, you can make another run back to the office...rent time at \$10 an hour on one of their Macs...or, if you've made friends with the Lino operator, sit down at his or her Mac and make the corrections while getting a bit of expert instruction.

How do you find a service bureau? Look in the yellow pages under desktop publishing, graphics, printing, and/or desktop publishing. Aldus and Adobe also maintain lists of service bureaus in their special interest groups (SIGs) on CompuServe.

### **The final step is printing**

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Printers are easy people to work with. If your printer isn't, find a new one — there are a lot of them, and they will go out of their way to land and keep a customer. Most of them will be very helpful, especially if you've turned out a nice-looking publication. They want your business, and take a certain pride in making a print job look as good as they possibly can. On the other hand, they aren't miracle makers. In order for them to do their job, you need to provide them everything they need.

The first thing they need is copy that's completely free of errors. Nothing reflects on you more poorly than misspellings, doubled words, omitted words or phrases, and references to illustrations that don't exist. If you don't take the time and trouble to read your book, ad, newsletter, or report carefully enough to be sure it is free of mistakes, no one else will take it seriously. And there's nothing your printer can do about such errors, since you're handing him the pages hot out of your laser printer, ready to slide under the process camera and turn into a negative if you're using the standard offset printing process.

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Reserve time for proofreading, time for correcting pages with mistakes, and time for one more proofing to catch the mistakes introduced while correcting mistakes. (Here's hoping we allotted enough proofing time for this book.)

Once you've turned over your carefully proofed pages, the printer prepares to shoot a negative. Many publications will include art that must be stripped into the negative before the presses roll, such as the 100 or so photographs and pieces of artwork reproduced in this book. You supply that art pasted down on heavy cardboard — commonly called *boards* — using hot wax, rubber cement, or tape. Each piece of art will have crop marks that show the outer edges of the part of the image you wish to print. An overlay sheet of transparent paper goes over the top to protect the art and to provide a place to write other instructions, such as whether the art is to be half-toned (photographs and any drawing with continuous tones) or line-shot. You must tell the printer what percentage of reduction or enlargement the art must be shot at to make it fit in the spot you've allocated on the page. And the printer must be able to tell which place on which page the art goes. A simple numbering system works great.

### **Manual (gasp) paste-up is a necessary evil**

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Desktop publishing isn't completely automated. There are still some things better done with glue and a cutter than with electronic cut-and-paste.

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Some people enjoy doing paste-up. I can't paste a straight line. Fortunately, finding someone to do paste-up for you is easy. (Someone who will do paste-up while you watch Peter Sellers in *The Party* or the campfire scene from *Blazing Saddles* on his large-screen television is the kind of artist I'd look for if I were you.) Your printer may provide that service, or perhaps he can recommend a cultured artist with a sufficiently intellectual video collection.

If you wish to do it yourself, use the proper tools to aid the precise alignment of the art on the page. A T-square and a triangle are the minimum requirements. A light table can be a tremendous aid as well. The light table shines a strong light through your boards, creating a shadow due to the grid of lines printed on the flip side, where they won't show up in the negative. This shadow grid makes it possible to line up the art precisely.

Finally, the printer will require some instructions. What kind of paper stock do you want your publication printed on? He will be happy to make recommendations and show you samples. What kind of binding would you like, if the publication requires binding? Is your publication a relatively simple one, made of a single sheet folded in half to create four pages? Or does it have to be bound? If so, how? Reports may be side-stitched, although this is not the ideal solution, because the inside gutter of your pages will be very hard to see. Saddle stitching is better — most magazines are bound this way. (By the way, the term stitching is misleading: a saddle-stitched publication is actually held together by staples.)

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More expensive and among the most durable is the perfect-binding method most often used for books. To produce a perfect-bound volume, 16 pages are laid out side by side and printed on a single, very large sheet of paper called a signature that is then folded and trimmed. The trimmed spine is then roughened, clamped, and glued, and a cover is wrapped around it. Once the binding is complete, the pages are trimmed. This book is a perfect-bound volume.

Other common methods of binding include case-binding (for expensive hard-bound books), looseleaf (cheap, and useful for manuals and instructional booklets that may need to be changed), and comb-binding (used by Aldus for their PageMaker manual, and desirable both for its sturdiness and because it allows the book to lay flat).

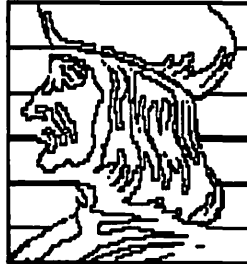
That's it. You're on your own, at the mercy of your printer. Be nice to him and watch out for anyone who doesn't have ink under his fingernails. That part of printing should be messy, unlike working with PageMaker, which sometimes is but never should be.

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# Chapter Nine

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Too much ... or not enough

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**J**ohn Tomeny is a name familiar to anyone who has visited the Aldus Forum on CompuServe. He expresses his opinions regularly and well. If you asked him in 1987 what PageMaker was good for and what it wasn't good for, he'd have told you the following.

PageMaker is great for interactive design, he'd say. But if you need to do batch processing — that is, if the layout will be the same page after page — he recommended using Ready-Set-Go. He'd choose Ready-Set-Go if the job had a lot of drop caps, too, because the program will perform that task automatically. You see, Tomeny is always looking for the fastest way to get the job done. That's because he's a professional, and the more work he gets done the more he gets paid.

It will be interesting to watch Tomeny's reaction now that PageMaker 3.0 is out with automatic flow of text from page to page and other features that ease the creation of long documents. And then there are PageMaker 3.0's templates for a wide variety of documents, including business reports with a table of contents and

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presentation overheads. What would Tomeny say about that, given his predilection for choosing the right software for the job? (And what would he say about the fact that 3.0 still makes you do drop caps by hand?) No doubt, Tomeny will have a few bones to pick, because we all do. No software is ever perfect.

But I want to stress Tomeny's underlying premise rather than his specific gripes, and that premise is this: even very good software may not be the most efficient tool for the job. I hope you'll think of your desktop publishing much as he does. More efficient is better. That means that sometimes PageMaker will be the right tool for the job, and sometimes using PageMaker will cost you time and money.

To help you decide, this chapter will discuss some of the alternatives to PageMaker and what they're good for — including programs that are head-on-head with PageMaker in the marketplace, word processors that are creeping up on it, specialized programs in the new field of desktop presentations, and even a program that requires 5 megabytes of memory and is actually quite a bargain at \$2500.

We'll start with the word processing programs, and then work our way to the top.

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## **When PageMaker is layout overkill**

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If all you want to do is drop a graphic or two into a quick report with some bold subheads and a large headline, PageMaker is too much layout program and not enough word processor. The beauty of the Macintosh is that virtually every Mac word processing program can take full advantage of the fonts on a PostScript printer and incorporate graphics that can be transferred through the

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Clipboard. Some even handle such typographic subtleties as kerning. In many cases, you can do all the page layout you need without ever leaving your favorite word processing program.

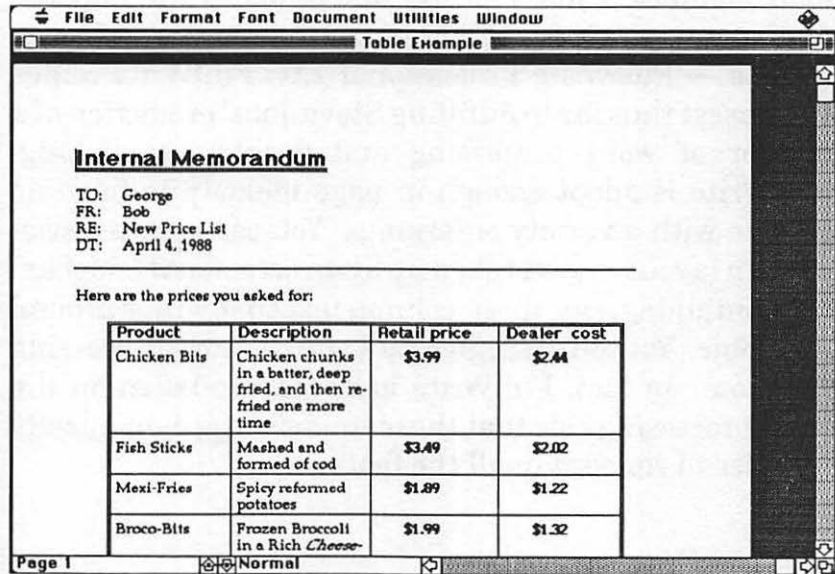
The first word processing program that comes to mind is Microsoft Word 3.02. By the time you read this, version 4.0 may be out, with added page layout capabilities and built-in macros (if you want to see what Word 4.0 is all about, see *Figures 9.1* and *9.2* on page 270). But version 4.0 simply makes everything I say about Word 3.02 even more relevant. Microsoft Word can handle many of your simpler layout jobs and do it faster than if you move a Word file into PageMaker. And for many purposes, you don't even have to wait for 4.0's extra features. Word 3.02 is hard to beat for the creation of reports in one-column formats.

I'll also discuss a word processor that's suited to slightly more complex layouts — and was probably the impetus for the announcement of Word 4.0 many months before its release — FullWrite Professional 1.0. FullWrite comes the closest thus far to fulfilling Steve Jobs' prediction of a merger of word processing and desktop publishing. FullWrite is adept enough in page makeup to have no trouble with a variety of formats. You can create a two-column layout that's broken up by an occasional "sidebar" box containing, say, three-column text that wraps around a graphic. Yet you don't give up a whit of word processing function. In fact, FullWrite is so feature-laden on the word processing side that the menus change dynamically in order to squeeze in all the features.

Figure 9.1. An early version of Word 4.0 shows it can wrap text around graphics.



Figure 9.2. A look back at Chapter Three will remind you of the problem of building a table in a PageMaker publication. But Word 4.0 automates table creation.



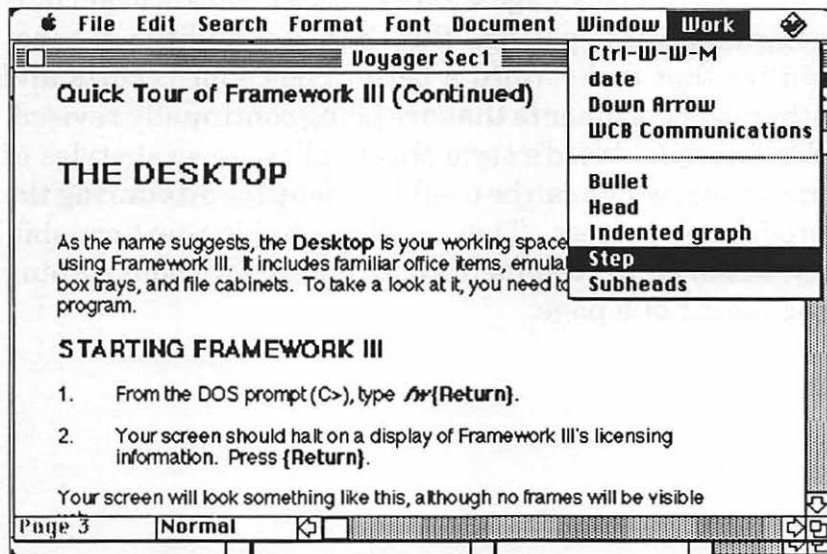
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## Word 3.02

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My bias for Word is based in part on it being such a fine complement to PageMaker. When I bring out the heavy desktop publishing artillery, I use Word to cover PageMaker's exposed flanks. If it weren't for PageMaker's ability to export its text in Word format, PageMaker would be hard for me to live with on book-length projects. I depend on Word to generate my table of contents and index as well as to check my spelling before I ship off camera-ready pages.

Word does a number of things that make the creation of long documents easier. For example, no Word option or command need stay buried in a dialog box, which can save you several mouse-clicks and a couple of pauses each time you use it. That's because you can add an extra menu to Word's menu bar called **Work** (see *Figure 9.3*).



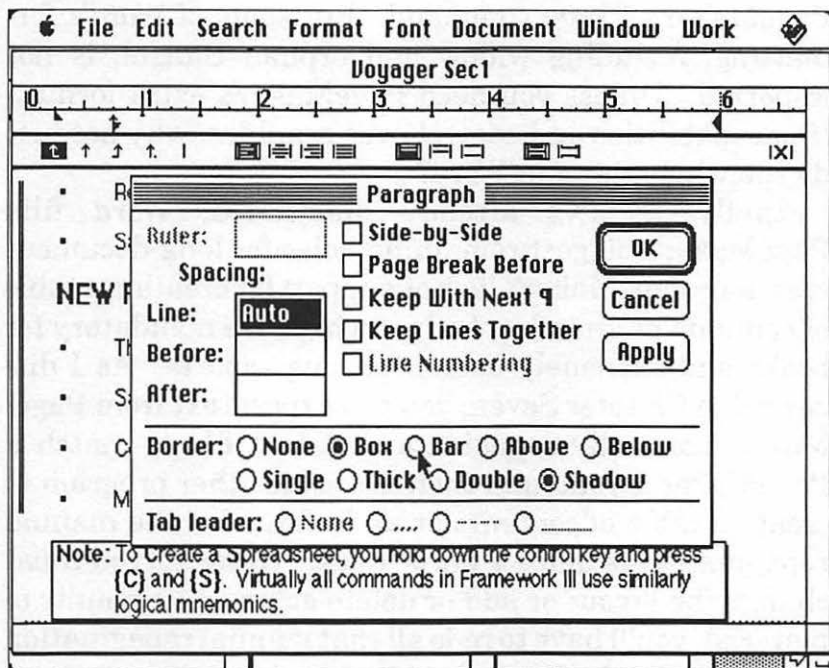
*Figure 9.3.* Word 3.0 allows users to move commands that are buried in dialog boxes into pull-down menus. Here you can see the style and glossary entries I've moved into the Work menu. This ability to customize Word is one of its chief attractions.

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It might seem that you lack access to some of your fonts if you just read Word's **Font** menu, but that's not true. In fact, it's actually an advantage that just a few fonts are listed in that menu. In PageMaker, you have to wade through every typeface whether you use it or not. Word lets you see the complete list of typefaces available to you in its **Character** dialog box of the **Format** menu. You can move any font from that complete list to the document's **Font** menu for quick access (the trick is the same ⌘-Option + maneuver described in *Figure 9.3*). As a result, you don't have to scroll through a list of dozens of typefaces everytime you want to change fonts as you must in PageMaker.

Word's style sheets are another reason you might choose to use Word for a project over PageMaker. Word style sheets can't handle a few of the things PageMaker style sheets do. You have control over typeface, typestyle, and type size, but lack PageMaker's precise control over character and word spacing. But there are additional capabilities that make Word a better choice for reports and other long documents that are being continually revised. For example, Word's style sheets allow several styles of underline, which can be useful to identify edits during the production process. There is also a hidden-text capability, which allows comments to be entered without ruining the layout of a page.

When it comes to paragraphs, Word gives you all of PageMaker's control over margins and tab settings plus the ability to associate a graphic element with a paragraph. Word can put a shadow box around a paragraph, making it into a sidebar commentary or an aside, separate from the main text (*Figure 9.4*). You can also add several kinds of bars alongside a piece of text to emphasize it. If the paragraph moves on the page because of editing or a cut and paste operation, the associated graphic moves as well. PageMaker has no corresponding capability to associate a graphic element with a paragraph.



*Figure 9.4.* Word's style sheets access everything in the Paragraph dialog box, including the ability to attach a variety of lines to paragraphs. For example, notice that the "Note" is differentiated by a shadow box. If an edit causes that note's text to move, the shadow box will move with it.

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## Word processing versus PageMaker's Text tool

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One of Word's biggest advantages is that it is a powerful word processor. PageMaker's text tool is limited. It does not search. You cannot globally correct mistakes with a search and replace function. There is no spelling corrector. You cannot automatically prevent widows and orphans. All of that is left up to you. You can *export* the text portion of a publication to Word or another word processing program for which PageMaker has a filter, do what needs doing, and then bring the corrections back into your publication using the **Replacing Entire Story** option of PageMaker's **Place** command. But some of Word's formatting, including widow and orphan control, is not imported. Unless you need PageMaker's extra formatting capabilities and control over graphics, why not just do the whole thing in Word?

Finally, as I've already mentioned, Word fills PageMaker's biggest remaining holes for long-document creation: PageMaker's lack of support for creating a table of contents or an index, both of which are mandatory for books and extremely useful for long reports. As I discussed in Chapter Seven, you can export text from PageMaker, manually repaginate that text file to match a PageMaker layout, and then use some other program to create a table of contents or an index. But the manual repagination is quite a bit of work. Worse, if you must change the layout or add or delete extensive amounts of material, you'll have to redo all that manual repagination again. In Word, all you need to do to have the new page placements reflected is to pull down the **Document** menu and let Word recalculate the index and table of contents.

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## FullWrite

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FullWrite Professional has all of the features of Word, adds some of the layout and graphics capability of PageMaker, and adds unique features of its own. It's a big program — you can't do much in 1 Megabyte of memory without running up against a wall. How big is FullWrite? Word 3.02 asks MultiFinder for 384K. Even PageMaker 3.0 asks for only 700K. But FullWrite asks for 1124K. On my 2.5 Megabyte system with a 557K System file, there wasn't room to give both FullWrite and PageMaker all the memory they asked for.

On the other hand, you can *run* FullWrite on a 1 megabyte Mac even though the program alone occupies 773K. The way FullWrite gets around the memory limitation is by allowing you to break up documents that are too large to fit in memory at one time into "chapters." An optional warning lets you know when a chapter is becoming too large to fit on a 1 megabyte Mac running under an average-size system file.

What is the degree of the limitation? It varies according to the size of your system file, but I've heard reports of a limit of about 15 pages of text on a 1 megabyte Mac, with succeeding chapters slightly smaller. Another user, who must have a larger system file, said he ran into problems at about six pages of text, and soon thereafter started receiving "memory low" messages that prevented him from doing a spelling check or page preview. This need to divide a long document into six- to 15-page chapters is something you might be able to live with during the writing process — after all, it's not as if you can write six pages a minute and will be continually creating new chapters. It's importing long documents that's the real pain. Bringing in a 50-page Word document, for example, would require breaking it up into four to eight shorter "chapters."

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FullWrite is so big in part because it does much of what you would expect a page layout program to do in addition to its full-blown word processing features (See *Figures 9.5A* and *9.5B*). On the word processing side it adds to the functionality level of Word 3.02 a thesaurus, bookmarks for easily finding your way to particular spots in a document, and a larger repertoire of style sheet types. On the page layout side, FullWrite allows you to resize graphics and edit text while viewing a multiple-column layout onscreen (Word 3.02's Page Preview, which lets you see the layout, does not let you edit text). FullWrite also incorporates drawing tools, including the bezier curves tool that not so long ago broke new ground in Illustrator. No doubt — FullWrite does a lot.

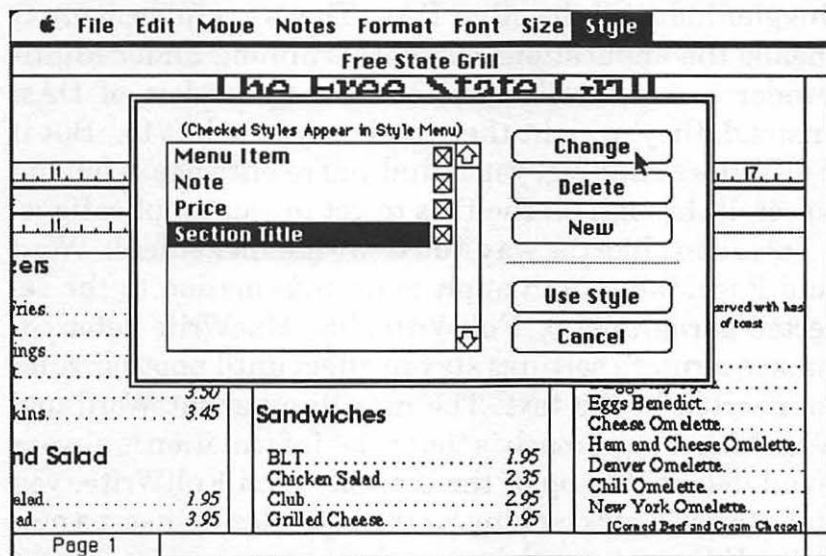
The large feature set is not completely to blame for FullWrite's memory crunch, however. With a bit of time now to go back and refine the program, the FullWrite product manager at Ashton-Tate has said publicly that they're going to squeeze it down and make FullWrite a truly viable option for a 1 megabyte Mac.

There are several other anomalies in the first version that will be fixed, eventually. Although FullWrite will read Microsoft 3.0 files, it won't save files in that format. Until that **Save As Word** file feature is implemented, any file you move into FullWrite is going to stay in FullWrite format unless you're willing to accept a loss of formatting information in order to move it to another program.

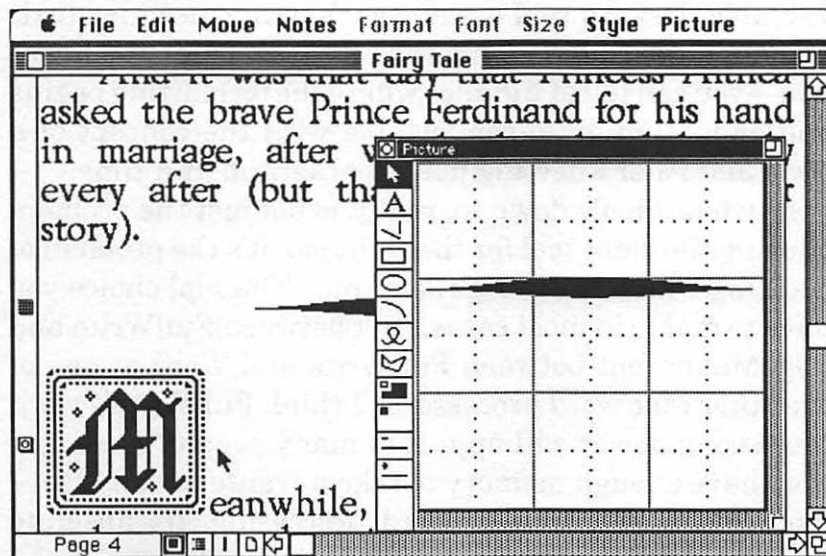
Another problem for anyone who uses the keyboard for selecting text is the slowness of FullWrite's cursor movement. Although this is not a factor if you always use a mouse, if you use the numeric keypad cursor movement keys inherited from the PC world...well, just don't.

Other problems I have with FullWrite are matters of personal preference or the result of design decisions — they will never be fixed, nor probably should they be. For example, FullWrite handles menus in a nonstandard

way. Instead of using the standard Mac menu manager, the program authors wrote their own in order to be able to change menu items dynamically as modifier keys are pressed. That's a nice feature. But the trade-off is incompatibility with Desk Accessories that tap into the



**Figure 9.5A.** Here FullWrite shows its ability to provide side-by-side column editing, lines created with its own drawing tools, and style sheets for controlling fontography of the various elements. In short, everything for creating and maintaining a restaurant menu.



**Figure 9.5B.** FullWrite handles graphic elements like the fancy "M" and the section break graphics as "sidebars." The presence of a sidebar is indicated by a column mark. One advantage of FullWrite's approach is that the sidebar graphics move with text when an edit makes it reflow.

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Mac's menu manager in order to perform some very useful functions. Just one example: FullWrite defeats one of my favorite Font/DA Juggler features (for more on Font/DA Juggler, see Appendix A). Ordinarily, if you hold down **Shift** while pulling down the Apple menu, Font/DA Juggler hides all the other DAs. That's useful because it means the applications currently running under Multi-Finder aren't scrolled out of view by a slew of DAs. Instead, they're right there and easy to select to. But if FullWrite's running, you'll find you're once again having to scroll through all the DAs to get to your applications.

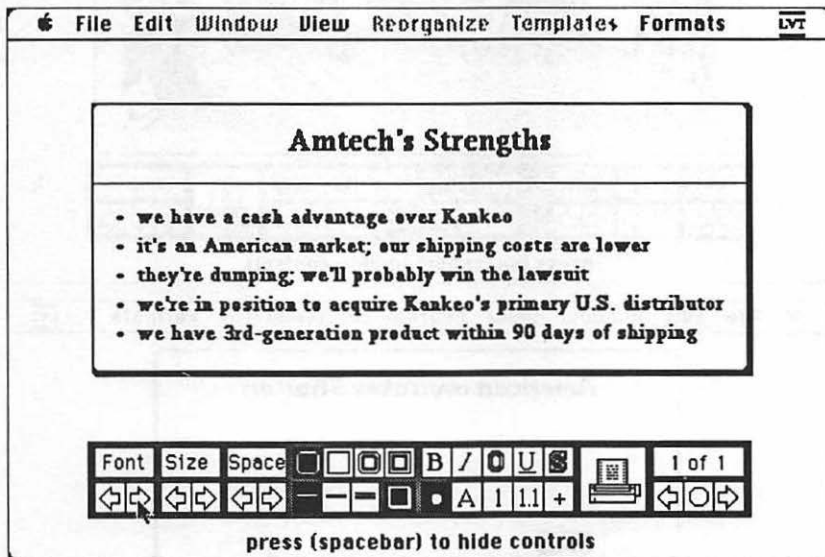
I also don't like the way FullWrite handles rulers. Word and PageMaker both apply ruler information to the selected paragraph(s). FullWrite, like MacWrite before it, makes a ruler's settings stay in effect until another ruler is inserted in the text. The nice thing about Word and PageMaker's approach is that ruler information is always available at the top of the screen. With FullWrite, you have to backtrack looking for the last ruler or insert a new ruler. Either approach is annoying because rulers take up valuable desktop real estate that's better used for text. Although the FullWrite method is very visual and intuitive—you can tell at a glance where the formatting begins and ends—I'm quite comfortable with the concept of a style and ruler affecting just a paragraph at a time.

So, what it boils down to, really, is not just the problem of using the right tool for the right job: it's the problem of deciding which tool is right for you. The real choice you have to make, in most cases, isn't between FullWrite and PageMaker, but between FullWrite and Word or one of the other Mac word processors. I think FullWrite's word processing power will appeal to many people, assuming they have enough memory to take advantage of it. But I like Word's approach to word processing, its absolute solidness, and its speed. I think I'll wait until version 2.0 of FullWrite and then re-evaluate it.

## More vs. PageMaker for presentations

PageMaker 3.0 includes several templates for overhead transparencies. It's clear that you can easily produce acceptable images for overheads using PageMaker, but there are better ways to go if you do a lot of presentations.

For quick creation of a bullet-point list, I know of no better tool than Living Videotext's More. A bullet-point chart is a simple hierarchical structure consisting (usually) of one main point plus several subordinate points per overhead. While that may seem too simple to require a sophisticated program like More, it's worth using More because More reinforces the use of outlines and automatically converts an outline into bulleted points (*Figure 9.6*).

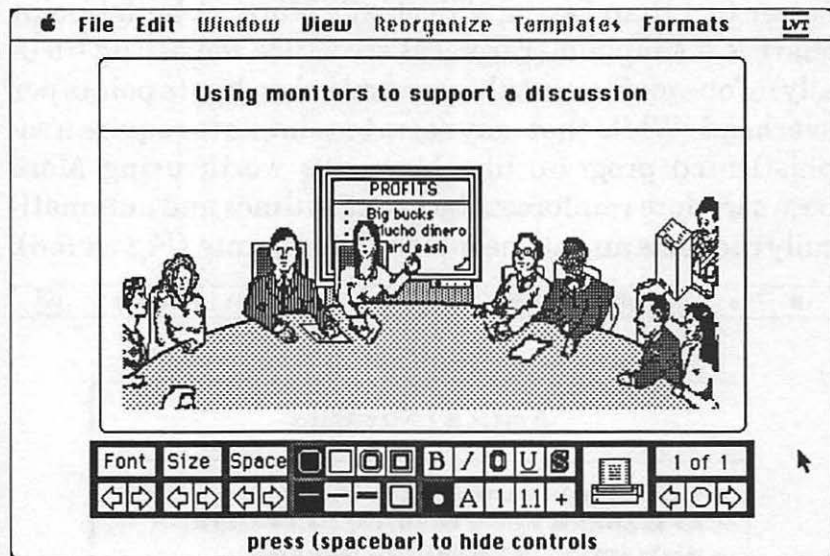


*Figure 9.6. More is very good at producing word charts for presentations. You don't have to place anything — More formats them for you automatically.*

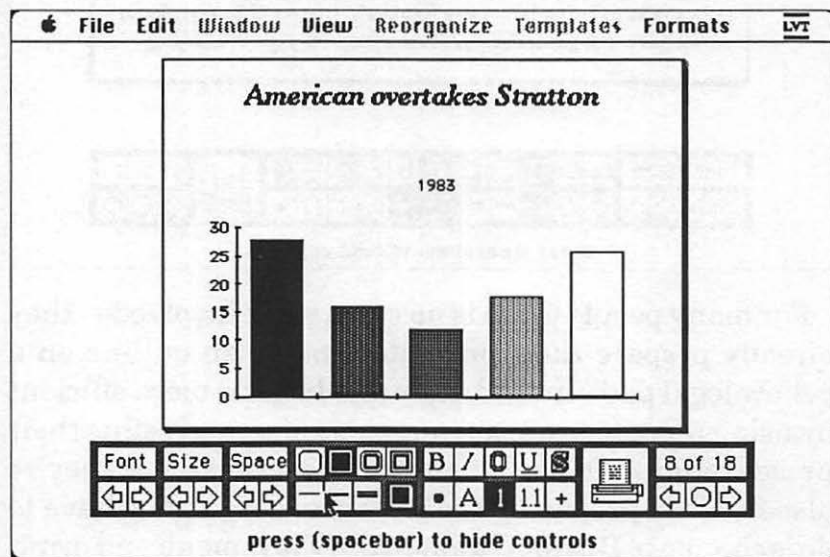
For many people there is no extra work involved—they already prepare their presentations as an outline on a yellow legal pad. Indeed, they just become more efficient by using More to brainstorm, reorganize, and refine their presentations. Once that part of the work is done, they've also finished preparing their overheads: all they have to do is change to **Bullet Chart** in the **View** menu and print.

It's possible to make More overheads more effective by adding illustrative materials, as you can see in *Figures 9.7A-9.7B*. Or you can alter the appearance of charts that are composed of nothing but text without having to deal with point sizes, fonts, and styles of text as you must in PageMaker, because the More palette simply rotates through a number of predefined options.

*Figure 9.7A. As most Mac programs can, More can also accommodate graphics.*



*Figure 9.7B. The graph came from Microsoft Excel. The text is part of a More outline.*

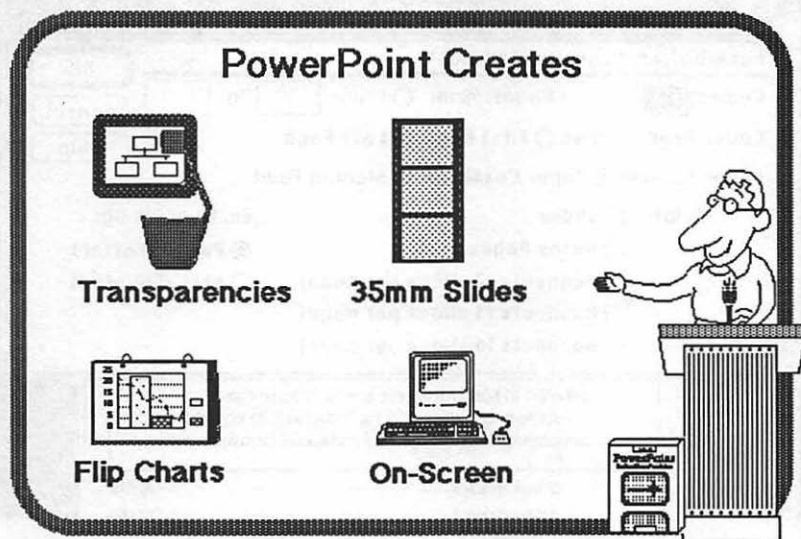


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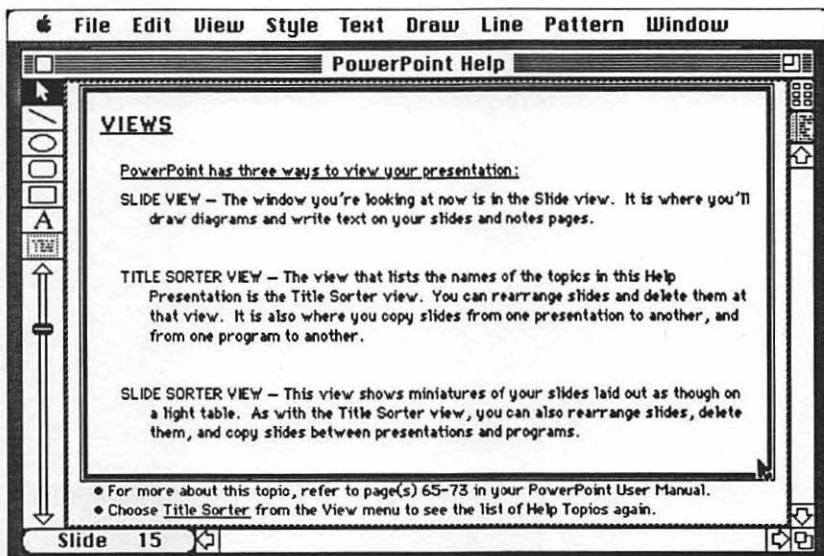
## PowerPoint

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An alternative to More for the creation of presentations is PowerPoint. PowerPoint includes templates for the creation of presentations that take into account a number of fine points More doesn't (Figures 9.8A and 9.8B).

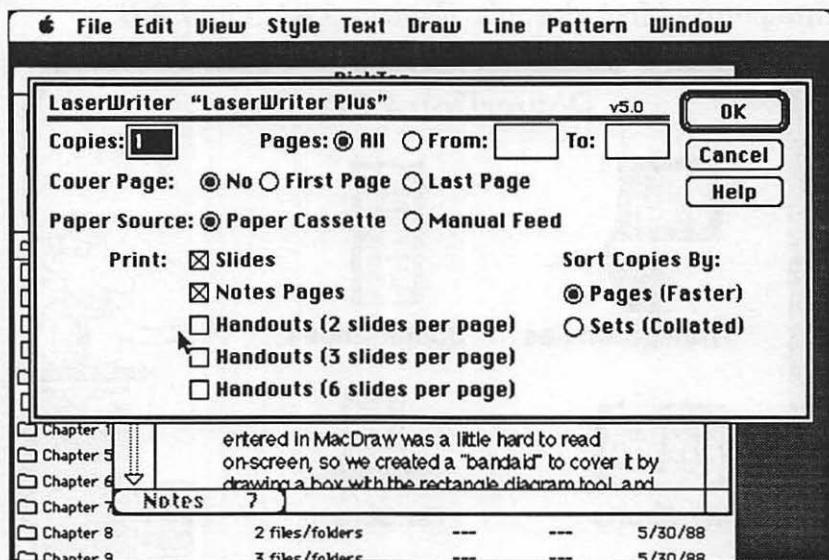


**Figure 9.8A.** PowerPoint incorporates graphics and can drive a variety of output devices. Laser printers can handle transparencies and small flip charts.



**Figure 9.8B.** PowerPoint has several tools to help you organize your presentations, including an interesting view that emulates slides laid out on a light table.

PowerPoint also takes care of other aspects of giving presentations that More doesn't. It can print out each of your slides with speaker's notes, and it gives you a choice of formats for printing handouts of your presentation (Figure 9.9).



*Figure 9.9. PowerPoint also provides presentation support by printing handouts and speech notes as well as your word charts.*

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## Mac alternatives: Ready-Set-Go, XPress

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John Tomeny preferred to use Ready-Set-Go for some jobs back before PageMaker 3.0 came out, and he wasn't alone. Many desktop publishers have taken a liking to this package. But have the revisions in PageMaker 3.0 eliminated the advantages Ready-Set-Go had for long documents and some other kinds of publications? Well, yes and no.

The chief differences between PageMaker and Ready-Set-Go are now approach and feel. PageMaker's metaphor is the blank paste-up board, which is comfortable for anyone coming from the graphics world. RSG does not have a real-world analog, on the other hand, although some people say it's similar to some composition systems in the typesetting arena. In RSG, you define pages by defining text blocks and picture blocks on the screen, which contains a grid. You define flow from text block to text block by using the lightning-shaped text linking tool that's an analog to a newspaper "jump" line, those "continued on page 2" messages you see at the end of the column when a newspaper story continues on another page. Ready-Set-Go has long had the combination of tools for design-intensive publications like newsletters as well as batch-oriented documents like manuals and long reports. Indeed, it combines these two capabilities slightly better than PageMaker 3.0 does. Remember, it would have been wonderful for this book if PageMaker had been able to flow text from the second column on one page to the second column on the next (including captions and the like from the first column to the next). RSG can do that. All you have to do is use the text-linking tool to establish that kind of flow on one set of pages, and then global linking to establish that pattern for pages that follow.

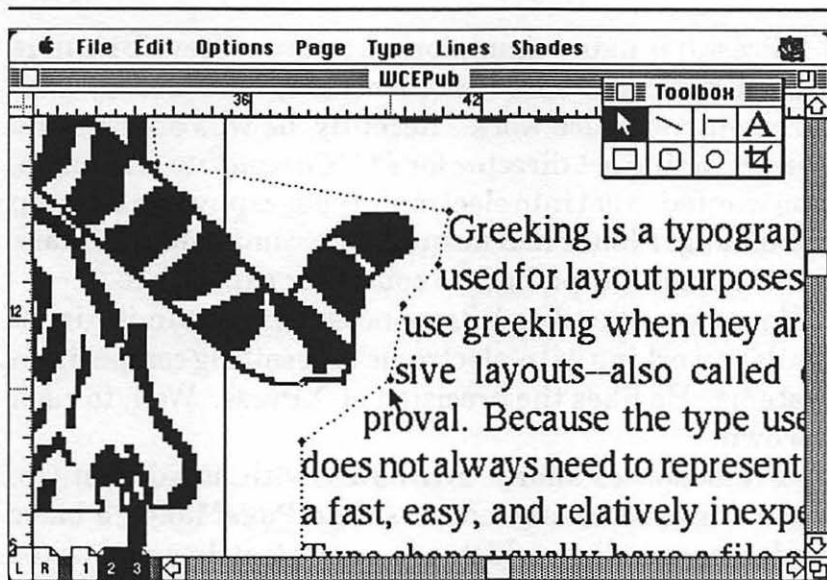
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Another feature that's nice for long documents is a search-and-replace function, particularly when substantial revisions must be made. RSG's built-in word processing has a search-and-replace feature as well as a number of other functions PageMaker's text tool lacks, including a spelling checker and a glossary function for expanding abbreviations into words or blocks of boilerplate text. Despite the extra functionality, RSG's word processing is about midway between the speed of PageMaker's text tool and what is considered acceptable speed in an ordinary word processing program.

RSG also provides a uniquely efficient way of assigning a style to a particular paragraph. Instead of having to pull down a menu and drag the mouse, or click on a style palette that's constantly taking up valuable room on the screen as PageMaker 3.0 users do, RSG users can assign styles using a keyboard **⌘-Option** combination.

Another thing many people like about RSG is that it displays a grid system on the page. On the other hand, many designers use PageMaker as if it were a grid-based system simply by pulling down rulers on the master page to add horizontal lines to PageMaker's columns.

RSG also has a few of the sexy features that were added to PageMaker, including automatic wraparound. RSG's wraparound is more sophisticated than PageMaker's, however. Even for irregularly shaped objects, all you do is specify a **Repel** distance. PageMaker works pretty much the same way for wrapping text around a rectangular object—you assign a **Standoff** distance. But on an irregular object, PageMaker ignores the **Standoff** setting and instead wraps flush to the border you define by hand around an irregular shape by dragging handles (see *Figure 9.10*).



**Figure 9.10.** PageMaker does not match Ready-Set-Go's ability to wrap text around irregular objects automatically. In PageMaker 3.0, you must manually manipulate the outline around the object to which text will wrap.

So given all the good things RSG has going for it, why do I continue to favor PageMaker? I've said it before and I'll say it again: because running PageMaker is much like driving a fine German automobile. It's functional and things feel right. As an automobile can be a real revelation to drive, PageMaker is a revelation to use.

## Quark XPress

Quark XPress falls pretty much in the same category for me as Ready-Set-Go. I've used XPress, and I'm not fond of its feel. Whereas PageMaker seems intuitive and understandable, XPress seems complex. Why do I need 17 types of frames plus the ability to customize frames? Because the frame is a cross between a column and a style sheet, I tell myself. Sure, that's it. Perhaps it would all be clearer to me if XPress had decent manuals, but it doesn't. They certainly don't compare with PageMaker's masterly documentation.

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XPress has many champions, however. Steve Blount is a book packager based in Princeton, New Jersey who turns out very nice work. Recently, he was advising Fo Wilson, acting art director for *PC/Computing* magazine, who wanted to get into electronic typography and desktop publishing. Blount had no qualms recommending Quark even though Wilson had no computer experience.

Blount says he likes XPress because it reminds him of his days working with electronic typesetting composition systems. He likes the precision of XPress. Well, to each his own.

XPress shares many attributes with Ready-Set-Go: more word processing features than PageMaker, a basic modus operandi in which the user stretches out boxes that will hold graphics or text, the isolation of graphics in their own special kind of boxes, automatic wrap around an irregular shapes, and so on. And text flow is established with a similar linking tool.

XPress also has several features that Ready-Set-Go 4.0 lacks and that PageMaker didn't have until version 3.0, including support for spot color and control over contrast and brightness of scanned images.

XPress is particularly good at typography. Besides the ability to kern text according to the tables of optimum kerning-pair distances built into PostScript fonts, and the ability to kern words manually, Xpress can also do something known as tracking. Tracking does not just bring particular letter pairs closer together as kerning does. Instead, it brings all letter pairs closer together, reducing the white space in every line of type. Tracking is particularly useful for achieving good line breaks and spacing when you've wrapped justified text around an object in relatively narrow columns.

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## **PC alternatives: PageMaker and Ventura**

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Certainly PC PageMaker is a reasonable alternative to the Mac version of PageMaker 3.0. True, there are serious tradeoffs involved. PageMaker 3.0 is simply too much program for the 640 kilobytes of memory available on the PC (which must be shared with Windows). Add one small resident program and performance degradation is severe. And don't even think about trying to transfer graphics between PageMaker 3.0 and the leading Windows' illustration program, MicroGrafx Designer, through the clipboard. After 20 minutes of furious desk swapping the time I tried it., Designer finally got control of the machine long enough to inform me there wasn't enough memory for the transfer. Yes, I could go on and on about the qualitative differences between the two products.

Perhaps the most telling thing about PageMaker on the PC is that I know of no professional desktop publishing person who uses the PC. Given the choice, they have all opted for the Macintosh.

But I'm not here to tout the Mac over the PC. PageMaker on the PC has a lot going for it. It is, largely, the same product as PageMaker 3.0 on the Mac. Files from Mac version 3.0 can be taken directly into PC version 3.0. The only loss will be PICT format graphics.

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The bottom line is this: if you work for a corporation that is exclusively PC oriented, PageMaker on the PC may be the only way to get PageMaker. Lucky for you, this book provides an approximate feel for what PageMaker 3.0 on the PC can do. There are some things the Mac is better at — font handling and easy set-up, to name two. But PageMaker on the PC has the definite advantage of being able to work with a number of low-cost laser printers. Although I wouldn't recommend a LaserJet to any serious newsletter publisher, the inclusion of Bitstream's Fontware makes PC PageMaker 3.0 a very tolerable choice for publications that don't need typographic sophistication. No doubt, a LaserJet is adequate for the kind of reports and so on that many corporations want to generate. And certainly, working on the PC can make your job easier if all the people contributing to your publication are writing and creating graphics on PCs.

### **Ventura Publisher**

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The program in PageMaker's price range that provides the toughest competition for PageMaker 3.0 on the Mac is Ventura Publisher on the PC. Ventura isn't really an alternative for jobs in which the design changes from page to page, like a newsletter. But for long documents that are stable in design from page to page — reports, manuals, and books — Ventura is very good.

Why do I think Ventura is tough competition? Because it makes the production of long, relatively simple documents — the kind of reports and manuals that American business churns out in large numbers — extremely simple.

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Just as an example, Ventura would have simplified the production of this book. Ventura style sheets can handle the 2-point rules under subheads automatically, so rules would not separate from subheads in a last-minute edit. Similarly, captions won't separate from a figure. Finally, Ventura can generate both a table of contents and an index.

## **InterLeaf Publisher**

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While all of the packages discussed thus far have certain advantages over PageMaker, none does anything to ease the management aspect of desktop publishing. InterLeaf Publisher, on the other hand, is designed to manage and ease the process of putting together complicated publishing projects. And while every program discussed thus far in this chapter can automate the layout process a bit more than PageMaker, none can quickly and completely automate the process the way InterLeaf can. If your work involves a team of writers and editors preparing and revising manuals or other book-length documents, InterLeaf is worth considering.

InterLeaf is designed to work on a network. It is designed to automate the layout process for documents that are uniform throughout — a book approach rather than a magazine approach. It incorporates full-blown word processing *and* powerful drawing tools. And it has management tools that are like having a good production editor coordinating and tracking the various elements of a project as people work on it across a network.

When a team is on a network, InterLeaf can make sure everyone works with the most current revision of a file. InterLeaf can also let different projects share files. For example, several manuals for software based on Microsoft Windows might share a chapter on Windows' basics.

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InterLeaf's real power begins to show when you start dealing with tracking the little error-prone details of desktop publishing. InterLeaf can automatically number figures, even maintaining consecutive numbering across several files. It also tracks references in the text to those figures. When figures are inserted, deleted, or moved from page to page during the revision process, the figure number and page references are automatically updated.

InterLeaf's equivalent to the style sheet — the property sheet — could have captured all of the rules of this book's layout. Graphics can be anchored to pieces of text, which eliminates the need to move graphics when revision causes references in the text to move far away from them. There are options for controlling margins, vertical justification (how far down the page each column extends), and even for stretching or reducing the space between lines in order to meet that vertical justification spec.

If your design needs to vary, you can create a microdocument that has a different layout than the rest of the publication. As with the FullWrite sidebar, a microdocument is the only way InterLeaf can do a runaround layout.

InterLeaf's drawing tools are impressive. You get the power of the original MacDraw plus the ability to rotate objects in three-dimensional space. You also have a built-in chart-making facility, which can be very useful when a document is revised. Instead of having to go off to another program, retrieve the original file (if it still exists), change the data, and then import the revised chart, you simply change the numbers and your graph or chart is revised.

The same advantage accrues from InterLeaf's word processing. There's no need to export to a full-blown word processor, revise the text, and bring it back in.

Of course, InterLeaf is not the only desktop publishing software that supports lots of word processing features, including search and replace and spelling correction. The difference is that InterLeaf's word processor is *fast*.

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If you need to, you can import text files from Word or MacWrite, but once a file is inside an InterLeaf document, you won't really need to move it back out.

The really impressive part of InterLeaf is that page layout is automatic and quick. You can delete 2.6 pages of a 300-page document, and within seconds all 300 pages will be automatically reformatted according to the very complex rules InterLeaf lets you establish.

InterLeaf does have some drawbacks. Its interface is somewhat different from that of other Mac programs, which may make Mac aficionados angry and force them to do a bit of relearning. The familiar **File** and **Edit** are visible in the menu bar, but the choices inside are grayed. Everything in InterLeaf is done instead via pop-up menus that open to the side the way the new choices in PageMaker's **Type** menu do. Arrows in the menu indicate submenus; you must pass the pointer over then to open the submenu, which appears just to the right or left of the main menu. In InterLeaf there are often several lower levels of submenus that form a kind of dragon menu that you must sinuously traverse to get to the command of your choice. A real time-saver, however, is that these menus remember your last command and resume the same sinuous shape the next time you return.

InterLeaf tends to follow the conventions of the other InterLeaf Publisher software running on Sun workstations rather than the standard conventions of the Mac. For example, the familiar **⌘-X** for Cut, **⌘-C** for Copy, and **⌘-V** for Paste don't work. Instead, InterLeaf offers its own set of keyboard shortcuts, which are most practical for helping you with word processing if you have the extended keyboard. When you highlight some text and begin to type, expecting to enter a correction as you do on every other Mac program, the highlighted text is not replaced. Instead, the new text is simply inserted.

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InterLeaf does not support downloadable fonts — only the set that's standard in the LaserWriter Plus and all the PostScript printers that follow that convention. In other words, forget Bodoni. Nor does the software take advantage of the kerning tables built into PostScript fonts. These seem strange omissions for a \$2499 package.

On the other hand, while the price of InterLeaf for the Mac is high, it's a bargain if you consider that it has the same capabilities as the \$15,000-and-more Technical Publishing 3.0 version of InterLeaf Publisher that runs on a Sun Microsystems workstation.

### **Saving money without learning PageMaker**

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PageMaker has plenty of desktop publishing capabilities, but do you? A Mac and a wonderful piece of software do not automatically turn someone into a designer, publisher, and production coordinator. It may be that any desktop publishing project beyond a simple form or newsletter will be too much for you. That's fine. Remember the first rule of this business: do things as efficiently as possible. And maybe the most efficient thing would be to hire someone else to do it for you. Try posting a notice at a local PageMaker service bureau if you want to bring your publishing activities in-house with a PageMaker expert. Buy a Macintosh or PC for the best person, give them the same kind of guidance you'd give any graphics designer, and then cut them loose with PageMaker (and maybe this book, what the heck). You can still save money from desktop publishing, even if you don't do the desktop publishing yourself. You just won't save as much . . . nor will you get to play with one of the most marvelous tools I've ever encountered.

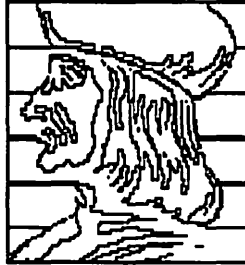
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# Appendix

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## A



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### Finder, MultiFinder, and the Mac

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If you already have a pretty good feel for the Macintosh, you don't need to read the first few pages of this Appendix. If you're comfortable with using the Finder but still aren't using very many Desk Accessories, or want to find out how you can speed up the work you do in the Finder because it's getting difficult navigating around through all those icons and folders, skip forward to "Easy to learn, hard to use" on page 296.

If you already have the Finder tamed and are mainly interested in learning more about the MultiFinder, skip ahead to "MultiFinder" on page 299.

If you're already a MultiFinder power user, then maybe you don't need to read this Appendix at all, which is why it's tucked back here instead of in the main flow.

On the other hand, even if you are a Macintosh power user, it couldn't hurt to breeze through this appendix. The Mac is such a flexible environment (there are thousands of utilities and aids available to help get your job done) that I may have stumbled onto some software you've never run into before. Or maybe I can put a new spin on using something as familiar as the file folders on the Mac desktop.

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## Finder Basics

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For the moment, let's forget that MultiFinder exists and consider the Finder. The Finder is the program the Mac runs when you first turn it on, the one it returns to after you quit another program. It is an emulation of a desktop, and it's easy enough to think of it as a desk blotter that holds both your work and the tools with which you do your work. Its purpose is to let you find and manage both the work documents you produce and the programs you produce them with.

In its default mode, the Finder represents your work documents as little icons that look like pieces of paper. Documents carry a graphic indication of the program that created them, and below that the name of the file.

To help keep all your documents organized, they can be placed in file folders. Once again, the default for documents placed in a file folder is to show them as if they were pieces of paper.

Programs look much like documents. They are represented by icons about the same size, and if they look like a piece of paper they are distinguished by a hand making distinctive marks on the page or some similar device. Program icons too can be stored in file folders.

In the upper right of the desktop are icons for each disk drive you have attached to your system. In the lower right corner of the desktop is a trash can. To save a file to a particular disk drive, you drag its icon until the mouse pointer is touching the disk's icon, then release. To get rid of a document you no longer need, you use the mouse to drag its icon to the trash can. The trash can bulges to show something is inside; the file making it bulge goes away permanently when you choose **Empty Trash** from the **Special** menu at the top of the desktop.

---

**Special** is just one of the menus you can choose from when using the Finder. Like almost all Mac programs, the Finder has a menu bar from which you can make selections. In Finder's case, there are four — **File**, **Edit**, **View**, and **Special** — plus the special Apple icon, which is always part of the menu bar. Those menus hold commands that act on whatever folder, document, or program is selected. Selected items are highlighted by reversing their white-and-black patterns.

To select from a menu, you simply move the mouse until its pointer is over that menu's name and then click the mouse button. The menu drops down. Now, without releasing the mouse button, you can drag the pointer's selection bar down to the word representing the command you wish to execute. With the highlight on that word, you release the mouse button. The command then acts upon the selected object on the desktop.

The commands under **File** include **Open**. If you have selected an application on the desktop and choose the **Open** command, the application "launches" (starts running). If you **Open** a document, the application that created it launches automatically and loads the file so you can work on it.

As in many other situations on the Mac, there is a shortcut that avoids this need to pull down the **File** menu. You can **Open** a file simply by putting the mouse pointer on it and clicking twice in rapid succession (double-clicking).

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## Easy to learn, hard to use

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The Finder is one of the reasons the Mac has earned a reputation for being good for the beginner but not for someone who has become more sophisticated. In its default setup, the Mac devotes an enormous amount of resources to managing the graphic images of files on the desktop. Yet there's not room for that many icons. Although icons are intuitive because they represent familiar objects and because you point at them and physically move them, they are also difficult to deal with when you amass large numbers of them.

And it certainly doesn't take long to amass hundreds of files. If you're using PageMaker, it's certain that you've got many more files than you can deal with efficiently as thumb-nail sized icons.

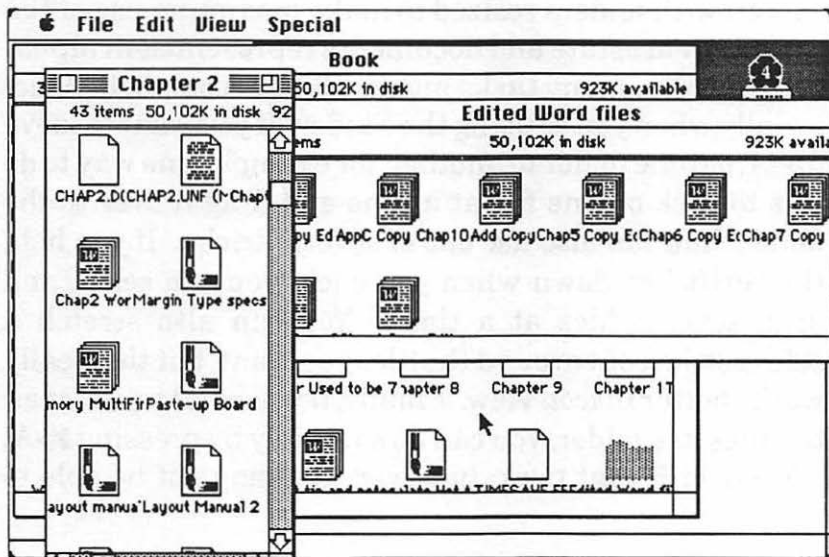
Fortunately, the Finder also lets you view your files by small icon, by name, alphabetically, by size, by date, or by type.

## Overcoming ease of use

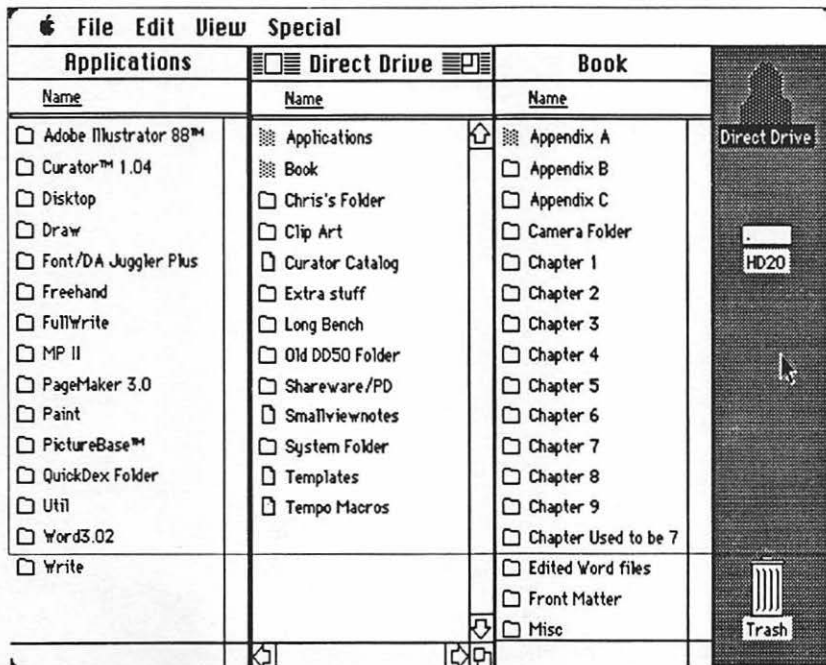
---

If you choose one of the other options in the **View** menu, finding files becomes easier. **View by Name** alphabetizes files, one file to a line, making it easy to scroll down the list quickly to the name you want. **Sorting by date** brings the most recently altered files to the top of the list, which can be handy for finding a file you worked on recently but whose name slips your mind. **Sorting by type** groups all the documents created by a particular application together. **Sorting by size** brings the largest file to the top.

Figures A.1 and A.2 show the Mac desktop before and after overcoming ease of use. After, of course, is how I arranged my desktop during this book project to make it easiest to find the files I wanted.



*Figure A.1. Not an efficient use of the desktop, is it? Only three of the more than 50 folders on this disk are showing, the file icons are disorganized, and you can't even read many of the file names because of overlap.*



*Figure A.2. With 41 folders visible and neatly organized, we're on top of things. The folders open up to compact little shapes for scrolling through an alphabetical list of file names.*

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You want your folders to be rather small — just large enough to identify what files are inside — because large folders tend to cover everything on the desktop when they're open.

Even with folders resized to make maximum use of the desktop real estate and documents represented in alphabetical order, many tasks must still be accomplished pictorially when you're using the Finder. If you want to move files from one folder to another, for example, one way to do it is to click on one file at a time and drag it over to the folder. You can also use one of several tricks. If you hold the **Shift** key down when you click, you can select and drag several files at a time. You can also stretch a selection box out around the files you want, but this really works better in icon view. Finally, if you want to select all the files in a folder, you can do so simply by pressing **⌘-A**.

Even with that trick, however, you may not be able to

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copy your files easily to another folder. It's easy for the one you want to be buried under several overlapping folders that piled up in the course of searching to find some other document or application.

Part of the answer, it seems, is just to keep your desktop cleaned up: close folders when you're done with them, which you do by touching the box in the upper left corner. Keep your folders as small as practical so they won't obscure other folders. But it's clear that you can spend an awful lot of time physically moving and resizing icons in order to make efficient use of the Mac's "easy" system of file management. It's enough to make those of us who are bi-computer (PC as well as Mac) to long for the obscure but succinct syntax of PC-DOS

Before we get to supplemental programs that can improve Mac file management, let's consider MultiFinder, because it needs such help more than the Finder does.

## **MultiFinder**

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MultiFinder is Apple's answer to IBM's OS/2. OS/2 is actually a much more ambitious product because it provides true multitasking and lots of clever devices for programmers to hang their hats on as they advance the state of the desktop computing art. All MultiFinder does is make your life a heck of a lot easier...providing you have enough memory. If you have only a Megabyte in your Mac, forget it. You need at least 2 Megabytes to take advantage of Multifinder, and more is much better.

The chief benefit MultiFinder provides is quick switching from one program to another. The only real multitasking it provides is background printing (iffy with PageMaker) and communications.

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*Only* may be the wrong choice of words there, however, because it is those two areas that have the most to gain by far from background processing. In most other cases, it doesn't matter one whit that a program you aren't directly using at the moment is frozen in the background instead of being active but idle.

There are several ways to switch from one application to another under MultiFinder. When MultiFinder is running, an icon in the upper right corner of the screen indicates the current program. Clicking on it causes MultiFinder to cycle to the next program. Any DAs you have running will be grouped together on one menu and screen.

A second way to move among applications while running MultiFinder is to pull down the Apple menu. After the usual "About This Program" choice come all your DAs, and below that come a list of programs currently running. If you have a lot of DAs running, it can take awhile to scroll all the way down to your active programs. (Font/DA Juggler has a neat trick that eliminates this problem — it doesn't let DAs show if you select the Apple menu with the Shift key held down.)

The third way to switch to another program under MultiFinder is to click on any of its active windows. Usually, the active program will come to the top of the stack, but just below it are all the other windows that are currently open. And sometimes a program doesn't have a window open under MultiFinder. PageMaker 3.0 doesn't, for example, when you don't have any publications opened, which makes it very easy to switch to another application simply by clicking.

---

Indeed, sometimes it may not be immediately obvious to you which program you're in because of this free intermingling of all the applications and all the windows of the Finder. Of course, the current application is the one whose menu bar is displayed at the top of the screen. In the Apple menu, you can find out which program has the conch by checking the "About" box or noting which of the programs near the bottom of the Apple menu has a check displayed next to it.

The confusion of windows and screens make it tough to get to what you need when Finder is the current application under MultiFinder. The trash can and disk drive icons may become hidden under many windows, which makes programs that supplement the Finder's house-keeping duties even more valuable.

## **Finder supplements**

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Fortunately, there are other tools for managing files on a Mac. One of my favorites is a DA called DiskTop.

What's a DA? DA is short for Desk Accessory. DAs are small little programs located under the Apple menu. As the name implies, DAs are the kinds of tools you'd like to have on the desktop, ready to go. Apple's original DA's included a calculator, a notepad, an alarm clock, and even a puzzle. You can call up a DA while you're running another program — say, bring up the calculator to add a few numbers while you're writing a letter. DiskTop is a DA that's particularly useful because it can run when you're in the middle of another program. DiskTop helps you find and organize your files.

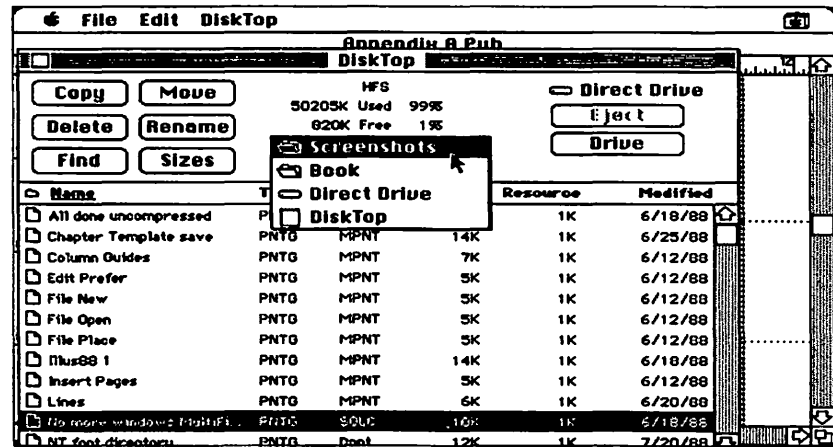
When I want to browse through files, DiskTop is much easier to use than the Finder because DiskTop eliminates

the need to manage the layout of folders on the Finder's desktop. As you can see in *Figure A.3*, DiskTop presents your files in a scrolling file selection box, one folder at a time.

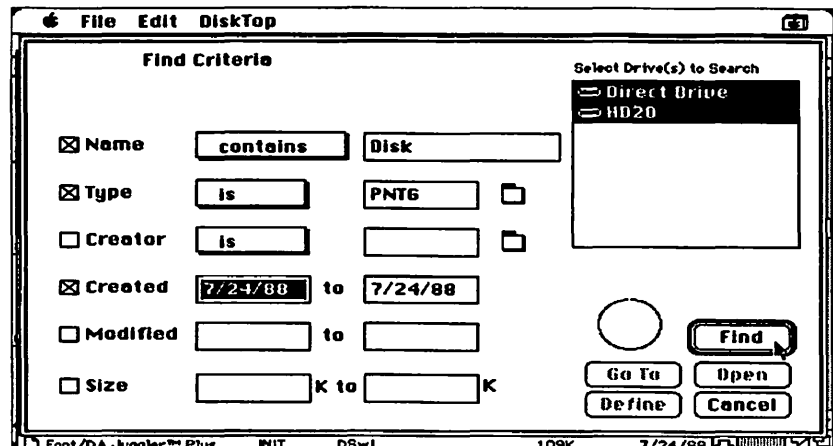
DiskTop also includes a powerful searching capability that lets you find files by name, date, type, and several other criteria (*Figure A.4*).

Although it might seem that DiskTop has been made redundant by MultiFinder — you can simply return to the

**Figure A.3.**  
DiskTop lets you do all your file maintenance far more easily than the iconic Mac desktop. And it's always available, even when you're running another program.



**Figure A.4.**  
DiskTop's Find is more sophisticated than the Find utility that Apple supplies.

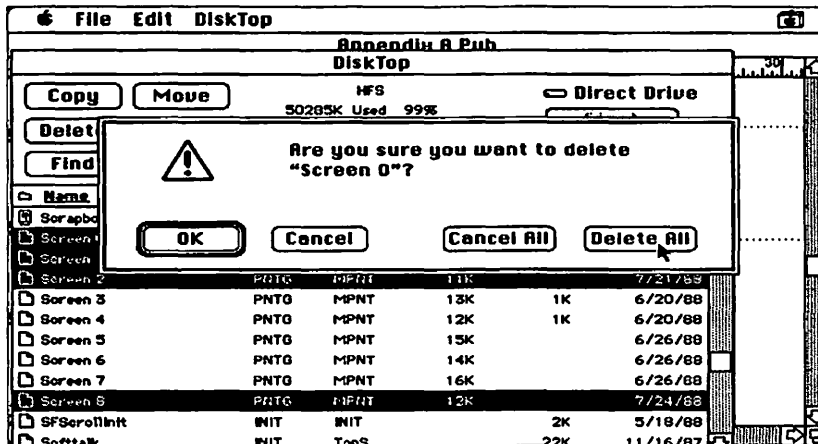


Finder now while you're working in another application — DiskTop has actually become even more valuable with the advent of MultiFinder.

Consider the MultiFinder approach to deleting files. When my disk is too full — which it always is — I often find myself trashing 5 or 6 files at a time to make sure I have enough clear disk space. Too many times I've selected several obsolete documents with the intention of deleting them, only to realize that the Trash Can was buried out of immediate reach on my cluttered desktop. (After all, I'm running MultiFinder with several applications up, each of which has several full-screen document windows open.) When I rearrange the windows in order to unbury the Trash Can, I lose all the work I did selecting the files I wanted to delete.

With DiskTop, there's no need to search for the Trash Can. You simply press **Delete** after you've selected your files, and confirm the deletions as DiskTop asks (*Figure A.5*). The procedure for **Copy** and **Move** is similar.

Finally, double clicking on a file in DiskTop has the same effect as double clicking on an icon on the DeskTop. The appropriate program launches into action.



*Figure A.5.* Being able to delete a group of files without digging out the trash can is my idea of ease of use.

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## Finder substitutes

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DiskTop is a DA that supplements the Finder, but there are other programs that try to improve upon the Finder by replacing it.

MiniFinder is probably the best-known example. The Finder can take a minute or more to rebuild a desktop, particularly if you left lots of folders open when you last left it. MiniFinder saves time by replacing the Finders' highly graphic and explicit rendering of all the files on the desktop with a simple listing of several programs or documents that you might want to launch.

A public domain alternative to MiniFinder is WayStation, written by Steve Brecher.

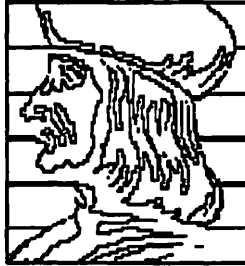
And then there are the dozens of neat little programs that help make the Mac a pleasure to use. Just one example: you know how the Finder and all other Mac programs always return to the beginning of a scrolling list of files? If you're dealing with a group of files that are together in the middle of the list — or simply want to select the same file you selected last time — you'd prefer to have the scrolling list box keep your place rather than go mindlessly back to the top of the list. Fortunately, one of the all-time Mac programming geniuses has a solution. Andy Hertzfeld wrote a small Init file that remembers the location of your last file access within a folder. When you return via a scrolling file list, you'll find yourself in the same place. The file is called SFSCROLLINIT and like so many other useful Public Domain utilities, it is available in the libraries of the Mac user group MAUG on the CompuServe Information System.

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# Appendix

## B



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### Typography, fonts

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**A**bout 90 percent of your publication is text. So how come I haven't talked that much about it before? And headlines — have I even mentioned headlines? Barely. And both are composed of type, pure and simple.

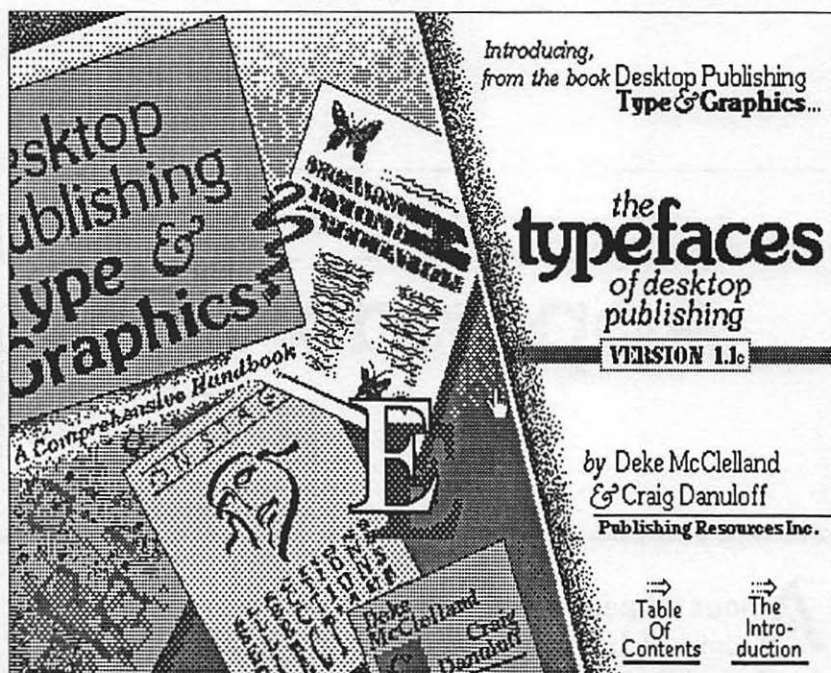
Why have I largely ignored typography? Well, because it's a tough subject. Although the effect of your choice of body type is profound, it's also subtle, and I haven't touched on much that's subtle. Display type isn't subtle, but it's very subjective. And esoteric, in a way.

Face it — I don't have the space or expertise to cover type in any detail. Nothing but the basics. Display type is used for headlines, subheads, and initial caps. Body type is what paragraphs are made of. In general — although this is not a hard and fast rule — display type is sanserif and body type is serif. Serifs are those little curly things at the remote ends of a letterform. Serif type is used for body copy because the serifs help lead the eye from one letter to another, making it easier to read.

See — nothing but the basics. If you're trying to decide on typefaces, I suggest you check out the typefaces HyperCard stack from Publishing Resources Incorporated (*Figure B.1* on page 306) and the book on which it is based.

Or you can just look at the Adobe PostScript typefaces on the following pages and decide what you like.

**Figure B.1.**  
The stack shows  
what most of the  
PostScript typefaces  
look like and what  
applications they  
work best in.





Trump Mediaeval°  
*Trump Mediaeval Italic*  
**Trump Mediaeval Bold**  
*Trump Mediaeval Bold Italic*

ITC New Baskerville° Roman  
*ITC New Baskerville Italic*  
**ITC New Baskerville Bold**  
*ITC New Baskerville Bold Italic*

ITC Tiffany  
*ITC Tiffany Italic*  
**ITC Tiffany Demi**  
*ITC Tiffany Demi Italic*  
**ITC Tiffany Heavy**  
*ITC Tiffany Heavy Italic*

ITC Cheltenham° Book  
*ITC Cheltenham Book Italic*  
**ITC Cheltenham Bold**  
*ITC Cheltenham Bold Italic*

ITC Garamond° Light  
*ITC Garamond Light Italic*  
**ITC Garamond Bold**  
*ITC Garamond Bold Italic*

Helvetica° Light  
*Helvetica Light Oblique*  
**Helvetica Black**  
**Helvetica Black Oblique**

ITC Bookman Light°  
*ITC Bookman Light Italic*  
**ITC Bookman Demi**  
**ITC Bookman Demi Italic**

News Gothic  
*News Gothic Oblique*  
**News Gothic Bold**  
**News Gothic Bold Oblique**

ITC Souvenir° Light  
*ITC Souvenir Light Italic*  
**ITC Souvenir Demi**  
**ITC Souvenir Demi Italic**

ITC Korinna° Regular  
*ITC Korinna Kursiv Regular*  
**ITC Korinna Bold**  
**ITC Korinna Kursiv Bold**

Figure B.3. Adobe PostScript typefaces.

Univers° Condensed Light  
*Univers Condensed Light Oblique*  
Univers Condensed  
*Univers Condensed Oblique*  
**Univers Condensed Bold**  
***Univers Condensed Bold Oblique***

Futura° Light  
*Futura Light Oblique*  
Futura Book  
*Futura Book Oblique*  
**Futura Bold**  
***Futura Bold Oblique***

Stone° Serif  
*Stone Serif Italic*  
Stone Serif Semibold  
*Stone Serif Semibold Italic*  
**Stone Serif Bold**  
***Stone Serif Bold Italic***

Stone° Sans  
*Stone Sans Italic*  
Stone Sans Semibold  
*Stone Sans Semibold Italic*  
**Stone Sans Bold**  
***Stone Sans Bold Italic***

Eurostile  
*Eurostile Oblique*  
**Eurostile Demi**  
***Eurostile Demi Oblique***  
**Eurostile Bold**  
***Eurostile Bold Oblique***

Excelsior°  
*Excelsior Italic*  
**Excelsior Bold**

Futura°  
*Futura Oblique*  
**Futura Heavy**  
***Futura Heavy Oblique***  
**Futura Extra Bold**  
***Futura Extra Bold Oblique***

Lucida° Sans  
*Lucida Sans Italic*  
**Lucida Sans Bold**  
***Lucida Sans Bold Italic***

Corona°  
*Corona Italic*  
**Corona Bold**

*Figure B.4. Adobe PostScript typefaces.*

ITC Avant Garde° Book  
*ITC Avant Garde Book Oblique*  
**ITC Avant Garde Demi**  
***ITC Avant Garde Demi Oblique***

ITC American Typewriter° Medium  
**ITC American Typewriter Bold**

Futura° Condensed Light  
*Futura Condensed Light Oblique*  
Futura Condensed  
*Futura Condensed Oblique*  
**Futura Condensed Bold**  
***Futura Condensed Bold Oblique***  
**Futura Condensed Extra Bold**  
***Futura Condensed Extra Bold Oblique***

Stone™ Informal  
*Stone Informal Italic*  
**Stone Informal Semibold**  
***Stone Informal Semibold Italic***  
**Stone Informal Bold**  
***Stone Informal Bold Italic***

*ITC Zapf Chancery° Medium Italic*  
ITC Zapf Dingbats \* † ” © ☞ ☜ ☞ ❖

ITC Galliard° Roman  
*ITC Galliard Italic*  
**ITC Galliard Bold**  
***ITC Galliard Bold Italic***

Memphis° Light  
*Memphis Light Italic*  
Memphis Medium  
*Memphis Medium Italic*  
**Memphis Bold**  
***Memphis Bold Italic***

Century Old Style Regular  
*Century Old Style Italic*  
Century Old Style Bold

ITC Benguiat° Book  
**ITC Benguiat Bold**

ITC Friz Quadrata  
**ITC Friz Quadrata Bold**

Glypha°  
*Glypha Oblique*  
**Glypha Bold**  
***Glypha Bold Oblique***

Figure B.5. Adobe PostScript typefaces.

Letter Gothic  
*Letter Gothic Slanted*  
Letter Gothic Bold  
*Letter Gothic Bold Slanted*

Prestige Elite  
*Prestige Elite Slanted*  
Prestige Elite Bold  
*Prestige Elite Bold Slanted*

ORATOR  
*ORATOR SLANTED*

Letter Gothic  
*Letter Gothic Slanted*  
Letter Gothic Bold  
*Letter Gothic Bold Slanted*

Prestige Elite  
*Prestige Elite Slanted*  
Prestige Elite Bold  
*Prestige Elite Bold Slanted*

ORATOR  
*ORATOR SLANTED*

**Cooper Black**  
**Cooper Black Italic**

**STENCIL**  
**Hobo**

*Brush Script*

**Aachen Bold**  
**Revue**

University Roman  
*Freestyle Script*

Carta™ ⚡ ☆ ✈ ☪ Å Æ ⊕ ✨ ☪

Lucida° Roman  
*Lucida Italic*  
**Lucida Bold**  
**Lucida Bold Italic**

Univers° Light  
*Univers Light Oblique*  
Univers  
*Univers Oblique*  
**Univers Bold**  
**Univers Bold Oblique**  
**Univers Black**  
**Univers Black Oblique**

**Figure B.6.** Adobe PostScript typefaces.

## Sans Serif

*Italic • Book • Book Italic • Demibold • Demibold Italic*

8 What is a typeface? Written characters are the symbolic framework of human communication

9 What is a typeface? Written characters are the symbolic framework of human communication

10 What is a typeface? Written characters are the symbolic framework of human communication

12 What is a typeface? Written characters are the symbolic framework of human communication

## MONTEREY

*ITALIC • MEDIUM • Bold • Bold Italic*

8 WHAT IS A TYPEFACE? WRITTEN CHARACTERS ARE THE SYMBOLIC FRAMEWORK OF HUMAN COMMUNICATION

9 WHAT IS A TYPEFACE? WRITTEN CHARACTERS ARE THE SYMBOLIC FRAMEWORK OF HUMAN COMMUNICATION

10 WHAT IS A TYPEFACE? WRITTEN CHARACTERS ARE THE SYMBOLIC FRAMEWORK OF HUMAN COMMUNICATION

12 WHAT IS A TYPEFACE? WRITTEN CHARACTERS ARE THE SYMBOLIC FRAMEWORK OF HUMAN COMMUNICATION

## Sans Serif Bold

*Bold Italic • Bold Condensed • Bold Condensed Italic*

14 **What is a typeface? Written characters are**

18 **What is a typeface? Written characters are**

*Figure B.7. There are other typeface suppliers besides Adobe. These are from CasadyWare.*

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# Glossary

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**Adobe Systems** Developers of Postscript, the page-description language used by such laser printers as the Apple Laserwriter (see “page description language”).

**Apple Macintosh** A Motorola 68000-based microcomputer that pioneered 32-bit processing, bit-mapped graphics displays, and a user interface based on icons, windows and a pointing device called a mouse. Combined with the Apple Laserwriter, the Mac became the basic engine for the first desktop-publishing systems.

**AppleTalk** The Local Area Network built into the Apple Macintosh and most PostScript printers. AppleTalk allows multiple Macintoshes to share files and resources such as printers.

**ascender** In typography the word that describes a stroke that extends above the main body of the lowercase form of a character. The word also describes the character itself: b, d, f, h, k, and l are ascending characters, or simply ascenders.

**autoflow** A mode of text placement in which text flows continuously onto successive pages. To “autoflow” text means to place a text icon or to double-click on the “+” at the bottom of a PageMaker text window shade with the new PageMaker 3.0 feature **Autoflow** selected. Autoflow causes the next section of a linked piece of text to flow down the page and onto the next until the story is completely placed. New pages will be created as needed unless the PageMaker limit of 128 pages per publication or 9999 pages total is reached.

**bad break** In typography, a word that has been hyphenated in an awkward position or a manner that violates basic grammatical norms. For example, “microprocessor” has a natural break in it, and should be hyphenated as “micro-processor,” rather than “mic -roprocessor.”

---

**bit map** A graphic image formed by a group or matrix of dots. Also the pattern of dots that make up a digitized image.

**black writer** A laser printer engine in which the laser beam strikes the parts of the light-sensitive drum that correspond to the image to be printed. See **white writer**.

**bleed** The technique of extending art or a body of text off the edge of a page in any direction.

**blueline** A proof of a printer's negative exposed on photo-sensitive paper, showing exactly how the finished image will look. This step allows you to make final changes before the press run.

**body type** Type used in the main sections of a published document, as opposed to display type or headline type. Body type is chosen for its readability at small sizes, usually in the 9- to 12-point range. Traditionally, body type is plain but well-proportioned, has serifs, and is used mainly in roman fonts, with boldface and italic fonts used for emphasis or distinction. Times Roman is a classic body typeface.

**boldface** Font that appears heavier or blacker than the roman font.

**button** Either the button on the mouse, or the representation of a push-button on which you click to execute a command.

**camera-ready art** Art or printed material that is ready to be photographed by the printer. The printer uses the negatives of the camera-ready art to create the printing plates themselves, so camera-ready art must be complete and error-free. In desktop publishing, you can generate camera-ready art directly from a laser printer.

**character** In typography, any graphic representation of an alphabetic or numeric figure.

**click** To quickly press and release the mouse button.

**clipboard** The clipboard is used as a holding area for moving text and graphics from place to place within a PageMaker publication or as a way to move text or graphics between PageMaker and another application. The text or graphic is selected for moving or replacing in documents or files. When you cut or copy text or graphics to the clipboard, they remain there until something else is cut or copied.

**color separations** A method of photographing color art to prepare it for printing. Because modern presses run one color on each press run, a negative is made for each color used in a publication. A four-color illustration must have four negatives.

**column guides** The lines used to divide columns in PageMaker. Text and graphics will snap to these guides. They show onscreen unless turned off by toggling the Guides command; they never print. In this way, they are much like the light blue column guides found on real paste-up boards. PageMaker will create column guides for 1 to 20 equally spaced columns per page.

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**command key** On the Macintosh keyboard, the keycap marked with the odd cloverleaf design (⌘) that is used as part of PageMaker's keyboard shortcuts.

**comp** (comprehensive) A preliminary design for a document that will be either offset-printed or generated in PageMaker.

**continuous-tone** Art that contains all values of blacks, grays, and whites. Roughly synonymous with gray scale.

**copy** The written elements of a publication, including text, captions, and headlines.

**copyfitting** The technique of physically inserting copy into the page, either by hand using galleys, or electronically using PageMaker files and page layouts. Also, the act of determining whether the copy you have will fit into the available space.

**Courier** A standard monospaced typeface most commonly found on the everyday typewriter. Resident on all PostScript laser printers.

**crop** To improve the composition of a photograph by trimming down, or by selecting a specific region for enlargement and reproduction.

**cut and paste** To electronically select text or graphics to be saved to the clipboard and placed either into the same file in a different location, or in a completely different file.

**DA (desk accessory)** Macintosh utilities that are selected from the Apple menu and perform various useful functions. For example, the Guidance desk accessory provides "hypertext" access to the PageMaker help document. The DiskTop DA provides powerful file management utilities even while you are working in another application.

**descender** In typography, the stroke of a character that extends below the main body of the type. Also, the character itself: g, j, p, q, and y are all descending characters (see "ascending" entry for related definition).

**desktop publishing** Using a publishing system based on microcomputers and 300-DPI printer output to produce near-typeset-quality publications, thus supplanting the complicated and expensive offset-printing process.

**dialog box** A graphic device used by the Apple Macintosh and Pagemaker that allows you to enter commands by pointing and clicking with the mouse. Dialog boxes usually appear after you have selected a function from a menu but need to provide further specifications, such as printing directions, before the computer can carry out the function.

**disk cache** An area of the Mac's memory set aside for storing the information most recently accessed from disk. Information that's in the cache is accessed faster than if it has to be read off the disk again. If PageMaker 3.0 runs out of memory, you can provide more by turning off the disk cache using the Mac's Control Panel DA.

---

**display type** Decorative type used in advertising, magazine headlines, and illustrations.

**dithering** A method of digitizing images on the screen by creating patterns based on the average brightness level of a group of pixels.

**double truck** The center of the publication on which two consecutive pages are printed side by side on one piece of paper.

**downloadable fonts** Character fonts that are stored on a disk and sent from the personal computer to the laser printer's memory. In PostScript printers, the fonts describe the outlines of the letterforms.

**drag** To hold down the mouse button while moving the mouse to a desired position and then releasing the button. This is the Macintosh and Pagemaker technique for selecting menu items and for manipulating text, graphics, and layout tools.

**draw** Refers to the creation of an object-oriented graphic. Drawn objects are stored as mathematical descriptions and exist independently of the resolution of the display. Contrasts with **paint**.

**drop cap** In body copy and display type, an initial cap that is much larger than the rest of the text. Drop caps are a device used at the beginning of paragraphs or any long block of text, to break up space and draw attention.

**elevator car** Pagemaker's graphic device that enables you to scroll through a document by pointing and dragging the mouse. Also referred to as a scrolling thumb box.

**face** A shortening of "typeface," a collection of characters of a particular appearance or style.

**facing pages** The left- and right-hand pages one sees as a pair when viewing a book or other bound publication.

**Finder** The Macintosh application supplied by Apple for managing files and launching applications. PageMaker 3.0 requires Finder version 6.0 or later.

**flat-bed** In reference to scanners, a device in which the page being scanned remains stationary while the scanning device moves. Contrasts with sheet-fed scanners, which move the paper past the scanning device. Flat-bed scanners can accommodate books and other bulky items and have fewer problems with correctly aligning rectilinear material.

**flow** To "flow" text means to place a text icon or to double-click on the "+" at the bottom of a PageMaker text window shade, causing the next section of a linked piece of text to flow down the page. With the new PageMaker 3.0 feature **Autoflow** selected, the flow of text continues from page to page.

---

**flush left** The alignment of text or graphics to the left margin of a document or column within a document.

**flush right** The alignment of text or graphics to the right margin of a document or column within a document.

**folder** A subdirectory that holds a number of individual related documents, much like a file folder within a filing cabinet. The folder is used to organize files on a Mac much as subdirectories are used on a PC-compatible computer.

**folio** Standard text that appears on every page of a document, largely to help the reader identify the material. For instance, page numbers may appear at the bottom of each page, and a title may appear at the top.

**font** A complete set of characters in a particular typeface, at a particular size, and in a particular style. For example, Times Italic 16 point is one font. The word derives from the days of cast-metal type and originally referred to a collection of little metal pieces of type all the same size, with enough of each letterform to set a full page.

**font cache** An area of a printer's memory in which the printer controller temporarily stores the images of characters that have been scaled and bit-mapped. Once cached, these characters don't require any processing before they're used again, so a printer with a large cache may print faster than one with a small cache.

**font cartridge** A plug-in cartridge that stores type fonts. Relatively uncommon in PostScript printers.

**Font/DA Mover** Program that makes screen fonts and Desk Accessories accessible by loading them into the System file.

**Font/DA Juggler Plus** An application from ALSoft that overcomes the Macintosh System limit of 15 Desk Accessories, 200 fonts and 8 FKeys. Makes groups of screen fonts or DAs available without need to move them into the System file with Font/DA Mover and can resolve Font ID conflicts.

**form** A group of page mechanicals — usually 8, 16 or 32 — pasted together according to the needs of the printing press. The printed sheets are folded, and at that time they are referred to as signatures. Signatures are cut and bound into the final publication.

**format** The overall layout of a printed page, including margins, columns, type style, and size.

**galley** Hard copy that is typeset and printed for purposes of proofreading before paste-up.

**grabber hand** Activated in PageMaker by holding down the option key and dragging. The grabber hand is useful for moving around in a PageMaker publication, particularly when the scroll bars are hidden.

---

**grid** In drawing programs, measured, non-printing lines that enable the user to align objects within a drawing at a definite location within the picture frame.

**gutter** The area of white space that extends between two facing pages, the left margin, and either the binding or between two columns of a page.

**HFS (Hierarchical File System)** The Macintosh file system introduced with the Macintosh Plus that made it practical for the Mac to deal with a large number of files. HFS organizes files hierarchically by placing folders within folders. HFS puts blinders on the Mac, narrowing its attention to the contents of a single folder at a time. That way, the Mac isn't burdened with knowing at all times about each of the hundreds or thousands of files on a large hard disk. It deals with only a few files and sub-folders inside the current folder.

**half-tone** In printing, a regular pattern of black and white dots that creates the illusion of gray by varying the size and shape of the dots.

**half-tone screening** The process of turning a continuous tone image into a pattern of black and white dots. In the photo-mechanical process, a fine mesh or screen—sometimes merely a piece of glass etched with a network of lines—is laid over the image to break it up into dots or lines. The finer the screen, the higher the number assigned to the screen, as in “53-line screen.”

**hierarchical** A system with multiple levels, like an outline. The Macintosh Operating System file structure is hierarchical, leading from one folder to secondary folders, and ultimately to the file itself.

**HyperCard** A Macintosh application that permits information to be linked in a myriad of useful ways. The user is free to interactively wander along a number of predefined paths through a stack of information cards, as well as to create new paths and new cards. Collections of information that work with HyperCard are called stacks.

**image area** The area within the margins of a PageMaker publication. Ideally, the image area coincides with the print area of the output device, but not in practice. It is wise to compare the image area to your actual print area.

**italic** An oblique version of a typeface, usually sloped to the right in cursive strokes. Italic type is used for decoration as well as for emphasis.

**justify** To evenly space lines across the width of a column, as opposed to arranging type flush left or flush right.

---

**kerning** The method of reducing space between two letters — such as an extended capital letter and a smaller letter as in “Ki” — to improve the appeal and readability of the document. Fonts come with a table that tells the printer how to adjust the spacing of particular kerning pairs.

**laser engine** The mechanism that places the dots on paper that make up the letters and picture of a printed page.

**laser printer** A non-impact output device capable of near-typesetting-quality text. The laser inside creates an electrostatic charge on a photosensitive drum to which toner is attracted. Paper is then passed over the drum and heat applied to melt the toner onto the paper.

**leading** The space between lines of type, measured in points. Pronounced “ledding.”

**letterspacing** The adding or deleting of space between letters to justify a column of type.

**line art** Illustrations that contain only sharply contrasting colors, such as blacks and whites, with no gradation.

**line shot** A photographic image composed of blacks and whites, but no grays. Also called a stat.

**Linotronic** A series of high-resolution typesetters manufactured by Allied Linotype Company of Hauppauge, New York. The Linotronic 100 and 300 are PostScript-compatible.

**local-area network** Usually refers to a small group of personal computers hooked together for the sharing of data and peripherals.

**locked** PageMaker can lock guides so you won't accidentally move them when selecting and dragging other objects. Macintosh floppy disks can be locked by sliding the tab located in the upper right corner of the disk.

**margin** The space between the edge of the paper and the first and last character within a line.

**master page** PageMaker's master pages are opened by clicking the “L” or “R” page icon in the publication window. Master pages hold text, graphics, and guides you want repeated on every page: folios, running heads, etc.

**mechanical** A complete page, ready to be reproduced.

**mouse** An input device that permits the fast movement of the cursor to any place on a screen and gives quick access to applications and commands through the push of a button.

**MultiFinder** The new Macintosh system software that allows switching rapidly among as many programs as can physically fit in memory. The Finder is one of those programs.

---

**option key** The key labeled "option" on the Macintosh keyboard. Often used in combination with other keys including the command key as a keyboard alternative to selecting a menu option with the mouse..

**orphan** A line of type at the bottom of a page that has been separated by the rest of the paragraph. Orphans are usually avoided in good typography.

**oval tool** The PageMaker tool that creates ovals. When the Shift key is held down, it creates circles.

**overlays** Multiple images that form a complete image when laid one on top of another. PageMaker 3.0 handles spot color in publications by printing a separate overlay for each color.

**page icon** PageMaker's graphic representation of pages that indicates the page on which you are working.

**pagination** The act of numbering or creating pages in sequence.

**paint** Graphic arts applications programs developed for personal computers, usually used in conjunction with a mouse, such as MacPaint or SuperPaint for the Apple Macintosh and PC Paintbrush and Windows Paint for the IBM PC. Images are stored as a bit map composed of a specific number of dots per inch. PageMaker can place images created in any of the above publications.

**paste** The insertion of text or graphics from the clipboard into a document. The material is cut from another document or from within the same document and stored on the clipboard until requested.

**paste-up** The physical preparation of pages by adhering type and graphics in position on a layout board.

**pica** A unit of measure used in printing that is approximately equal to 1/6 of an inch (see **point**). A pica is equal to 12 points.

**point** A typesetting measure equal to 1/72 inch, used to size type. Actually, PageMaker is fudging a bit when it equates 72 points to one inch, and there are purists out there who are quick to let you know it. A pica is actually 0.01384 inches to *real* graphics people. A 288 point (24 pica) line is actually 3.98 inches, not 4.0 inches as PageMaker would lead you to believe.

**pointer** The on-screen icon that reflects mouse movement. The pointer icon changes according to the PageMaker mode you in which you are working.

**PostScript** A graphics and page description language developed by Adobe Systems of Palo Alto, Calif.

**preferences** The PageMaker menu selection that lets you change measuring systems.

**print area** The maximum area of a page in which a printer can print. Most printers cannot print on the extreme edges of the page.

---

**proof** The final hard copy prior to production printing. This copy usually includes graphics as well as text and is a “dress rehearsal” for the final copy.

**proportional** A method of spacing characters in which space allocated to a character is determined by its width. For example, in a proportional font, the letters “W” and “M” get much more space than the “l” and “i” do. Contrasts with nonproportional, in which all characters are evenly spaced. Typesetting usual involves proportional fonts.

**publication** A PageMaker document is referred to as a publication whether it is a single page or a full 128 pages.

**QuickDraw** The image description language defined by the graphics routines built into the Macintosh ROMs. Everything that appears on the Mac screen is drawn by QuickDraw. Non-PostScript laser printers for the Mac let QuickDraw prepare the image of each page to be printed using the Mac’s processor and memory.

**ragged** An unjustified edge, either ragged right or ragged left.

**RAM (Random Access Memory)** The memory used to run programs and manipulate data. Newer application programs and Multi-Finder make it desirable to have as much RAM in your Mac as you can afford.

**RAM disk** A memory emulation of a mechanical disk drive that takes advantage of the faster access time of RAM, compared to the access time of floppy or hard disk drives. The disadvantage of a RAM disk is that it is volatile. Anything stored in the RAM disk disappears when the machine is turned off.

**reduction wheel** A rudimentary mechanical calculator for figuring reductions of art.

**register** The degree to which color separations line up when overlaid. The better the match, the better the register. Precise color registration is essential to professional, high-quality printing.

**ROM (Read Only Memory)** Semiconductor memory containing crucial system functions on the motherboard of a computer. The original 64K Macintosh ROM has been extended to 128K. If you have an original 512K Mac, you will need to upgrade the ROMs and add RAM to run PageMaker 3.0.

**roman** A style of letters with upright stems. Contrasts with italic.

**rule** Vertical or horizontal lines on a page.

**ruler guides** Tools that help you align text and graphics horizontally and vertically on the page. Ruler guides are visible on-screen but do not print.

**run-around** Text columns that are adjusted to fit around art that protrudes into the text column area.

---

**SCSI (Small Computer System Interface)** For some reason pronounced "Scuzzy" when it could have easily been "Sexy." The SCSI port built into the Macintosh Plus and all subsequent models provides high-speed data transfer between devices like hard disks and scanners and the Mac's system memory. As many as 8 SCSI devices can be daisy-chained: since the Mac counts as one, you can connect 7 hard disks or other SCSI devices to a Mac. The Mac keeps the devices straight by assigning itself the number 7 and the other devices a number from 0 to 6. Make sure your SCSI devices are set to different numbers.

**sans-serif** A modern type style that does not have the extra strokes at the end of letters.

**scaling** Reducing the size of an image without changing the proportions.

**scanner** An optical device that scans an image such as a photograph or drawing and digitizes the image for use within PageMaker.

**screen angels** In color reproduction, angles at which the half-tone screens are placed with relation to one another to avoid undesirable moire patterns.

**screen font** A collection of bit-mapped letterforms intended for producing characters on-screen. The mathematically defined fonts that reside in a PostScript printer have matching screen fonts that allow the screen image of text to closely resemble the final printed text.

**scroll bar** The part of a Macintosh window in which the elevator car or scrolling thumb box resides. Dragging the thumb or elevator car along the bar with the mouse causes the screen to scroll.

**select** To activate a menu item with the mouse by clicking on it or dragging to it, or to choose a element of a page by clicking on it or surrounding it with a selection box..

**serial cable** A communications cable leading from the phone or printer port of the Macintosh to a serial device such as a modem.

**serifs** The fine strokes at the ends of letters in many typefaces. Serifs are said to help lead the eye from character to character and improve readability. Thus body copy is usually a serif typeface such as Times.

**service bureaus** Businesses that specialize in PageMaker output. Often, a service bureau will rent time on computers and laser printers, provide design consultation, and typeset PageMaker output.

**sheet-fed** A scanner that moves paper past the scanning device, usually with a typewriter-like platen. Contrasts with flat-bed.

**signature** Groups of page mechanicals called forms produce printed sheets that, when folded, are referred to as signatures. Signatures are cut and bound together into a publication. A publication can be composed of multiple signatures. See **forms**.

**spread** Two facing pages treated as a single unit.

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**stat** a high contrast photographic reproduction technique. See line shot.

**story** In PageMaker, each thread of text is called a story.

**stripping** Positioning something onto a page at the negative stage by physically cutting out part of the negative and replacing it with a half tone or other page element.

**style sheet** A collection of type, leading, and margin specifications that define the look of a particular document.

**Switcher** An alternative to MultiFinder that many users prefer. Rather than MultiFinder's cluttered presentation of several applications at once, Switcher presents one application at a time. The metaphor is that of a revolving cube, as if each application resides on one of the sides of a four-screen Mac. Clicking on the left arrow of the Switcher icon causes the "cube" to rotate left, and the application on the front screen slides out of view and is replaced by the application that was on the right. The official blessing of MultiFinder means Switcher will fade in importance.

**system file** The file on the Macintosh that holds many of the resources shared by all programs: fonts, menus, windows, pointers, icons, scroll bars, and so on. Although system files seem like RAM and disk hogs, they actually conserve space by allowing many programs to share a library of resources. Technical types can add to or change these resources with a program called ResEdit.

**TOPS** An acronym for Transcendental OPERating System, TOPS is the name of network software that runs on AppleTalk and allows Macs and PCs with AppleTalk add-in boards to share files. TOPS is a distributed network: no machine is dedicated to providing network services, and any machine on the network can be a file server. Mac users do not have to learn PC-DOS in order to access files on a PC they are linked to via TOPS. PC files appear on the Mac desktop as the familiar document icon, and subdirectories as the familiar folder.

**tape back-up** The preservation of data and program files on magnetic tape that can be stored for archival purposes. Most Macintosh tape drives are SCSI devices.

**template** A PageMaker file used as the model for a type of publication, with pre-set margins, column guides, and place-holding type.

**text icon** The icon to which the pointer changes when you are placing text in a publication.

**Times** A serif type font that appears in many guises, including Dutch, English, Tms Rmn, New Roman and London Roman. The font includes mathematical symbols.

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**toggle** Moving between commands or modes, such as toggling italic print on and off.

**toolbox** The graphic representation of PageMaker's basic design tools.

**Trump Mediaeval** A serif typeface used mainly in text or body copy.

**typography** The art — and craft — of manipulating type and art design so that it is both functional and pleasing to the eye.

**underline** A type style in which all the characters are underlined.

**Ventura Publisher** A desktop publishing program published by Ventura Software of Morgan Hill, California.

**white space** Parts of a page left empty for a visual effect. White space is not supposed to be accidental or an afterthought—it should be part of your design. Used more often in modern page design. Also referred to as “airing out a page.”

**widow** The last line of a paragraph at the end of a column of type that is moved to the top of the next column to accommodate space demands. It is considered bad style or bad design to create widows in a layout.

**window shade** Appearance of a selected block of text in PageMaker, which has handles at the top and bottom, and a “+” at the bottom that can be clicked to flow the next portion of text.

**word processing** The electronic manipulation of text. Word processing opens writing to extensive revision both during and after a document's creation. Documents can be edited and corrected on-screen prior to the printing of a final document.

**WYSIWYG** (“What You See is What You Get”) The idea is that everything appears on the computer screen exactly as it will appear on the final printed page. The reality is that you have to be on the lookout for minor discrepancies even with a fine program like PageMaker 3.0.

**zero point** The point at which a ruler guide is anchored on the page. It is marked by a “0” on the ruler guide.

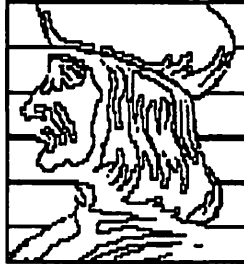
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## A Comprehensive Guidebook for PageMaker Version 3.0

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ISBN 0-673-18764-0



9 780673 187642

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