

*By*  
*Ted*  
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# VENTURA

## TIPS AND TRICKS

*The experts'*  
*guide to*  
*desktop*  
*publishing*  
*with Xerox*  
*Ventura*  
*Publisher.*

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**Version 1.1**

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# Ventura Tips and Tricks

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## VENTURA TIPS AND TRICKS

by Ted Nace

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This book is dedicated to the memory of  
Benjamin Linder.

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## *Production Note*

THE MANUSCRIPT OF this book was written using WordStar and Microsoft Word on several DOS computers. Screen shots were made on an AST Premium 286 computer using Hotshot from Symsoft and ScreenCP, a utility that is bundled with the Univation Turbo Ventura Publisher package. Scanned images were created using PC Paintbrush Plus and a Canon IX-12 scanner, controlled via a Tall Tree J Laser Plus board. The sample pages used in the tutorials were created as PostScript print files and then merged back into Ventura frames as Encapsulated PostScript graphics. Other illustrations were created using Ventura's drawing tools.

The book was laid out entirely using Xerox Ventura Publisher 1.1, with no paste-up. Several display systems were used during the layout process: a Hercules

Graphics board driving a Samsung amber monitor, an Enhanced Graphics Adapter running a Hewlett-Packard Enhanced Graphics Display, and a Moniterm Viking I monitor.

Master pages were produced on Hammermill Fore 9000-DP stock using a Hewlett-Packard LaserJet printer retrofitted with a Laser Connection PS Jet controller. Typeface families were Times and Helvetica.

At the printer during creation of negatives, the 8.5- by 11-inch master pages were photographically reduced by 18 percent, resulting in the final 7- by 9-inch trim size. The cover was designed and produced using traditional graphic arts methods. The book was printed on a web press by Griffin Printing.

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Finally, a number of companies lent software and equipment for the project. My appreciation to AST for providing a Premium 286 computer and an AST TurboScan, Symsoft for the HotShot screen capture utility, Univation for the ScreenCP screen capture utility, ZSoft Corporation for PC Paintbrush Plus, Moniterm Corporation for the Viking I monitor, PC Quik-Art for samples from its clip art collection, Cornucopia Software for Electric Webster, Digital Research for GEM Draw Plus, the Laser Connection for the PS Jet laser printer controller, Tall Tree Systems for the JLASER Plus board, and—last but not least—Xerox Corporation for Xerox Ventura Publisher.

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# Introduction

I FIRST SAW Xerox Ventura Publisher in the spring of 1986, when Ventura Software president John Meyer and head programmer Don Heiskell visited the *PC World* offices in San Francisco to show off a fledgling version of the program. At that time the agreement between Ventura Software and Xerox Corporation to market Ventura Publisher did not yet exist. Ventura Software was still just an unknown startup with a whistle and a song, one of a crowd of small companies claiming to do something new and different with words, pictures, and laser printers.

As Meyer and Heiskell set up their XT-compatible computer in *PC World's* glass-walled demonstration room, I reflected on the irony that two years earlier this same room had been rigged up with peek-proof curtains to sequester a prototype of the Macintosh computer while a small team of *PC World* staffers worked in secret to create the first issue of *Macworld* magazine. For the first year of its existence, the Macintosh had been widely ridiculed as a \$2500 Etch-A-Sketch, a fun machine to play around with but hopelessly devoid of any useful software.

Now that little machine was showing it could throw fast balls too. With the in-

roduction of its LaserWriter printer and the advent of a new generation of slick page makeup software, Apple was opening up a vast new market, dubbed desktop publishing by its enthusiasts, or CAP (computer-aided publishing) by the more acronymically minded. As yet, nothing existed on the PC-compatible side of the industry to rival the Macintosh/LaserWriter combination, a situation that was causing no small degree of consternation in places like *PC World*.

With various editors and production managers clustered around a long table in *PC World's* demonstration room, Meyer started up Ventura and immediately went into a blistering tour. While the staff looked on, increasingly absorbed, he set up a document in multiple columns, added pictures, and demonstrated the use of Ventura's style sheet method of formatting.

I wasn't sure which was more astonishing, the speed of the program or the number of features that Meyer was showing. Compared to other PC programs then on the market that purported to provide desktop publishing capabilities . . . well, there just was no comparison.

Expressing the general sentiment in the room, someone jested, "You got a

Macintosh hidden in that computer?” Meyer only smiled, but the response was implied: That’s obviously not possible—this program’s way too fast.

But it wasn’t a comparison against the Macintosh that Meyer seemed to be interested in stressing, it was between two levels of PCs. “I want to emphasize,” he said, “that the speed you’re seeing isn’t the result of us using a souped-up computer. We’re purposely showing the program on an XT-compatible rather than an AT-compatible.”

Abruptly, the demonstration halted with an unexpected program crash. For a moment, even the garulous Meyer seemed at a loss for words, but Heiskell actually seemed to take a sort of perverse satisfaction in the blowout. He flashed a laid-back smile, leaned forward, and jotted a few notes on a legal pad. “That’s the one I was trying to get on Sunday,” he remarked, grinning.

At the time of the Ventura demonstration, I had just finished typesetting the book *LaserJet Unlimited* the old-fashioned way, that is, using Microsoft Word. With Word, you can easily incorporate various laser printer fonts in a document and format the appearance of text using flexible style sheets. However, when it comes to adding illustrations to a document, you have no alternative to the light table and the Exacto knife. Facing the prospect of repeating the manual pasteup ordeal with my next book, I couldn’t wait to get my hands on Ventura.

## So What’s It For?

To make a long story short, I did get my hands on Ventura, I experimented with it, and I confirmed that it was indeed as good a tool as I had hoped. The book you’re holding is physical evidence that Ventura is ideally suited for long documents such as books, and also manuals, long reports, and other hefty publications. As of the latest release, there really aren’t any serious limitations on document size. Version 1.1 can handle chapters with up to 500K of text, and you can chain as many as 128 chapters together into a publication.

But what about shorter documents like newsletters? Again, I can only refer to my own personal experience, which is that the longer I’ve used Ventura, the more I’ve found myself leaning on it for all kinds of jobs: designing flyers, running off each week’s invoice forms, typesetting poetry, designing business cards, making phone logs, you name it.

## About This Book

This book, then, is a product of discoveries I’ve made during my own explorations into Ventura, as well as those made by fellow explorers. Some of them have consented to being listed on the title page as contributors; others remain anonymous.

If you’re new to Ventura, my advice is to first install Ventura on your computer, then place one hand firmly on your mouse and follow the step-by-step instructions in Section I of this book, “Tu-

torials.” This section is designed in keeping with the theory that most people learn best by diving right into something. You won’t find much in the way of orientation here, and if you’d prefer more of a general overview before starting to use the program, skip to the next section.

Section II, “Foundations,” deals with the basic concepts underlying the program, the elements of assembling the hardware required for your particular publishing system, and strategies for organizing your hard disk.

Section III, “Using Ventura,” provides information on the techniques by which you create and format illustrated documents with Ventura.

Section IV, “Special Topics,” is a miscellany of information that hopefully will be of use as you attempt to “push the envelope,” with Ventura: adding more fonts to your system, improving the program’s innate hyphenation abilities, speeding up your work, overcoming memory limitations, and importing screen shots and PostScript illustrations.

Finally, the book contains three appendices. The first contains notes on a variety of software and hardware products that work in conjunction with Ventura, as well as some additional resources such as books and periodicals. The second is a chart of operations, intended to help you quickly look up how to perform a particular task. The third is a glossary of typographic terms and terms used to

describe the operations of Ventura Publisher.

As you make your own Ventura discoveries, I hope you’ll take the time to share them with me and/or with the Ventura Publisher User’s Group, whose phone number is provided below. Please let me know what you think ought to be added to the book, where the explanations went astray, entries that should have been included in the index—whatever. The more detailed, the more downright picky your critiques, the better!

Also, if you have bought this book from a bookstore or a dealer rather than directly from Peachpit Press, take a moment to send us your name and address so we can drop you a line when the next edition comes out. Dealers of Ventura Publisher and Ventura trainers are especially encouraged to contact Peachpit Press about promotions and quantity discounts.

By the way, the phone number of VPUG, the Ventura Publisher User Group, is 408/778-1125. The phone number of the Xerox Customer Application Support Center, which is set up to answer technical questions about Xerox Ventura Publisher, is 214/436-2616. My number at Peachpit Press (9 a.m. to 5 p.m. Pacific Time) is 415/843-6614.

Good luck!

Ted Nace  
Berkeley, California





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# Tutorials





# *Tutorial: A Business Report*

THE PURPOSE OF this chapter is to escort you, from start to finish, through the creation of a typical Ventura document. At this point we're not as concerned with the niceties of exactly how the page looks, rather, the aim is to help you get accustomed to the basic procedures to be followed in moving a document from start to finish. We won't spend any time at all talking about the why's and wherefore's of the process—just the process itself at this point. By following the steps spelled out below, you'll end up with a three-page business report that includes a chart and a table. Even if you don't plan to use Ventura for business reports, you'll find that most other documents are created using the same general method. They just happen to be longer, in most instances.

In creating a document, the first steps involve developing your text and graphics outside Ventura using programs designed specifically for those purposes: word processors and graphics software.

Once that is done, you will start Ventura and establish the appropriate file structure. Next comes loading text and graphics into Ventura, followed by selecting a style sheet and then attaching a tag from that style sheet to each paragraph text and then modifying the tags, if necessary, to change the appearance of the document.

As you can see from Figures 1-3, the business report document combines four types of material:

- Text created by a word processing program.
- A table created in a word processing program.
- A chart created in Lotus 1-2-3 (if you prefer, you can substitute a graphic from a different graphics program or use one of the same graphics provided with Ventura).
- Rules, boxes, and footers created with Ventura.

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## Report on Virgil Corporation and Z-Calc Data

### Summary

For the past five years, Finanswers Consultants have been providing management data and financial planning consulting services to two medium-sized Texas-based corporations in the high-tech Silicon Prairie industrial area near Austin. Virgil Corporation is a manufacturer of technical workstations for the biomedical research field. Z-Calc Data is a supplier and franchiser of payroll systems to small accounting firms. Both companies have emerged as clear success stories. Each has shown consistent, rapid growth over the period. More important, the two have successfully undertaken ambitious programs aimed at repositioning their operations for continued growth. Prospects for both companies appear to be excellent.

### Background: Virgil Corp.

Founded in 1961 by electro-oscilloscope inventor R. Stanley Mahanovich, Virgil Corporation developed into a manufacturer of technical instrumentation for medical laboratories. In 1978, with Mahanovich still at the helm, the company began to expand its scope toward

designing and manufacturing an entire line of technical tools—including microcomputer work-stations—for both the medical and biotechnical fields. Today, Virgil supplies three turnkey workstation systems for researchers, including soft-ware and instrument peripherals.

### Background: Z-Calc Data

Z-Calc Data was founded in 1977 by two computer science graduate students at the University of Texas, Roberta Orbison and Lucy Chin. Initially the firm was exclusively involved in accounting and payroll processing. After growing rapidly for five years, Z-Calc began shifting its activities to supplying payroll processing systems on a franchise basis throughout Texas, Oklahoma, Louisiana, and New Mexico to independent accountants and payroll firms. Meanwhile, the company has sold its own payroll processing business and reduced its miscellaneous accounting work.

Figure 1

### Financial Snapshot: Virgil Corp. vs. Z-Calc Data

Calendar 1986	Virgil Corp.	Z-Calc Data
Revenues (thousands)	8054	4099
Earnings (thousands)	890	311
Revenue Growth 86/85	20%	18%
Income Growth 86/85	106%	48%
Margin	11%	8%
Price-Earnings Ratio	13	11
Revenue per Employee	85,000	92,000

### Five Year Performance

Both Virgil Corporation and Z-Calc Data have posted solid gains since 1982. As shown in the Financial Snapshot table, Virgil grew from \$36 million in revenues in 1982 to \$81 million in 1986. Z-Calc grew somewhat more slowly, from \$12 million in revenues in 1982 to \$41 million in 1986.

Both companies have succeeded in taking advantage of the rapid general growth that has occurred in the Silicon Prairie area around Austin—Virgil by broadening the scope of its existing operations, Z-Calc by shifting into an area with a larger potential for expansion.

### This Year's Performance

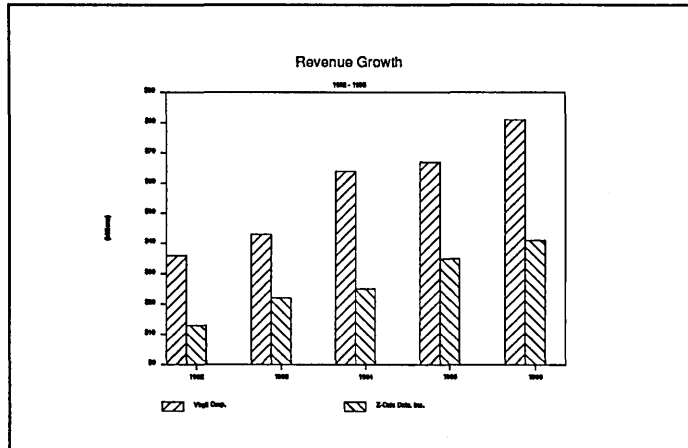
Both companies showed enviable track records during the past year in posting positive financial indices. As the Financial Snapshot shows, the two companies have nearly identical margins and revenue per employee. Currently, Virgil's price-earnings ratio is greater, possibly because

of current investor optimism for growth in biotechnology. Virgil's income growth during 1986 was over twice as fast as Z-Calc's, mainly because Virgil's Model IX-3 advanced researcher's workstation went on the market in the second quarter of the year. Significant income from Z-Calc's new franchisees, on the other hand, is not expected until late 1987.

### Future Prospects

Both companies have successfully shifted their activities to take advantage of new opportunities that have arisen in the past five years. With the expected growth in biotechnology over the coming decade, Virgil is currently well positioned for rapid expansion. Having developed a solid reputation for quality in the medical instrumentation field, it has superb prospects for selling a broader line of tools for biotechnical research.

From its base as an independent payroll processing service, Z-Calc has successfully taken on the challenge of shifting into a completely different business that of



payroll systems franchiser. Despite the inherent costs of such a transition, the company has nevertheless maintained a solid revenue and income growth rate. Now that the shift has been accomplished, Z-Calc's prospects for rapid growth are excellent.

### Recommendation

We strongly recommend that the existing advisory relationships that Finanswers Consultants have forged with both Virgil Corp. and Z-Calc Data be extended during the foreseeable future. In addition, the laudable track record that both these companies have posted can provide a model to many of Finanswers' other client corporations. We also recommend that Finanswers Consultants continue to establish new consultancy relationships with high-technology companies in the Austin area.

Figure 3

## Preparing Text for Importing

To prepare the text portion of the document, enter the text in Figure 4 using your standard word processor. The ↵ at the end of each line indicates a carriage return (i.e. pressing Enter). The <197> is a code that Ventura translates into an Em dash (—). This is necessary because the Em dash is not a regular keyboard character. Since the specific contents of the file are not relevant to the exercise, you can use any text file of 600 words or more. Make sure to remove any extraneous formatting from your file so that it looks like Figure 4.

The following word processor formats are recognized by Ventura: WordPerfect, Microsoft Word, WordStar, MultiMate, Xerox Writer, IBM DisplayWrite, XyWrite, or Samna. You can also use any other word processor, provided you save the text files in DisplayWrite DCA format or in plain ASCII form. (To check that a word processor is saving a file in plain ASCII form, display the document using the DOS command TYPE filename. If no nonkeyboard characters such as the smiling face appear, the file is in plain ASCII form.)

Although Ventura can handle various word processor formats, that doesn't mean it can successfully translate any type of formatting you might do within those files. To keep things simple, your best bet is to do no formatting within the word processor. Leave such operations as centering text, setting leading (line spacing), and establishing the widths of columns to Ventura. In particular, avoid

using tabs for paragraph indents. Note that the symbol ↵ indicates that you should press Enter.

As shown in Figure 4, you can include the command

```
@PARAFILTR ON =
```

as the first line of the text file. Including this command causes Ventura to filter out any double carriage returns that it encounters. It allows you to press the Enter key twice between each paragraph to make your text more legible on the screen.

Tables and other tabular material require special attention. The best approach is to create a new file for a table. Separate each column with a single tab, but don't worry about setting the position of the tabs using your word processor. That too is best left up to Ventura. Figure 5 shows how to enter the table using your word processor. The arrows (→) indicate where you should press the Tab key.

With WordStar, make sure that Vari-Tab is turned off when you create the table. Otherwise, Ventura will convert the tabs you enter in WordStar into five blank spaces.

## Preparing Graphics for Importing

Ventura recognizes a number of graphics formats, including Lotus files, PC Paintbrush (PCX) files, GEM, Halo, AutoCAD (SLD only), GEM Paint, MacPaint, HPGL, MacDraw, VideoShow, Mentor Graphics, CGM, and Encapsulated PostScript files. In this example, we use a Lotus graphic; however, you may substi-



@PARAFILTR ON = J

Report on Virgil Corporation and Z-Calc DataJ

J

SummaryJ

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For the past five years, Finanswers Consultants have been providing management data and financial planning consulting services to two medium-sized Texas-based corporations in the high-tech Silicon Prairie industrial area near Austin. Virgil Corporation is a manufacturer of technical workstations for the biomedical research field. Z-Calc Data is a supplier and franchiser of payroll systems to small accounting firms. Both companies have emerged as clear success stories. Each has shown consistent, rapid growth over the period. More important, the two have successfully undertaken ambitious programs aimed at repositioning their operations for continued growth. Prospects for both companies appear to be excellent.J

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Five Year PerformanceJ

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Figure 4: Enter text in your word processor as shown here.

┆  
Both companies have succeeded in taking advantage of the rapid general growth that has occurred in the Silicon Prairie area around Austin<197>Virgil by broadening the scope of its existing operations, Z-Calc by shifting into an area with a larger potential for expansion. ┆

┆  
This Year's Performance┆

┆  
Both companies showed enviable track records during the past year in posting positive financial indices. As the Financial Snapshot shows, the two companies have nearly identical margins and revenue per employee. Currently, Virgil's price-earnings ratio is greater, possibly because of current investor optimism for growth in biotechnology. Virgil's income growth during 1986 was over twice as fast as Z-Calc's, mainly because Virgil's Model IX-3 advanced researcher's workstation went on the market in the second quarter of the year. Significant income from Z-Calc's new franchisees, on the other hand, is not expected until late 1987.┆

┆  
Future Prospects┆

┆  
Both companies have successfully shifted their activities to take advantage of new opportunities that have arisen in the past five years. With the expected growth in biotechnology over the coming decade, Virgil is currently well positioned for rapid expansion. Having developed a solid reputation for quality in the medical instrumentation field, it has superb prospects for selling a broader line of tools for biotechnical research.┆

┆  
From its base as an independent payroll processing service, Z-Calc has successfully taken on the challenge of shifting into a completely different business that of payroll systems franchiser. Despite the inherent costs of such a transition, the company has nevertheless maintained a solid revenue and income growth rate. Now that the shift has been accomplished, Z-Calc's prospects for rapid growth are excellent.┆

┆  
Recommendation┆

┆  
We strongly recommend that the existing advisory relationships that Finanswers Consultants have forged with both Virgil Corp. and Z-Calc Data be extended during the foreseeable future. In addition, the laudable track record that both these companies have posted can provide a model to many of Finanswers' other client corporations. We also recommend that Finanswers Consultants continue to establish new consultancy relationships with high-technology companies in the Austin area.

tute your own graphic in one of the formats listed above or else use one of the sample graphic files provided with Ventura.

If you've already had some practice loading graphics into Ventura using version 1.0 of the program, you'll find that things have changed a good deal in version 1.1. In version 1.0, Ventura did not always successfully handle the type used by Lotus for labels and captions, which necessitated going through the cumbersome procedure of labeling them after import into Ventura. In version 1.1, you should have no such problems.

To prepare a Lotus graphic, use 1-2-3's Graph command to choose the type of chart and the title, legends, and labels. Use the Graph View command to preview the chart and the Graph Save command to save the chart as a PIC file. There's no need to use 1-2-3's Print-Graph module at all, since you can load the PIC file directly into Ventura.

## Method Over Madness

Now that you've created both the text and the graphics for the report, it's time to knit them together with Ventura. Before loading the program, it's a good idea to create a new subdirectory on your hard disk that will contain all the files associated with that document. Copy the two text files (one for the report, the other for the table) and the graphics file (Lotus PIC or another graphic format of your choice) into this subdirectory. In this exercise we'll assume that the subdirectory you're using is called C:\REPORT2.

Creating a new subdirectory for the files associated with a document is not strictly necessary, since Ventura does have the capability of knitting together files in multiple subdirectories. But it is advisable for two reasons. First is that it allows you to preserve the original versions of your text and graphics files. Second, once your document is in its own unique subdirectory, you'll find it much

```
Financial Snapshot: Virgil Corp. vs. Z-Calc Data␣
Calendar 1986→Virgil Corp.→Z-Calc Data␣
Revenues (thousands)→8054→4099␣
Earnings (thousands)→890→311␣
Revenue Growth 86/85→20%→18%␣
Income Growth 86/85→106%→48%␣
Margin→11%→8%␣
Price-Earnings Ratio→13→11␣
Revenue per Employee→85,000→92,000
```

Figure 5: Enter text for the table as shown here. The arrows indicate where you should press the Tab key.

easier to remove files from your hard disk when it comes time to free up a few megabytes.

With the text and graphics files moved into the new document subdirectory, you can start Ventura, load a new style, and save that style under a new name, as follows:

- From the DOS prompt type  
VP  
to load Ventura. From the File menu select Load Diff. Style.
- In the Item Selector dialog box, check to see that the Directory line reads C:\TYPESET\\*.STY.  
If it does, skip the next step.
- Click on the small black square several times until the scroll bar lists the drives on your computer (A:, B:, C:, etc., each preceded by a diamond). Select the drive that contains the TYPESET subdirectory, normally the C: drive but sometimes the D: or E: drive. Then select the TYPESET subdirectory from the list of subdirectories. Now the Directory line should read  
C:\TYPESET\\*.STY.
- The selection box at the left now shows a list of Ventura's preformatted style sheets (each preceded by an ampersand sign). Move the scroll bar down until you locate a style sheet with the name  
&PRPT-P2.STY.
- Select &PRPT-P2.STY. There are three alternative ways to do it: (a) Place the cursor over the name and click twice rapidly; (b) Place the cur-

sor over the name and click once, then select OK; (c) Place the cursor over the name and click once, then press Enter.

The dialog box should now disappear and the name of the style will appear in parentheses at the top of the screen. Once this style has been loaded into Ventura, you should save it under a new name in the subdirectory you are using for this document. Saving the style under a new name is an important step because it allows you to adapt Ventura's preformatted style sheet while preserving an original copy of that style for future use. Do these steps:

- From the File menu, select Save As New Style.
- Click on the small black square until the Directory line reads C:\\*.STY.
- Select REPORT2 from the scroll box. The Directory line should now read C:\REPORT2\\*.STY.
- Choose a new name for the style and type it on the selection line. For example, type  
BUSREPRT
- Select OK or press Enter.

Now, we'll name the chapter and save it in the REPORT2 subdirectory.

- From the File menu, select Save As.
- In the Item Selector dialog box, click on the little black box until the directory line reads: C:\\*.CHP.
- Select REPORT2 from the scroll box. The directory line should now read C:\REPORT2\\*.CHP.

- Type a name for the chapter on the selection line. Type **BUSREPRT.CHP**
- Select OK or press Enter.

Note the name of the chapter at the top of the screen and the name of the style sheet in parentheses.

## Tag Team

Style sheets contain a variety of information. Most noticeable are the new set of tags that they provide. You can see these listed in the sidebar if you select the Tagging icon. Style sheets also contain information on page margins, number of columns, and other parameters.

- From the View menu, select Reduced.
- Check to see that the Options menu is set so that column guides are shown. The two columns defined by this style sheet will be indicated on the page by dotted lines.

As the column guides indicate, the margin at the left is wider than the margin at the right. The extra room at the left edge is intended to allow room for binding or stapling the report.

Now you can load the text portion of the report.

- From the File menu select Load Text/Picture.
- In the dialog box select Text and then select the name of the word processor in which you created the text for this exercise.
- Select OK or press Enter.

- In the next dialog box, make sure that the directory is C:\REPORT2.
- Select your file from the list of files that appears in the box.

The name of the file you have selected will now appear in the box at the left of the screen. When you select that name, Ventura will load the document into the two-column format defined by your style sheet. Now you can proceed to “tag” the document. When you select the Tagging icon, the available tags in the style sheet will appear in the selection box on the left.

Each such tag applies to a particular type of paragraph, such as regular body text or a subhead. Contained within the tag is a variety of information regarding the typeface, type size, leading (i.e. line spacing), indentation, standard ruling lines, and other characteristics of a paragraph. Tagging a paragraph is done by executing the following steps:

- Select the Tagging icon.
- Select the paragraph (pointing at it and clicking).
- Select a tag from the Assignment List. Note that it’s not necessary to tag every paragraph in the document; those paragraphs that are not tagged will automatically be given the Body Text tag.

The tags contained in the style sheet for this document are Body Text, Bullet, Head level 1, Head level 2, and Title. After you’ve tagged the entire document, you might decide to change one or more of the parameters associated with a style.

For example, the following are the steps to change the font used in the title:

- Select the title line of the document and then select the Title style.
- From the Paragraph menu, select Font.
- In the dialog box, select 24-point Times Roman (or Dutch for non-PostScript printers).
- Select OK or press Enter.

Now let's change some other characteristics of the title.

- From the Paragraph menu, select the Spacing option.
- Change the measurement units to picas & points. To do that, point the cursor directly at the measurement units (at the word "inches") and click until the units are picas & points.

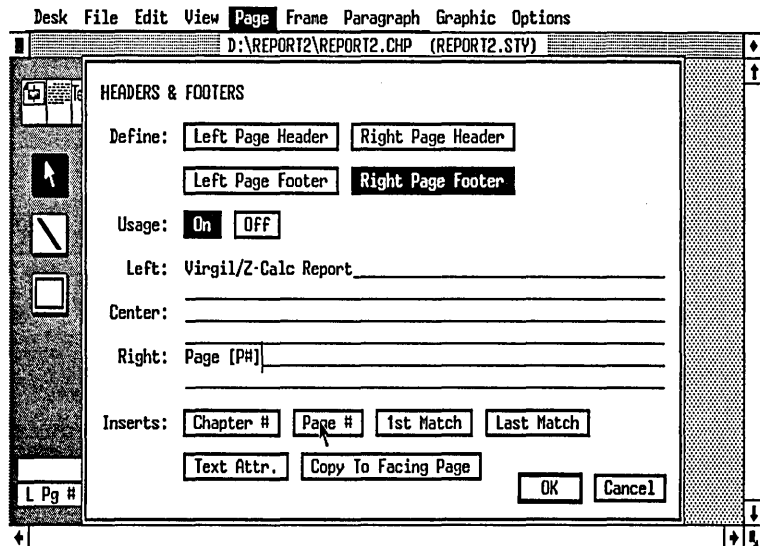
- Change the space above the title line to 6,00 picas & points and the space below the title line to 6 picas as well.
- Select OK or press Enter.
- From the Paragraph menu, select the Ruling Line Below option.
- Eliminate the ruling line by choosing None as the width of the line.
- Select OK or press Enter.

## Footers

Now let's create headers and footers for the document. With Ventura, you can have a different set of headers and footers for left and right pages.

- From the Page menu, select Headers & Footers.

*Figure 6: The Headers and Footers dialog box.*



- In the dialog box (shown in Figure 6) select **Right Page Footer** and **Usage:On**.
- For the left side of the footer, type **Virgil/Z-Calc Report**
- For the right side of the footer, type **Page**
- Under **Inserts**, select **Page #**.

This footer will now automatically appear on every right page, with the correct page number automatically inserted. To have the footer also appear on every left page, select **Copy to Facing Page** at the bottom of the **Headers & Footers** dialogue box.

Ventura automatically generates a tag called **Z\_Footer**, which may not appear in the **Assignment List**. To have it be included, select the **Preferences** option from the **Options** menu and select **Generated Tags: Shown**.

To change the font or any other setting of the **Z-Footer** tag, follow the same procedure used for changing the parameters of any tag:

- Select the **Tagging** icon.
- Select the footer.
- From the **Paragraph** menu, select the options you wish to change.

## Another Frame Job

Inserting tables and graphics into a page of text is one of the simplest operations to perform. The procedure for either text or graphics is the same. We'll illustrate it with the table on the second page of the report.

- Press **PgDn** to move to page two of the document.
- Select the **Frame** icon.
- Select **Add New Frame**.
- From the **View** menu select **Reduced**.
- From the **Options** menu select **Turn Column Snap On**. This ensures that the edges of the frame you are about to draw will line up with the edges of your columns.
- To draw the new frame, place the cursor on the upper left corner of the left column, then hold down the mouse button while pulling out the frame downward and toward the right. When you have drawn the new frame, the text below it will reformat automatically.
- From the **Frame** menu, select **Ruling Box Around**.
- Select **Width: Frame**.
- If the measurement units shown are "inches," point at the word **inches** with the arrow and click twice to change the units to **picas & points**. You'll find that page layout goes much easier if you get into the habit of consistently using **picas & points** (six picas to an inch, twelve points to a pica). These units have one big advantage over working with inches or centimeters: you never have to worry about fractions.
- Set **Height of Rule 1** at one point (00:01).

Now you can select the file containing the table, following the same procedure that you used to load the main text file. Once the table is loaded, you will need to create several new tags to set up its formatting.

To create a new tag in Ventura, execute the following steps:

- Select the Tagging icon.
- Select Add New Tag.

A dialogue box appears asking you for the name of the new tag and the name of the tag to copy from. Ventura never lets you create a new tag from scratch. Instead, you copy the format from a previously-created tag, and then alter the fonts, margins, and other parameters of the new tag to make it unique.

- For the name of the new tag, type **Table Title**

The next series of steps establishes the parameters of the Table Title tag.

- Select the title line of the table.
- From the Paragraph menu, select Font and choose 14-point bold Helvetica (or Swiss for non-PostScript printers).
- From the Paragraph menu, select Alignment.
- In the dialog box, select Alignment:Center and Overall Width:Frame-Wide. Make sure that the Fixed Indent is set at 0.
- From the Paragraph menu, select Spacing.

- Set Space Above at 3,00 picas & points, and Space Below at 2,00 picas & points.

You'll need two more tags to complete formatting the table, Table Text 1 and Table Text 2. For Table Text 1 use the following settings:

- Font: 10-point Helvetica (or Swiss).
- Alignment: Left-Justified, Frame-Wide, No Fixed Indent.
- Spacing: Inter-Line: 01,04 picas and points; Inter-Paragraph: 0; In From Left 3,00 picas and points.
- Tab Settings: first tab at 24,00 picas and points right-aligned, second tab at 32,00 picas and points right-aligned.

For Table Text 2 the settings are the same except that In From Left spacing is set at 5,00 picas and points.

The final step in creating the table is to place a ruling line around the table frame.

- Select the Frame icon.
- Select the frame containing the table. After it has been selected, the frame is "active" and is surrounded by small black rectangles.
- From the Frame menu, select Ruling Box Around.
- In the Ruling Box Around dialog box, select Width:Frame and set the Height of Rule 1 at 00,01 picas and points.
- From the Frame menu, select Sizing & Scaling.



- Set Vert. Padding at 1,00 pica. That ensures there will be a margin of vertical spacing between the frame and the adjacent text.

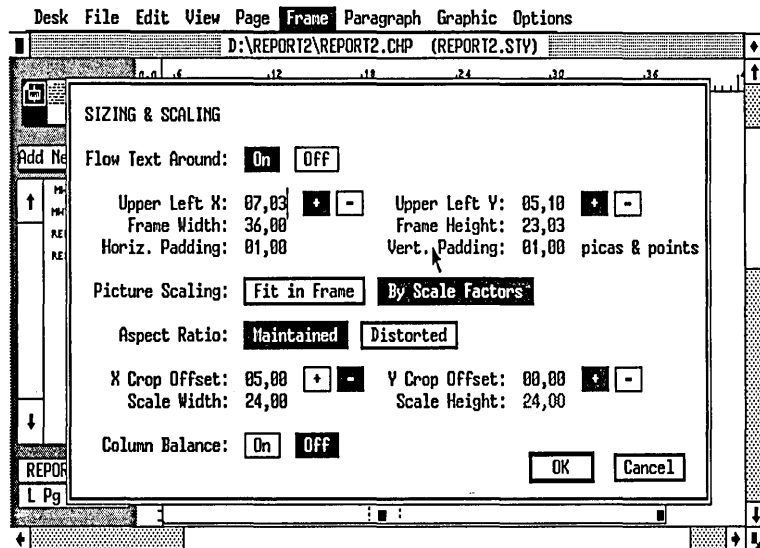
## More Graphics

Now you can load the Lotus graphic (or another graphic of your choice). The steps will be quite similar to those you followed in merging the table. However, there is the additional work of positioning the chart within the frame.

- Press PgDn to move to the third page.
- Draw a new frame across the top of the page.
- From the File menu, select Load Text/Picture.
- In the dialog box, select Line-Art, Lotus.

- Select OK or press Enter.
- In the next dialog box, select the appropriate subdirectory and name of the .PIC file. If you don't happen to remember the name of a subdirectory or file, you can use the Backup Box in the upper left corner of the list at the left to check through any subdirectory available to your computer. Clicking on the Backup Box takes you upward in the hierarchy of files until you are at the names of the drives. Clicking on the name of a directory in the list will display its subdirectories and files. In this way you can determine the name of any subdirectory or file without leaving Ventura.
- The graph will appear in the frame, not yet properly positioned. From the Frame menu, select Sizing &

*Figure 7: These are the settings you should enter in the Sizing & Scaling dialog box.*



Scaling. Enter settings to match those shown in Figure 7.

### Optional Step: Adding Shades

With Ventura, it's easy to make a chart or a table stand out by filling it with one of eight levels of gray shading. To add shading to the table, PgUp to page 2, select the frame containing the table, select Frame Background, from the Frame menu, and select Black pattern 1.

Shading the Lotus graphic as shown is slightly more complicated. First select the frame associated with the bordering line. Fill this frame with Black pattern 1. Next, select Add New Frame and draw a new frame overlapping the chart, covering the area that will not be shaded gray. Using the Frame Background option, select solid white for this frame. Initially, the solid white box will block out the chart. You now need to select the frame containing the chart itself and move it in front of the solid white frame. That way the solid white frame will block out part of the gray-filled frame, and the graphic will be on top of the solid white frame. To move the frame containing the chart to the front, select it (by holding down Ctrl while clicking within the frame boundary). Next press Del followed immediately by Ins.

### Box Text

Another option is to replace the type automatically generated for the title of the Lotus chart. To do this, select Framing icon, select the frame containing the

chart, select the Graphics icon, select the Box Text tool, draw a box covering the old title, from the Graphic menu select Fill Attributes, select White Solid Opaque, select the Text icon, place the cursor at the end of the words Box Text and backspace across them, type a title of your choosing, drag the cursor across the title to highlight it, select Set Font, choose a font for the title, select the Graphic icon, select the box, drag the box containing the title into the desired position, select the Line Attributes option of the Graphic menu, and select None.



## CHAPTER TWO



# *Tutorial: A Newsletter*

ALTHOUGH XEROX VENTURA Publisher is an ideal program for handling long documents such as technical manuals, the program also works quite nicely for shorter projects such as newsletters. This chapter illustrates the steps to follow to create a newsletter.

One distinctive feature of newsletters is that they typically involve knitting together articles written by more than one author and stored in more than one text file. For example, one author may have used WordStar, another WordPerfect, and a third MultiMate. With Ventura, text from any of these programs can be automatically loaded into a document.

As we'll see below, the technique for combining multiple text and graphics files on one page is to turn on Ventura's column guides, which appear on the screen as light dotted lines. You then use these guides to draw a frame to contain each text block or graphic image on the page. Next, you load text or pictures onto the page, one frame at a time.

Typically, in a newsletter-style layout, text will need to jump from one location to another. With Ventura, this is an

easy problem to handle. You merely select a frame and load text into that frame—Ventura will place as much into the frame as the frame can hold. You then select a new frame, and load the same file again. Ventura will continue loading the same file, picking up where the previous frame left off. In this way articles can jump from frame to frame, jumping as many times as necessary. Later, if you need to add or delete text from an early frame, text in frames down the line will adjust accordingly.

This method of loading text into frames on the page is different from the method described in the previous chapter, which involved loading text directly onto the base page. Ventura aficionados refer to this method of drawing frames to hold text blocks as “PageMaking,” since it mimics the PageMaker method of manually “placing” text onto a page one column at a time. With Ventura you should avoid PageMaking for long documents such as manuals and books, because it will tend to slow down the production of such documents. Instead, follow the procedure shown in the previous

# Ventura Scoop

SPECIAL EDITION

APTOS POST TYPOGRAPHY

MARCH, 1987

## Xerox Shows Off Ventura Publisher at Conference

BEVERLY HILLS (VP) — Xerox Corporation has introduced version 1.1 of its first electronic publishing software product that runs on industry standard personal computers. Xerox chose the Seybold Conference to announce the price and availability of the new revision to the industry standard software package. Conference attendees were impressed by the eighty-one new features, all of which were added without compromising the speed of the product and its depth of functionality.

Product now widely available.

The Xerox Desktop Publishing Software Series: Ventura Publisher Edition is available through Xerox authorized dealers (including ComputerLand, Microage, and Pactel), and the Xerox Business Software Center via (800)-822-8221, and the Xerox general line sales force. Commented one observer, "This breadth of distribution represents Xerox's commitment to the mainstream of the PC-based market."

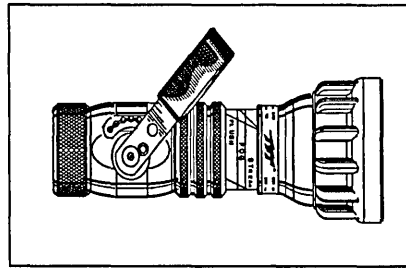
Ventura Publisher Edition allows personal computer users to merge text and graphics to create publishing-quality documents, such as newsletters, technical manuals, books, bids and proposals, that might otherwise be sent to a print shop or typesetter. The package runs on the Xerox 6065, IBM PC/XT, IBM PC/AT, and other PC compatibles. It supports popular laser

printers, including the Xerox 4045, the Apple LaserWriter and the HP Laser Jet.

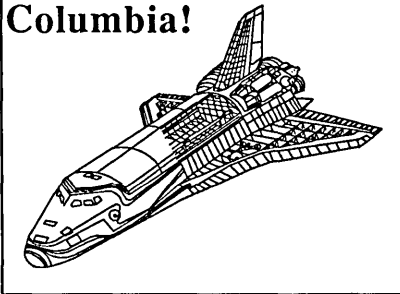
**Pioneers in the field**

"As one of the pioneers in the field of electronic publishing, Xerox fully understands users' requirements for a desktop publishing software product," said James N. Brown, vice president, office systems marketing, Xerox Business Systems Group.

Pricing for Ventura Publisher Edition is \$895, with volume discounts available. For further information or to place an order, call 800-822-8221.



**Columbia!**



## Version 1.1 Redefines Desktop Publishing—Again

MORGAN HILL (VP) — Xerox Ventura Publisher Edition version 1.1 has added new meaning to the term "Desktop Publishing." Before the introduction of Ventura Publisher Edition, desktop publishing referred primarily to advanced drawing packages that were extended to handle different text fonts.

These types of packages were characterized by a hand-intensive approach that attempted to mimic what graphic artists and typesetters were used to doing using the personal computer screen as an electronic paste-up board. While this approach was easy for artists to pick up, it did not result in much time-saving because the user was still faced with the drudgery of hand-adjusting each piece of text on the page.

Fortunately, the software developers at Ventura Software Inc. recognized this and adopted a style sheet approach. In the same

chapter. For newsletters, however, the method described in this chapter is ideal.

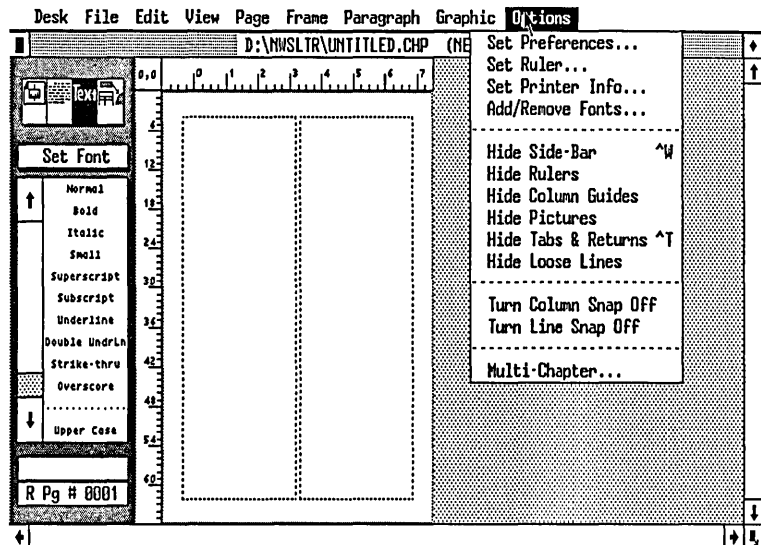
Figure 1 shows the newsletter we'll create in this tutorial. It is a slightly simplified version of the Ventura Scoop document used as a demonstration by Ventura dealers. Those using non-PostScript printers will not be able to print the 72-point headline, but will instead see a 24-point headline on their final printout. Conveniently, both the style sheet and the text files needed to produce this document are provided with Ventura and were automatically copied into the Typeset subdirectory of your hard disk when you installed the program.

## Preliminaries: Directories and Style Sheets

To start the tutorial, you'll need to load Ventura and then load the Scoop style sheet, as follows:

- From the DOS prompt, type **VP** to load Ventura.
- Pull down the Options menu and match the settings to Figure 2. If a setting does not match, move the mouse so the cursor is over it and click the mouse button once. In the remainder of this article, the term "selecting" will be used as shorthand for this operation of pointing and clicking with the mouse. Incidentally, if you accidentally pull down the wrong menu and want it to disappear, you merely click on any location outside the menu.
- From the File menu, select Load Diff. Style.
- In the Item Selector dialog box, check to see that the Directory line reads `C:\TYPESET\*.STY`. If it does, skip the next step.

*Figure 2: You should set your options as shown here. Note the dotted lines on the page, which represent the edges of the columns.*



- Click on the Backup Button (the small black square) several times until the scroll bar lists the drives on your computer (A:, B:, C:, etc., each preceded by a diamond). Select the drive that contains the TYPESET subdirectory. Then select the TYPESET subdirectory from the list of subdirectories. Now the Directory line should read c:\TYPESET\\*.STY.
- Scroll down until SCOOP.STY appears.
- Select SCOOP.STY. There are three alternative ways to do it: (a) Place the cursor over the name and click twice rapidly; (b) Place the cursor over the name and click once, then select OK; (c) Place the cursor over the name and click once, then press Enter.

It's a good idea to create a new directory on your hard disk to contain the chapter file, style sheet file, and other files associated with a particular document. That way, when you need to make room on your hard disk you can easily determine which files to erase or backup to a floppy. Create the new directory as follows:

- From the File menu, select DOS File Ops.
- In the dialog box, use the backspace key to erase the current file spec.
- Type a new file spec:  
C:\NWSLTR

- Select Make Directory. Note: when you do so there will be no confirmation by Ventura.
- Select Done.

Save the Scoop style sheet under a new name in this directory. That way you can preserve the original SCOOP.STY file intact. Do these steps:

- From the File menu, select Save As New Style.
- Click on the Backup Button until the Directory line reads C:\\*.STY.
- Select NWSLTR from the scroll box. The Directory line should now read C:\NWSLTR\\*.STY.
- Type a new name for the style on the selection line. For example, type NEWS.STY
- Select OK or press Enter.

Next, we'll name the chapter and save it in the NWSLTR subdirectory.

- From the File menu, select Save As.
- In the Item Selector dialog box, click on the little black box until the directory line reads: C:\\*.CHP.
- Select NWSLTR from the scroll box. The directory line should now read C:\NWSLTR\\*.CHP.
- Type a name for the chapter on the selection line. Type NEWS.CHP
- Select OK or press Enter.

Note the name of the chapter at the top of the screen and the name of the style sheet in parentheses.

## Establishing Columns and Frames

If you're not already in Reduced view, select Reduced from the View menu. On the screen, Ventura shows the outlines for three columns. To change to a two-column format, execute the following steps:

- Select the Frame icon (the icon furthest to the left).
- From the Frame menu, select Margins & Columns.
- Select 2 for # of Columns.
- Select OK or press Enter.

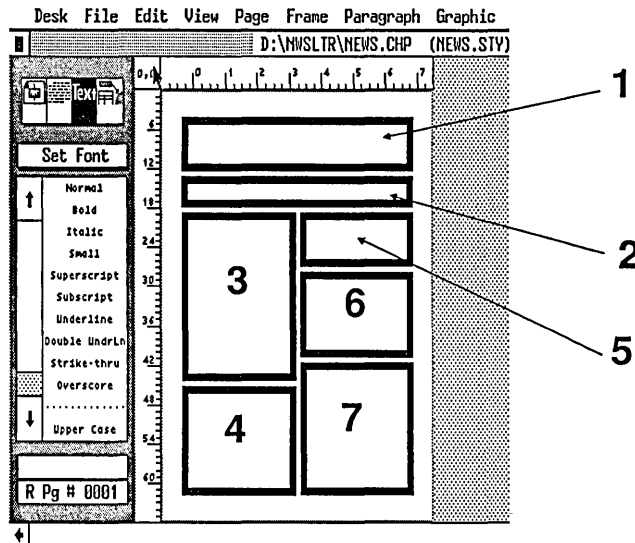
Dotted lines will now outline two columns on the screen. In laying out the newsletter, we will not pour text directly into these base page columns, as would be the case if this were a long document such as a book or a technical manual.

Base page formatting is appropriate for long documents, whereas a different method is appropriate for documents, such as newsletters, that contain more than one text file on a single page.

For a newsletter, you can use the dotted lines that indicate the base page columns as guides for drawing frames on top of the base page. After switching to two columns, the next step is to draw seven frames on the page, the approximate size and location of which are shown in Figure 3. Don't worry about drawing these frames precisely, since you can adjust them later.

- Select Add New Frame.
- Move the cursor to the upper left corner of the first column. Hold down the mouse button while pulling the cursor down and toward the right. When you reach the outside edge of the second column, release

*Figure 3: The frames you draw should be the approximate size and relative position of these boxes.*





the mouse button. As you can see, the frames you draw automatically snap to the column boundaries, since Column Snap has been turned on in the Options menu.

- Select Add New Frame again.
- Draw the second frame.
- Repeat for the other frames.

If you need to delete a frame, select the frame by clicking within its boundaries, then press Del. To move a frame to a new location, place the cursor within its boundaries and hold down the mouse button while you drag the frame. To change the size of the frame, place the cursor on one of the edge boxes and hold down the mouse button while you drag that edge.

## Loading Text and Pictures

The next series of steps is to load text into the first frame. When you are loading text into frames rather than onto the base page, Ventura loads as much text as possible into the currently selected frame.

- Select Frame 1 by pointing within its boundaries and clicking the mouse button.
- From the File menu, select Load Text/Picture.
- In the Load Text/Picture dialog box, select Text and ASCII. Select OK or press Enter.
- In the Item Selector dialog box, scroll down until you find

SCOOP1.TXT. Select SCOOP1.TXT.

- Select OK.

What you see on the screen at this point depends on the type of printer you are using. If you have installed Ventura for use with a PostScript printer, the words Ventura Scoop will be in 72 point type. If you have installed Ventura for other types of printers, the words Ventura Scoop will be smaller, since these printers are for the most part limited to 24-point or 30-point type.

Now you can load more of the SCOOP1.TXT file into the second, third, and fifth frames.

- Select Frame 2.
- Select SCOOP1.TXT (i.e. click on the name) from the assignment list.
- Select Frame 3.
- Select SCOOP1.TXT from the assignment list.
- Select Frame 5.
- Select SCOOP1.TXT from the assignment list.

You may wonder why the text has already been formatted, with the article headline in 24-point type and the article text in 10-point type. The reason is that the text files used in this tutorial have already been tagged, that is, have already been assigned formats. These formats, of course, can be changed.

If you switch from Reduced View to Normal View you can read 10-point body text.

The next step in formatting the page is to load another text file into Frame 7.

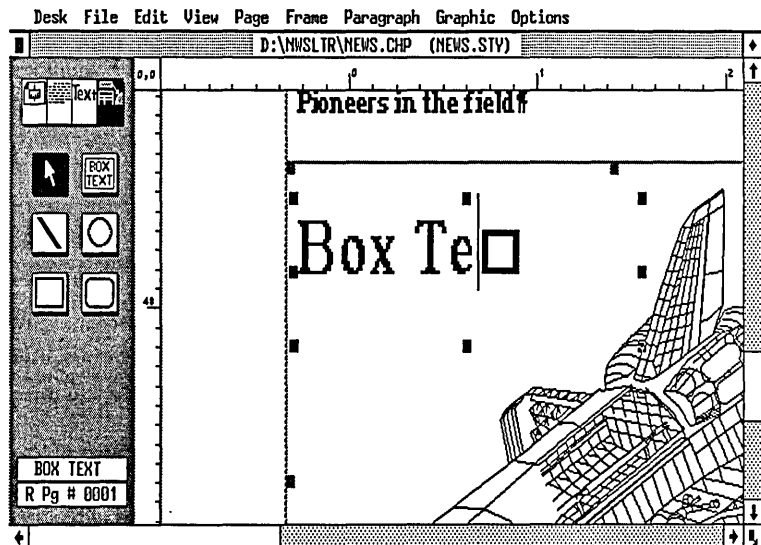
- Select Frame 7 by pointing within its boundaries and clicking the mouse button.
- From the File menu, select Load Text/Picture.
- In the Load Text/Picture dialog box, select Text and ASCII. Select OK or press Enter.
- In the Item Selector dialog box, scroll down until you find SCOOP2.TXT. Select SCOOP2.-TXT.
- Select OK.
- Select Frame 4.
- From the File menu, select Load Text/Picture.
- In the Load Text/Picture dialog box, select Line Art and GEM. Select OK or press Enter.
- In the Item Selector dialog box, select COLUMBIA.GEM.
- Select OK.

To load a different illustration into Frame 6, repeat the above steps, but select NOZZLE.GEM.

At this point the page is complete in its basic elements. You can now save the chapter and print it out to check your work so far. Then you can go on to enhance it.

- From the File menu, select Save.
- From the File menu, select To Print.

*Figure 4:  
Before  
inserting text,  
you first  
backspace  
across the  
words Box Text.*



- In the Print Information dialog box, check the configuration to see that the correct printer is selected. If not, select Cancel and select Set Printer Info from the Options menu. In the Set Printer Info dialog box, select the correct printer name and then select Load Different Width Table. Select the desired width table from the Item Selector dialog box.
- Check that your printer is turned on.
- Select OK or press Enter to print the page.

## Enhancing the Page

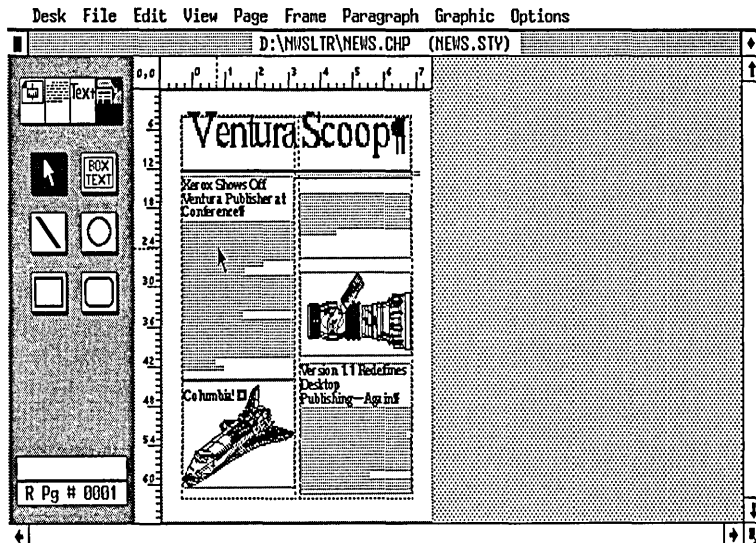
Having checked the current version of the page, you can begin to add enhancements. The first change we'll make will be to change the typeface used for headlines from Helvetica (or Swiss, depend-

ing on your printer) to Times Roman (or Dutch).

- Select the Tagging icon (second icon from left).
- Select the headline "Xerox Shows Off Ventura Publisher at Conference." Do this by placing the cursor on the headline and clicking.
- From the Paragraph menu, select Font.
- In the dialog box, select a new font name (Times or Dutch, depending on your printer).
- Select OK or press Enter.

Now let's provide a title for the shuttle illustration. With Ventura, this can be done using the Anchors & Captions selection from the Frame menu. However, that option only allows captions underneath or beside the frame containing the illustration. To place a title in-

Figure 5: The final page.



side the illustration frame, you can use Ventura's Box Text tool from the Graphics palette.

- Select the Frame icon.
  - Select the frame containing the shuttle.
  - Select the Graphics icon (icon furthest to the right, not the Graphic menu).
  - Select the Box Text tool from the palette.
  - Holding down the mouse, pull out a box inside the frame. The words "Box Text" will appear in the upper left corner of the box. This may be difficult to work with in Normal view. If necessary, select Enlarged from the view menu or press Ctrl-E.
  - Select the Text icon (second icon from the right).
  - Place the cursor between the final t of Box Text and the small marker box. Backspace to erase the words Box Text. (see Figure 4)
  - Type **Columbia!**
  - Select the Tagging icon.
  - Select the word Columbia! by placing the cursor on top of it and clicking the mouse button.
  - In the Assignment List on the left side of the screen, select the Headline 2 tag. The word Columbia! should now be in 24-point type.
  - Select the Graphics icon (remember—the furthest icon to the right, not the Graphic menu).
  - Select the box containing the word Columbia! by placing the cursor inside the box and clicking.
  - From the Graphic menu (not the icon—the menu), select Line Attributes. If the Line Attributes option is in light gray, it means that the frame containing Columbia is not currently active. To activate that frame, select the Frame icon and select that frame. Then select the Graphics icon and select the box containing the word Columbia! once again. Now you can select Line Attributes from the Graphic menu.
  - Select None for Thickness. This will eliminate the box surrounding the word Columbia! Select OK or press Enter.
  - Move the word Columbia! to the desired location, by placing the cursor on it, holding down the mouse button, and dragging it.
- At this point the page should look like Figure 5. Now it's time to format the second page of the newsletter. I'll show just the initial steps of that process and leave the rest up to you.
- From the Page menu, select Insert/Remove Page.
  - Select Insert New Page After Current Page.
  - Select OK or press Enter.
  - Draw a small frame in the left column of the second page, using the Add New Frame command.
  - Select SCOOP2.TXT from the Assignment List. The final portion of

the SCOOP2.TXT file will load into the frame you've drawn.

- Press PgUp to return to page 1. To go back to page 2, press PgDn.

## Issue Two

If this had been a real newsletter, you'd want to save this chapter as a template for the next issue. To create a template, you use the Remove Text/File option of the Edit menu to pull text and graphics off the page without disturbing the underlying frame and column structure. Then from the File menu select the Save As option to give the template a new name. For the next issue, you simply open the template chapter and load a new set of articles and illustrations into the existing frames, moving and stretching frames if necessary for a slightly different layout.

## CHAPTER THREE



# *Tutorial: A Form*

SO MUCH ATTENTION has been paid to Ventura's capabilities in handling long documents that many people have overlooked the fact that the program is superb at generating single-page forms.

Most forms are best done using a technique that might be called the Grouped Box Text method. Essentially, the steps involved in this method are as follows:

- Create a frame for each group of boxes.
- Create the boxes with the box text command.
- Add text to the boxes.
- Specify shading and borders for the boxes.
- Create tags for the text in the boxes and tag the text.

Using this method, you can create extremely complex forms, moving into enlarged mode when necessary for detail work. In this chapter, we'll walk through the creation of the very simple form shown in Figure 1. Chapter 12, "Document Layout Strategies," discusses some

techniques for handling more complex forms.

### **Preliminaries**

Execute the following steps to load Ventura, set the options, and load the default style sheet:

- From the DOS prompt, type  
**VP**  
to load Ventura.
- Pull down the Options menu and match the settings to Figure 2.
- From the File menu, select Load Diff. Style.
- In the Item Selector dialog box, check to see that the Directory line reads C:\TYPESET\*.STY. If it does, skip to the next step.
- Click on the Backup Box (the small black box) several times until the scroll bar lists the drives on your computer (A:, B:, C:, etc., each preceded by a diamond).
- Select the drive that contains the TYPESET subdirectory. Now the

# INVOICE

QUANTITY	ITEM	AMOUNT

Figure 1

Directory line should read  
C:\TYPESET\\*.STY.

- Scroll down until DEFAULT.STY appears.
- Select DEFAULT.STY. There are three alternative ways to do it: (a) Place the cursor over the name and click twice rapidly; (b) Place the cursor over the name and click once, then select OK; (c) Place the cursor over the name and click once, then press Enter.

As explained in the File Management chapter, it's a good idea to create a new directory on your hard disk to contain the chapter file, style sheet file, and other files associated with a particular document. Do so as follows:

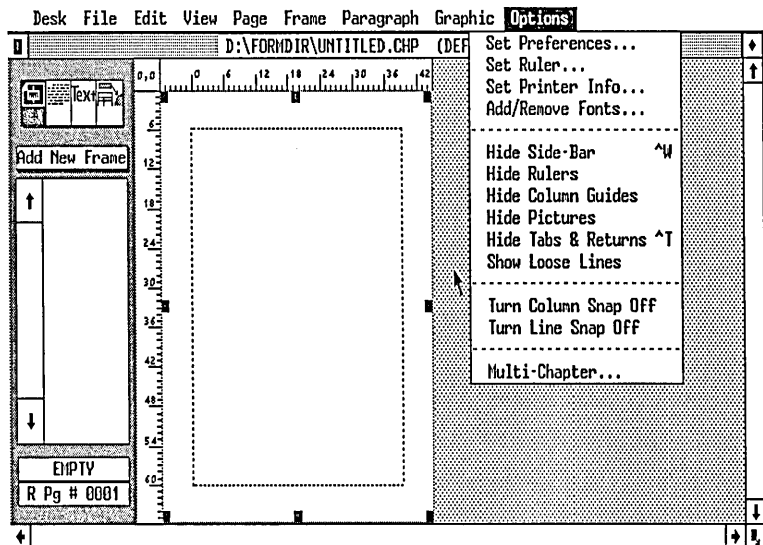
- From the File menu, select DOS File Ops.
- In the dialog box, use the Backspace key to erase the current file spec.

- Type a new file spec:  
C:\FORMDIR
- Select Make Directory.
- Press Enter or select Done. Ventura will not give you any feedback that it has created the new directory.
- Select Done.

Save the default style sheet under a new name in this directory. That way you can preserve the original DEFAULT.STY file intact. Do these steps:

- From the File menu, select Save As New Style.
- Click on the small black square until the directory line reads C:\\*.STY (or D:\\*.STY).
- Select FORMDIR from the scroll box. The directory line should now read C:\FORMDIR\\*.STY.

Figure 2: The settings in the Options menu.





- Type a new name for the style on the selection line. For example, type **INVOICE . STY**

- Select OK or press Enter

Next, we'll name the chapter and save it in the FORMDIR subdirectory.

- From the File menu, select Save As
- In the Item Selector dialog box, click on the little black box until the directory line reads: C:\\*.\*.CHP
- Select FORMDIR from the scroll box. The directory line should now read C:\FORMDIR\\*.\*.CHP
- Type a name for the chapter on the selection line. Type **FORM . CHP**

- Select OK or press Enter

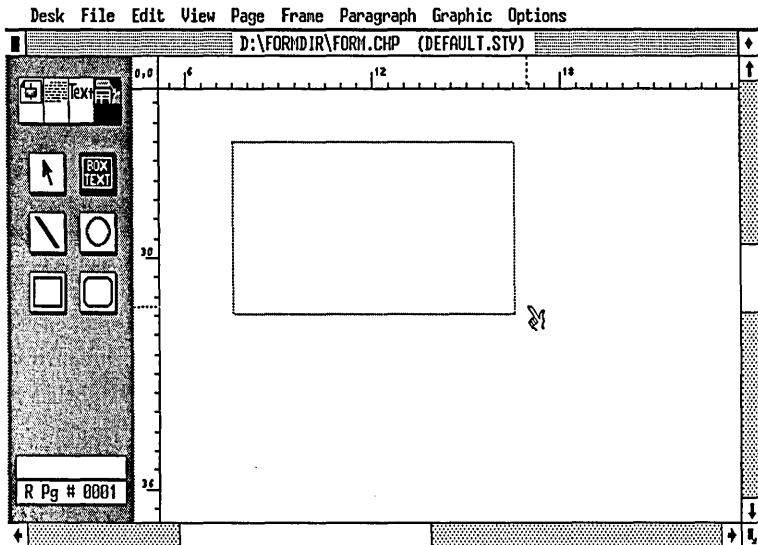
The names of the chapter should now appear at the top of the screen with

the name of the style sheet in parentheses.

The purpose of the next sequence of steps is to create the title for the invoice. Although this could be typed directly onto the base page, it's easier in the long run when producing a form to place all text in boxes created with the Box Text tool from Ventura's graphics palette. That way, if you need to move the text block to a new location you can simply drag it with the mouse. Of course, you don't want to have all text surrounded by boxes, but as we'll see below, one option of the Box Text tool is to have the box boundary hidden.

- Select the Graphics function (the furthest icon to the right, not the Graphics menu)
- Select the Box Text tool from the graphics palette.

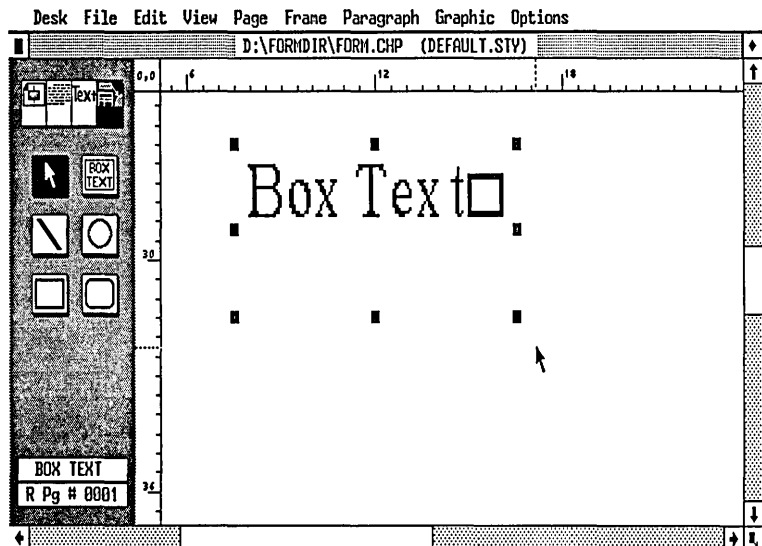
*Figure 3:  
Drawing a box  
with the Box  
Text tool.*



- Draw a box as shown in Figure 3. To do so, start at the upper left corner of the box and hold down the mouse button while you pull the cursor toward the lower right corner. When you release the button, the box will look like Figure 4.
- Switch to Enlarged view.
- Select the Text function.
- Place the cursor between the final t of the word Box Text and the small box and click the mouse button.
- Backspace across the word Box Text to erase the word.
- Type  
INVOICE
- Select the Tagging function.
- Select Add New Tag.
- In the dialog box, type **Headline** as the name of the new tag and select OK or press Enter.
- Select the word INVOICE by placing the cursor on top of it and clicking with the mouse.
- From the Paragraph menu, select Font.
- Select 24-point Times (or Dutch, depending on your printer).
- From the Paragraph menu, select Alignment.
- In the dialog box, select Center and select OK or press Enter.
- Switch back to Reduced view.

Executing the next series of commands creates a new tag for the word invoice, causing it to be centered within the box in 24-point type.

*Figure 4: After you draw the box and release the button, it will look like this.*



- Select the box containing the word **INVOICE**, by placing the cursor within the box and clicking.
- From the Graphic menu, select Line Attributes (or type **Ctrl-L**).
- Select Thickness: None.

In the next series of steps, the boxes that make up the form are drawn. The boxes that contain text will be drawn with the Box Text tool and the boxes that contain no text will be drawn with the regular box tool.

- Select Normal (or Enlarged) view.
- Select the Graphics function.
- From the Graphic menu, select Grid Settings.
- Select Grid Snap: On.
- If the measurement units shown are not inches, change them to inches by pointing the cursor directly at the words picas & points (or fractional pts or centimeters) and clicking until the word inches is shown.
- Backspace across the existing settings for horizontal and vertical units and type 0.250 for both. Select OK or press Enter.
- Select the Box Text tool.
- Draw the top three boxes that make up the form. You'll notice that it is necessary to select the Box Text tool each time you draw a box. You can save time by holding down the Shift key while you draw a box, and the Box Text tool will remain selected.

Later we'll replace the words Box Text in each box with the desired head-

ing. First, however, we'll draw the remainder of the form using the normal rectangle tool.

- Select the rectangle tool.
- Draw the first box.
- Type **Ctrl-L** and fill in the Line Attributes dialog box as follows:

Thickness: Custom Width 0.003 inches  
Color: Black  
End styles: squared ends.  
Defaults: Save To.

- Select OK.
- Type **Ctrl-F** and fill in the Fill Attributes dialog box as follows:

Color: Black  
Pattern: Hollow  
Defaults: Save To

- By selecting Save To, both the line and the fill attributes used for the first box will be used for subsequent boxes. Now draw the rest of the boxes in the form.
- After drawing all the boxes, select the lower right box, press **Ctrl-F**, and change the Pattern from Hollow to 1.

Now the form is complete except for entering the correct text in the boxes and formatting that text.

- Select the Text function.
- Backspace across the words Box Text in the first box and type **QUANTITY**

- Change the words in the other two boxes to **ITEM** and **AMOUNT**.
- Select the Tagging function.
- Select the word **Quantity**.
- Select **Add New Tag**.
- Next to **Tag Name to Add**, type **Center 14**
- From the **Paragraph** menu, select **Font**.
- In the dialog box, Select **Helvetica** (or **Swiss**) **14-point**.
- From the **Paragraph** menu, select **Alignment**.
- In the dialog box, select **Alignment: Center**.
- From the **Paragraph** menu, select **Spacing**.
- In the dialog box, change the measurement units to **picas & points**. Set **Above spacing** to **1,00 picas &**

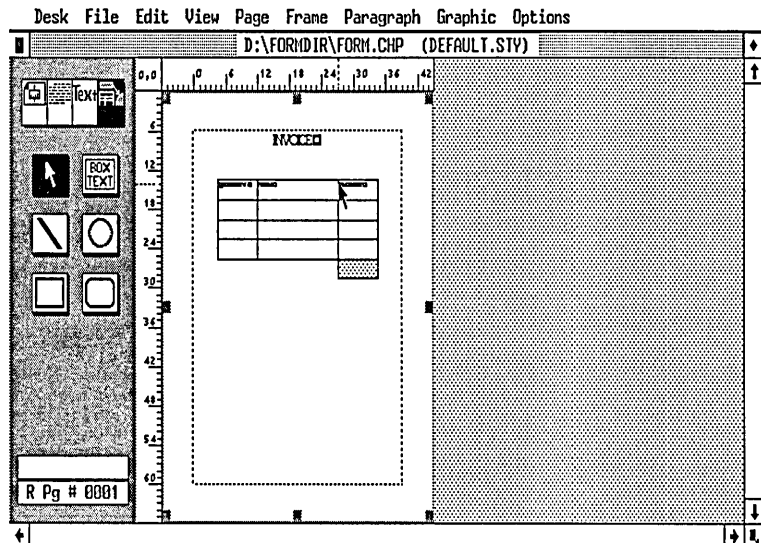
points. Select **Add in Above: Always**. Select **OK**.

At this point the form is complete and ready to print. However, you may want to make some adjustments, such as repositioning the group of boxes. To do that you need to select all the boxes together so that you can move them as a single unit; at the same time, the word **INVOICE** should not be moved.

The technique for moving the group of boxes is to use the **Select All** option of the **Graphics** menu and then de-select the box containing the word **INVOICE**. Execute the following:

- From the **Graphics** menu, select **Select All**. Alternatively, you can type **Ctrl-Q**.
- Now hold down the **Shift** key while clicking on the word **INVOICE**. That will de-select the box contain-

*Figure 5: The page after selecting the block of boxes and de-selecting the title.*



ing the word Invoice. The page will now look like Figure 5.

- Place the cursor on top of the group of boxes. Hold down the mouse button while dragging it to a new location.

Now you can print the form. First make sure you save it.

- From the File menu, select Save. Alternatively, type **Ctrl-S**.
- From the File menu, select To Print.
- In the Print Information dialog box, check the configuration to see that the correct printer is selected. If not, select Cancel and select Set Printer Info from the Options menu. In the Set Printer Info dialog box, select the correct printer name and then select Load Different Width Table. Select the desired width table from the Item Selector dialog box.
- Check that your printer is turned on.
- Select OK or press Enter to print the page.

II

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# Foundations



## CHAPTER FOUR



# *How Ventura Works*

*“Everything should be made as simple as possible, but no simpler.”*

SO SAID ALBERT Einstein in reference to physics, but the observation applies equally well to software. While learning Ventura does take effort, there’s no getting around the fact that preparing documents is an inherently complex task.

Mastering Ventura requires hands-on practice creating documents such as the ones in the Tutorial exercises. However, it may also help to review some of the concepts that the program is based on.

### **What Can Ventura Do?**

Before we get into exploring the workings of Ventura, let’s take a brief inventory of what the program actually lets you accomplish.

- It lets you merge text and graphics files created by other programs into a single document. Graphics can be scaled and stretched. Text blocks automatically reformat to flow around inserted graphics.
- It gives you full typographic controls over the appearance of text, including kerning, tracking, spaceband control, letter spacing, and leading. It also provides a variety of automatic ruling lines and boxes. Hyphenation is by algorithm, backed up by an exceptions dictionary.
- It provides batch pagination features such as automatic page, figure, and section numbering, index and table of contents generation, and chaining of multiple chapters at print time.
- It provides a simple text editor that allows insertion and deletion as well as block moves. Any changes you make in text are reflected back in the original files.
- It provides an internal graphics program that allows you to generate diagonal lines and arrows, empty or shaded rectangles, and empty or shaded ellipses.
- Results of formatting, including actual typefaces and line breaks, are shown on the screen. Most monitors



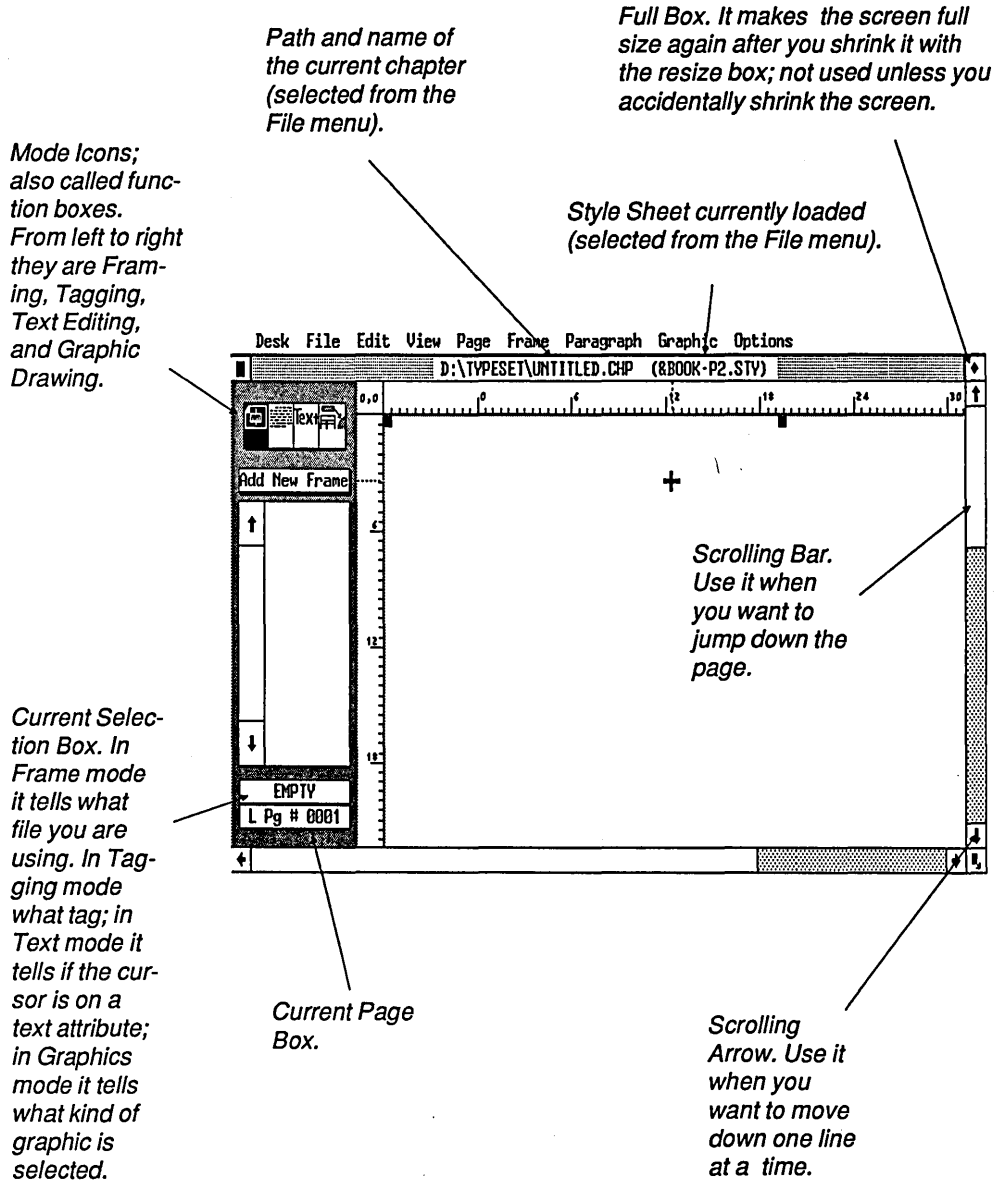


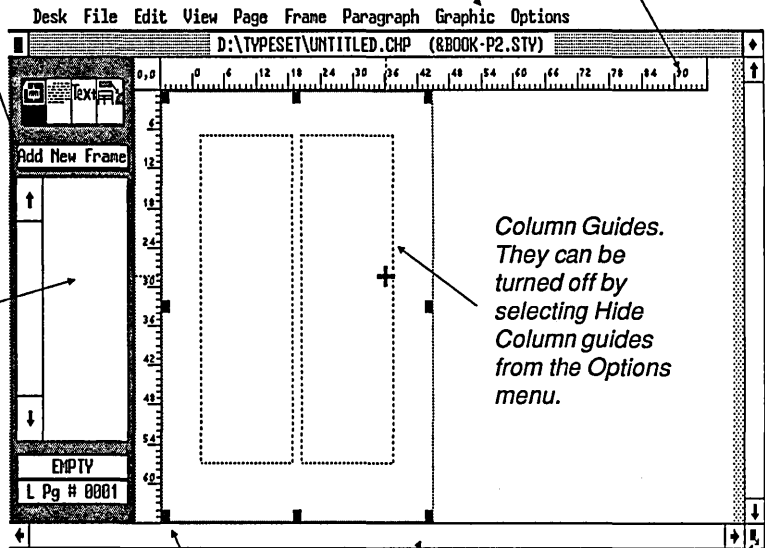
Figure 1a: The parts of the Ventura screen.

**Addition Button.** In Frame mode it must be selected before you draw a new frame. In Tagging mode it must be selected to create a new tag. In Text mode it reads Set Font and must be selected to change the attributes of a single letter, word, or phrase. In Graphics mode it is replaced by the drawing tools.

**Ruler.** It can be turned off by selecting Hide Ruler from the Options menu. The measurement units can be changed using the Set Preferences option of the Options menu.

**Assignment List.** In Frame mode it lists text and graphics files contained in a document. In Tagging mode it lists tags. In Text mode it lists formatting styles such as bold and italics. In Graphics mode it is replaced by the drawing tools.

Menu Line.



**Column Guides.** They can be turned off by selecting Hide Column guides from the Options menu.

**Frame Handles** (they indicate which frame is currently active).

**Resize Button** (a relic of GEM: not normally used).

Figure 1b: The parts of the Ventura screen.

that work with the IBM PC are supported by the program, including large-screen, high-resolution displays.

- Output options include dot matrix and color inkjet printers, most popular laser printers, and InterPress or PostScript compatible typesetters.

## Some History

So far so good. We've noted what Ventura can do. But we still haven't established just what Ventura is. According to which magazine article you read, it has been variously described as a "super word processor," a "WYSIWYG batch-pagination program," and as a "page makeup" or "page layout" program. All these terms are more or less accurate, but they also apply to any number of other programs on the market. So why is Ventura, among all these other products, a runaway bestseller?

To really understand the significance of Ventura, we need to look at the history of computer-based publishing. From the first use of computers for creating documents, a gap existed between two types of systems. One type was systems that provided a what-you-see-is-what-you-get (WYSIWYG) view of the final page and allowed you to "paste up" text and graphics on-screen. This approach, which might best be described by the term "page makeup" (since the user created a document one page at a time) had its roots in the computer-aided design (CAD) and computer graphics technology that moved from experimental to

commercial during the 1960's. It came into use in the publishing industry in the 1970's, when it was adapted for onscreen layouts of display advertisements.

Meanwhile, other systems were being developed that used a non-WYSIWYG, code-based approach. With these programs, documents were created in two stages. First, the user embedded typographic and pagination codes (and macros representing sets of codes) in the text of a document. Then the program processed the codes all at once, automatically generating pages with the proper headers, footers, page numbers, and so forth. The advantage of this approach was that the user didn't have to create pages one at a time; the disadvantage was that these systems didn't provide the interactive visual feedback provided by page makeup programs. Only when the document was printed could the final result be proofed.

Before Ventura, many experts assumed that the page makeup and the batch approaches were irreconcilable. And indeed, as publishing systems were introduced for personal computers, they typically fell into one or the other camp. Some of the early Macintosh hits, such as PageMaker and ReadySetGo!, were strongly rooted in the page makeup tradition. Other Macintosh programs, such as JustText, and programs for the PC such as ScenicWriter, TeX, and MagnaType, followed the batch approach.

What sets Ventura apart is that it merges some aspects of both approaches. Just as in the typical page makeup system, you can work interactively with

each individual page, watching the results of your formatting decisions on the screen. On the other hand, the program provides the speed of a batch program by automatically setting up as many pages as are required to compose your documents. In a real sense, with Ventura you get the best of both worlds.

## A Scenario

Let's bring the discussion down to earth by describing a typical scenario. Ken is a freelance technical writer who writes and produces manuals under contract to several small robotics companies. The manuals combine text, scanned images, and simple diagrams.

To create his text, Ken types it into WordStar. To create his scanned images he uses PC Paintbrush Plus, which automatically drives his scanner and converts the photographs into PC Paintbrush (PCX) files.

Once he has created the text and graphics files for a chapter of the manual, Ken loads Ventura and then loads a style sheet, using the operations in the file menu. While the screen is still blank, he uses the operations in the Page menu to select the type of paper he intends to print on. He then uses the Options menu to turn the column guides on. Next, he selects the Frame icon and uses the operations in the Frame menu to adjust the margins of the base page. By viewing the column guides, he checks that the margins are satisfactory.

Next he loads text from his WordStar files onto the page. He then selects the

Tagging icon and begins assigning a tag to each paragraph (paragraphs being blocks of text separated by carriage returns). If a tag is not to his liking, he uses the options in the Paragraph menu to adjust such elements as font, first line indent, left and right spacing, spacing between lines and paragraphs, ruling lines, and special features such as bullets. If no tag is available for a given purpose, he uses the Add New Tag option to create one.

The work of tagging goes fairly fast. Most text doesn't need to be tagged at all, since Ventura automatically assigns the Body Text tag to any untagged text.

Once the text is completely tagged, Ken selects the Text icon and uses Ventura's built-in word processor to make minor insertions and deletions to accommodate last minute changes in his text.

Next, he selects the Frame icon again, clicks on Add New Frame, and draws several frames to accommodate pictures. He then uses the File menu to load scanned images into these frames. Next, he uses the Margins and Columns option of the Frame menu to place margins between the pictures and the frames, and uses the Sizing & Scaling option of the Frame menu to adjust the scaling and cropping of the pictures. Then he uses the Anchors & Captions option of the Frame menu to add captions to the pictures.

Selecting the Graphics icon, Ken now uses the Line Drawing and Box Text tools to label his pictures. Then he selects the Text tool to type the actual contents of the box text labels and the tagging icon to alter the formatting of the labels.

Having formatted the text and graphics on each page of the manual, he now uses the Page menu again to add Headers and Footers to his pages. Finally, he uses the File menu to give his document a chapter name and save it, and then to print it out.

## **Modes: Five Programs in One**

As the above scenario illustrates, the process of creating a document with Ventura involves continually moving in and out of the four modes provided by the program and using the commands that are available in each. Once you have become experienced with Ventura, you'll find yourself choosing the right mode and looking into the right menu more or less automatically, and you'll find that the various modes work together quite seamlessly. However, in first attempting to grasp the way the program works, it's useful to recognize that the four modes actually represent four different programs merged into one.

The first two programs are a page layout program and a pagination program (some functions of each assigned to the Frame and Tagging modes). The third program is a simple word processor (Text mode), and the fourth is a simple drawing program (Graphics mode). When you're in a given mode, some of the items in the pull-down menus are shown in black and can be selected, while others are shown in gray and cannot be selected. This is Ventura's way of allowing the four programs to share the same set of menus.

In addition to the four modes associated with the four icons, there is actually a fifth mode, consisting of global controls that can be accessed no matter which mode you happen to be in. These include commands for loading text or graphics into Ventura, printing documents, and customizing the program's user interface.

## **Analyzing the Operations**

Clearly, it's important to know the purposes served by each of Ventura's five modes. But to grasp the program we need to take a slightly different tack. Let's now look at Ventura's operations not in terms of what mode they are assigned to but in terms of what they let you accomplish. If you analyze Ventura's structure from that perspective, you'll see that the operations available to you fall into four categories:

- Operations for importing and exporting various items such as text, graphics, and style sheets,
- Operations for customizing the Ventura interface,
- Text and graphics processing operations, and
- Formatting operations.

## **Category 1: Bridges to the Outside World**

Before you can format a document you have to pull text and graphics into Ventura, and after you format the document you have to either print it or store it on disk. In addition, with any program there

are various housekeeping chores that need to be attended to, such as saving style sheets and documents to use later on.

This is where Ventura's "bridging" operations come into play. Most of these reside in the File menu, including commands for loading text or pictures into Ventura, saving documents that have been formatted, printing, and using DOS to create new subdirectories to hold documents. Another menu is the Edit menu, which provides operations for removing text or pictures from a document. Finally, the Options menu includes a selection, Add/Remove Fonts, for increasing or reducing the number of fonts available for use in documents.

Most of the bridging work occurs at the beginning and end of creating a document: at the beginning to load the appropriate files and style sheets; at the end to print the document and save the completed (or partially completed) chapter.

## Category 2: Customizing the Interface

No user interface is perfect for every type of user and every type of document. For that reason, Ventura provides an extensive range of operations for customizing the appearance of Ventura's main screen as well as for controlling the type of feedback provided about the status of a document. Such commands are mainly located in the Options menu. They include options for hiding elements such as rulers, column guides, and pictures; flagging loose lines; turning column and line snap

on and off; adjusting the double-click speed of the mouse; and performing on-screen kerning.

Another location of such operations is the View menu, which lets you specify the degree of magnification of the screen. Finally, the scroll bars on the right side and bottom of the screen let you control the portion of the page you are currently viewing.

## Category 3: Text and Graphics Operations

Ventura's internal word processor and graphics generator are useful for making last-minute changes and for enhancing pictures generated by scanners, CAD programs, drawing programs, and business graphics programs.

The word processor is activated when you select the Text icon. Its commands are located in the Edit menu and in the sidebar.

The graphics generator is activated when you select the Graphics icon. Its tools are selected from the sidebar, and additional operations are located in the Graphics menu.

## Category 4: Formatting

While the operations we've discussed so far are certainly important, formatting lies at the center of what Ventura is all about. It is also the most complex of the capabilities provided by the program, with commands scattered in various menus. In the remainder of this chapter we'll go through the various tools pro-

Most of the functions in the Edit menu are only available when you are in Text mode. The exception is a pair of commands for removing text and pictures from a page or renaming text files.

Like the Page menu, the Paragraph menu is somewhat deceptively named. Its functions are only available in Tagging mode when a particular paragraph has been selected. This menu is used to control the typographic settings stored in each tag.

The Desk menu is not used for any purpose except to list the names of the Ventura development team and to hide an obscure status report (described in Chapter 20).

The options in the Page menu can be applied no matter what mode you are currently in. Contrary to its name, the Page menu mainly provides functions that apply to the document as a whole.

The Graphic menu's operations are available when the Graphics icon is selected. They control the appearance of graphics you have drawn with tools from Ventura's graphics palette. To change the line and fill attributes of a graphic element such as a line or a box, you must first draw and then select that element.

Desk File Edit View Page Frame Paragraph Graphic Options

The File menu is used for bringing text and pictures into Ventura documents, for loading or saving documents that you have already begun working on (called Chapters), and for loading and saving style sheets.

The functions in the Frame menu are only available when the Frame icon is selected. They are applied to the currently active frame: either to the base page (which itself is a frame) or one of the additional frames you have drawn on the page. Among the settings controlled through this menu are the number of columns of text in a frame, the scaling and cropping of graphics imported into frames, the amount of padding surrounding a frame, the background shade of the frame, and the placement of vertical rules in a frame.

No matter what mode you are in, the View menu can be used to zoom in or out. It also provides an alternative way to switch among Ventura's four modes.

The Options menu is used to control various settings for the user interface, such as whether a ruler is shown on screen. It also includes the Multi-Chapter options, which are used to backup chapters to disk, to print multiple chapters, and to generate a table of contents or an index.

Figure 2: Notes on the Menu Line.

vided by Ventura for formatting various levels of the document.

## **Style Sheets and Tags: Formatting At the Paragraph Level**

A style sheet might be thought of as a cookbook, a compilation of recipes (called “tags”) for how individual paragraphs are to be formatted. For example, a tag called Subhead might specify that a given paragraph is to be centered in the column and set in 18-point Palatino Bold type, with 3 picas (half an inch) of leading (vertical space) separating it from the previous paragraph and 1 pica separating it from the following paragraph. Every time you attach this tag to a paragraph of plain text, it will assume all the attributes stored in the tag.

Much of the work of formatting a document in Ventura involves setting up the specifications for the various tags and then attaching these tags as needed throughout the document.

Sounds simple enough. Unfortunately, the style sheet alone doesn’t provide quite enough information to completely set up a document. What do you do when a single letter or word within a paragraph is formatted differently than the rest of the paragraph? And what about formatting directions that transcend the individual paragraph, such as the margins for the entire page or the numbering scheme for the entire document?

To take care of the issues of document formatting that extend above and

below the level of the individual paragraph, Ventura provides a number of tools. None of these tools works quite as simply as the style sheet concept, and the way the tools are organized within menus is at times confusing. Although it’s not possible within this chapter to explain completely the relationship between these various tools, the following is a simplified synopsis of four levels of formatting control that Ventura provides, for the document as a whole, for frames on pages, for words and phrases within paragraphs, and for graphics.

## **Document Specifications**

Operations that affect the entire document are mainly located in the (somewhat inappropriately named) Page menu. These include the type of paper being used and whether the document is to be in portrait (upright) or landscape (side-ways) orientation; the numbering of chapters, pages, and subheads; and the contents of headers and footers.

Generally, when you lay out a document, the first menu to pull down is the Page menu.

## **Frame Specifications**

Frames are one of the most confusing concepts in Ventura, since they serve so many different purposes. When you start any document from scratch, Ventura automatically creates a frame that coincides with the dimensions of the paper and hence is called the “base page” frame.



Specifications that are set for the base page frame, such as margins and background shading, apply to the entire document. On the other hand, you can create smaller frames on individual pages to hold text or pictures. These frames must each be given individual settings for such things as margins and columns, and unlike the settings for the base page frames, the specifications you enter for a smaller frame on the page apply to that frame only.

While the difference between the base page frame and additional frames tends to cause confusion, so does the fact that the scaling of graphics is handled in the same dialog box (the Sizing & Scaling option of the Frame menu) as the size specifications for frames themselves.

## Sub-Paragraph Specifications

For altering the specifications of a letter, word, or phrase within a tagged paragraph, Ventura provides a special option called Set Font. This is not accessed through one of the menus at the top of the screen, but instead by clicking on the Set Font button that appears on the left side of the screen when the Text icon is selected. To make matters even more confusing, clicking on the Set Font button produces no response unless you have already highlighted the passage of text you wish to alter by dragging the mouse across it with the mouse button held down.

## Graphic Specifications

Ventura allows you both to import graphics and to generate graphics within the program. Generating internal graphics is done using the tools that appear on the left side of the screen when the Graphics icon is selected. Once graphics are drawn, the options in the Graphics menu can be used to alter them: for instance, to change the thickness of a line or the background shade of an ellipse.

It is somewhat confusing that there is no menu specifically devoted to sizing and positioning graphics imported into Ventura from other programs. Some of the commands for doing that are accessed via the Sizing & Scaling option of the Frame menu (scaling and cropping the picture), others via the Margins and Columns option of the Frame menu (margins around the picture).

## A Final Concept: Ventura As a Software Hub

One of the insights designed into Ventura is the recognition that publishing is a modular effort; that is, it comprises distinct series of stages such as writing, editing, proofing, layout, and preparation of graphics. In our scenario above, Ken was doing all the work himself. Typically, however, publishing is a group effort, in which various specialists merge their respective crafts towards a common end.

Translated into the computer world, publishing's modular and sequential na-

ture means different people using different software tools. Ventura's design allows it to be a useful adjunct to almost any of the most popular tools in use.

Most people are already comfortable with a word processing program and don't care to change. Ditto with respect to graphics programs. For instance, the preparation of the typical manual may involve one writer using WordPerfect, another using XyWrite, and an illustrator using AutoCAD, Publisher's Paintbrush, and perhaps other graphics programs as well. Not only does Ventura allow importing a diverse array of file formats, but it does so smoothly and easily.

If Ventura only allowed files to be imported, you'd be faced with a difficult situation when it came time to update and revise a major document. Fortunately, the exchange is potentially bi-directional. If a document needs to be reworked, you can use Ventura's editing tools to make changes and those alterations will be reflected back in the original files.

The method chosen by Ventura's designers to implement the open systems concept is worth noting. For each document you generate with the program, Ventura creates a unique file with the extension CHP. This chapter file contains pointers to all the other files that together make up a document, including associated files generated by Ventura and the original word processing and graphics files. Because of this scheme, Ventura does not need to generate an immense file containing the entire document, which helps the speed of the program while minimizing the demands it places

on your system's storage. Other files that Ventura uses are the INF file, which stores various settings in between your sessions with the program, and GEN files that Ventura creates to contain files it automatically generates such as tables of contents and indexes. These files are discussed in greater detail in Chapter 6, "Managing Files."

The open system approach used by Ventura has two additional benefits. As noted, it allows easy revision of documents, such as manuals and parts catalogs, that move through multiple generations. With Ventura, a document can be dynamic: revised and rewritten with each printing. The second benefit of the open system approach is that it allows those using Ventura to stay with the various personal computer programs they are already comfortable with—not only a convenience but a valuable savings for organizations, which can avoid the expense of retraining.

The drawback of the open system approach is that it leads to a proliferation of files for every document. While Ventura provides some techniques for managing these files and moving them about, the work of avoiding confusion on your hard disk requires a great deal of attention to detail and time-consuming file management.

## Putting It All Together

Hopefully, this chapter has persuaded you that despite the seeming complexity of Ventura's structure, there's method in the madness. Although in future revisions

of the program the organization may be tightened up a bit, it's reasonable to assume (harkening back to Einstein's observation), that a tool with as much flexibility and power as Ventura has will inevitably be somewhat complex. On the positive side, you'll find that once you get used to the quirks of how operations are organized in menus, formatting documents with Ventura is a speedy, natural process. In the end, you'll appreciate Ventura's power when you see the results on paper. In other words: the proof is in the printing.

## CHAPTER FIVE



# *Hardware*

USING VENTURA AS the software hub, you can build a wide variety of publishing systems, depending on your budget and your needs. One of the beauties of the program is that it can run on a relatively cheap hardware system. According to Xerox, the minimum configuration is a PC/XT with 512K of memory, a mouse (of virtually any variety), a graphics monitor (of virtually any variety), and one to three Mb of extra hard disk memory. By today's standards that's a fairly modest, inexpensive system, one that can be had for around a thousand dollars, which makes Ventura one of the real bargains among the current crop of desktop publishing programs.

When I first read those requirements, my reaction was one of skepticism. Like many other observers of the desktop publishing scene, I was convinced that for Ventura to provide the sort of WYSIWYG interface and the speed of, say, a Macintosh program like PageMaker, you'd need to be running it on a computer with a bit more oomph than a 512K PC. I was also convinced that for Ventura to claim that the program could be run on

a plain Color Graphics Adapter (200 by 350 pixels) must be some kind of cruel joke.

So, although I did have a more powerful computer available, I first tested the program on the minimum configuration: a 1983-vintage 576K IBM PC with a color graphics monitor and a modest 10 Mb hard disk. To my surprise, Ventura's performance on the system, though a tad slow, was perfectly adequate. The only truly aggravating sluggishness came in loading the program to start with and moving graphics around the screen.

Working with text was no problem. Also, the Color Graphics Adapter proved not to be the hindrance I'd expected. Despite its meager resolution, I found it easy to do fairly exacting work (by zooming in closer when necessary). The only real drawback with the CGA was not being able to read most text in Normal view.

Of course you can get better performance from systems with more memory, faster microprocessors, higher-resolution monitors, larger hard disks, and special RAM disk and disk caching

## XT or AT?

I've never much liked the phrase "works with." When they say that Ventura works with IBM XT computers as well as more powerful AT's, what exactly do they mean? As I'm sure you're aware, simply being able to run a program on a machine is not enough; it must run fast enough to make work go forward without too much finger tapping.

I've used Ventura on a number of machines: an IBM PC with 576K of memory, a Compaq DeskPro, an Everex AT clone (10MHz, 1 wait state), a Hewlett-Packard Vectra AT compatible, and an AST Premium 286 AT compatible (10 MHz, no wait states). The table on the following page shows the results of speed tests on several of these. Those figures, however, don't convey anything about the feel of the program, the subjective difference in performance from one machine environment to another.

I found even the plain IBM PC to give fine performance, provided the document I was working on didn't include any graphics. Because that computer lacked much memory, it would resort to disk swapping to handle pictures, and the result was a tremendous wait. On the Compaq DeskPro, which uses the 8088 chip, Ventura zipped along quite nicely, and in fact the performance seemed just as good as on the HP Vectra, which uses the 80286 chip. Of course, on the 10 MHz machines the performance was yet another notch higher, but the striking similarity between using Ventura on the DeskPro and the Vectra proved to my satisfaction that it isn't the microprocessor that counts so much as the speed of your hard disk. At the time I did the comparison my Vectra hard disk had become badly fragmented over time and had definitely become somewhat sluggish.

The moral: Go ahead and use Ventura on an XT-class machine, and if considering the options for upgrading such a machine for better performance, invest in a faster hard disk.

## Speed Tests

	(A)	(B)	(C)	(D)	(E)
1. Load Ventura	39	24	19	9	4
2. Load 3-p chapter	19	13	10	5	3
3. Load bit-mapped image	10	8	5	3	2
4. Load object graphic	11	6	5	3	2
5. Move bit-mapped image	3	2	2	2	1
6. Load 115K document	N/A	18	18	13	12
7. Jump to end of 25-p doc	n/A	7	5	4	4

*Notes: All times are in seconds. The computers were (A) an IBM PC with a 10 Mb hard disk; (B) a 640K Compaq Deskpro with a 20 Mb hard disk; (C) a 640K Hewlett-Packard Vectra with a 20 Mb hard disk; (D) a 640K Everex AT clone with a 40 Mb hard disk; and (E) the same Everex AT using the Flash disk caching program.*

*Table 1: Comparative speeds of Ventura on various computer systems.*

utilities. By the time I was laying out this book, I had graduated to a fast AT with a Viking I 19-inch monitor—and I definitely appreciated the increased speed and the convenience of working on the full-page monitor.

My own experience is that Ventura is flexible enough to adapt to your hardware resources. Assuming your budget has some limits, the question is: what sort of hardware investments will yield the most bang for the buck? In this chapter we'll start by looking at some hypothetical configurations. Then we'll look at each particular type of hardware in detail: scanners, laser printers, monitors, and personal computers.

### Five Configurations

As the following brief case studies show, prices for a publishing system built around Ventura can range from \$1,500 for minimal system to \$82,000 for a full-blown multi-workstation system, including Linotronic imagesetter.

### A Low-End System

System A is used by a graduate student who plans to typeset her 240-page thesis with Ventura, as well as to create the questionnaires and other materials. Since her budget is quite limited, she makes use of the laser printers at the local desktop publishing service bureau, which pro-

vides laser printers and computers on an hourly rental basis. Her computer is an IBM PC XT clone with a 20-Mb hard disk and a Hercules clone graphics card. She uses Ventura's optional keyboard controls but plans to add a mouse as soon as she can afford one. For output she uses an Epson dot matrix printer. Although the quality of Ventura's output on the Epson isn't good enough for master copies, it is sufficient for creating proofing copies. For final copies, the student rents time on an Apple LaserWriter, or possibly on a Linotronic 100, to produce the final version of her thesis. The price breakdown of her system is as follows:

<b>System A</b>	
20 Mb XT clone	\$1,200
dot matrix printer	300
Total	\$1,500

### **An Inexpensive Laser Printer System**

System B is used by a business consultant who frequently designs forms for clients and prints reports containing business graphics and tables. He does not have the funds for options such as a full-page monitor or a high-end laser printer. His system is the least expensive laser printer system:

<b>System B</b>	
20 Mb XT clone	\$1,200
LaserJet Series II	2,000
Total	\$3,200

### **A Medium-Priced System (Speed Oriented)**

System C is used by a freelance technical writer who prepares manuals for small software companies. Her priority is speed, not output quality, so she has chosen to spend most of her budget on a fast computer and a high-resolution monitor, and saved money by buying an inexpensive laser printer. She uses an IBM AT clone computer with a 40-Mb hard disk and a mouse, and a Wyse monitor. Because she can get by with the standard Swiss, Dutch, Courier, and Symbol typefaces provided with Ventura, she opted not to buy a PostScript printer, and instead bought a used QMS KISS printer and retrofitted it with a LaserMaster printer controller. This controller resides on a board installed in the computer and connected with an ultra-high-speed cable directly to the video interface of the printer, a scheme that allows extremely fast printing. The cost of her system:

<b>System C</b>	
40 Mb AT clone	\$3,000
Wyse monitor	700
QMS KISS (used)	1,200
LaserMaster controller	1,500
Total	\$6,400

### **A Medium-Priced System (Type-Oriented)**

System D is used by the proprietor of a walk-in desktop publishing shop that produces a wide range of materials: books, business reports, resumes, newsletters,

forms, and manuals. Customers are generally businesses that provide him with files in WordStar, WordPerfect, MultiMate, or Microsoft Word format. The shop does not have a scanner. When images need to be merged into documents he advises clients to have halftones made at a graphic arts shop and then to paste them onto boxes that he creates with Ventura. Because of the variety of typefaces needed by customers, Kent uses a QMS PS-800+ PostScript laser printer, which includes about a dozen built-in scalable typefaces. Because his budget is limited, he uses a Hercules clone board with an AT clone computer, but plans to purchase a higher-resolution monitor as his next investment. His system:

<b>System D</b>	
40 Mb AT clone	\$3,000
QMS PS-800+	5,500
Total	\$9,000

### A High-Priced System

System E was assembled by the manager of a department that produces all the manuals for a small but well-heeled engineering company. The company decided to pull out all the stops in setting up a desktop publishing system—well, almost all the stops: they balked at her request for a Linotronic imagesetter. The system includes a 386 computer with 80 Mb of storage, an Apple LaserWriter Plus, a JLasar Plus board, a Viking I full-page display, and a Microtek scanner. The price of the system is as follows:

<b>System E</b>	
386 Computer	\$6,500
Apple LaserWriter Plus	5,500
JLasar Plus board	1,100
Microtek scanner	2,500
Viking I display	2,400
Total	\$18,000

### Full-Blown Publishing

System F is used by a task force that is developing prototype systems, procedures, and training materials for a Fortune 1000 company. The company intends eventually to invest in Ventura-based systems for its offices in numerous different locations in the United States and overseas. The system includes six AT clone workstations; three attached to PostScript printers, the other three to LaserJet series II printers. The group shares a single scanner and a Linotronic imagesetter. The entire system is as follows:

<b>System F</b>	
Six 40-Mb AT clones	\$18,000
Three Apple LaserWriter Plus printers	16,500
Three LaserJet Series II printers	6,000
Six Wyse displays	4,200
One Microtek scanner	2,500
One Linotronic 100 imagesetter	35,000
Total	\$82,200
Price per workstation	\$13,700



## PS Jet

PS Jet is a conversion kit that provides non-PostScript printers with PostScript capability. You can install PS Jet in any printer that has an internal controller and uses the Canon LBP-CX engine (HP LaserJet and LaserJet Plus, QMS Kiss and Big Kiss, QMS SmartWriter, Canon LBP-8 A-1 and A-2, and others). A version is also available for retrofitting printers with the Ricoh 4080 engine. Included in the installation kit is a new interface with a 9-pin AppleTalk port for Macintosh computers and a 25-pin serial port for IBM PC's. When you're done, you'll have a printer that is virtually identical to the Apple LaserWriter--same Canon engine, same PostScript brain. It contains the identical selection of built-in typeface families: Times Roman, Helvetica, Courier, and a symbol typeface. One improvement over the LaserWriter is in memory. The LaserWriter has 1.5 Mb of RAM, PS Jet sports 2 Mb. The additional memory allows you to download more fonts into the printer and assists PostScript in storing graphics and PostScript prep files.

The installation procedure involves unscrewing the top portion of the laser printer, disconnecting its cables, and installing a new top manufactured by the Laser Connection. On an HP LaserJet the removal portion of the task involves unscrewing 12 easily accessible external screws and one slightly difficult internal screw, pulling out a plastic shield that is somewhat tough to budge, and disconnecting three cables. Installing the new top is the same process in reverse. While a practiced hand could probably make the switch in about 20 minutes, you should budget more time than that to the task and approach it with caution.

I performed the transplant operation twice, first on a QMS Big Kiss, then on an HP LaserJet Plus containing a connection to a Tall Tree JLASerPlus board. On the Kiss, the procedure took me a full hour and a half. The next time around, on the LaserJet, things went a bit faster: I had the new top installed and printing in just under an hour.

For the most part, the steps of the procedure are clearly described and illustrated by PS Jet's excellent manual. None is difficult, except the removal of a small screw within the printer, for which purpose the Laser Connection thoughtfully provides a magnetized screw driver with the PS Jet package.

I recommend that you not rely on the magnetic screw driver to hold the small screw. Just to be on the safe side, wrap a loop of tape around the end of the screw driver once you've loosened the screw a few turns. That way the screw will stay attached to the screwdriver until you've drawn it completely out, and you're less likely to get involved with a game of cat and mouse between your needle-nosed pliers and a small screw rattling around inside your printer.

Once you've installed the PS Jet, you'll be ready to print. The Laser Connection provides a disk with a menu-driven program that configures the PC and provides some demo PostScript files. Feeling in the mood to take a chance, I ignored the setup disk and found that I was able to immediately begin printing from Ventura anyway. I also was delighted to discover that my J Laser board worked just as well as always.

An alternative to PS Jet is PS Jet Plus, which provides seven additional typeface families (ITC Avant Garde Gothic, ITC Bookman, Helvetica Narrow, New Century Schoolbook, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats) and Hewlett Packard Graphics Language emulation.

Of course, for all the attractions of having PostScript and HPGL emulation in your printer, there's still one fly in the ointment. What about all the LaserJet software you've got in your library? Will you have to give that up? With the version of PS Jet that I installed, the answer is yes. But with the PS Jet Plus, you can have your PostScript and in effect keep your LaserJet too. Among the features of the new model is complete emulation of the LaserJet Plus (sans compatibility with HP's font cartridges).

## Conclusion

Some interesting conclusions can be drawn from these scenarios. The first is that publishing systems based around Ventura start at around \$4,000 (assuming the system includes a laser printer), but that a bare-bones configuration can cost as little as \$1,500, provided you are willing to put up with the inconvenience

of proofing on a dot matrix printer. On the other hand, if you decide to set up a no-holds-barred workstation with all the fixin's and buy the latest IBM-brand computers, your bill can run upwards of \$18,000. With careful selection of computers, however, and sharing of typesetting equipment by a workgroup, you can have an even better system (since it includes a typesetter) for under \$13,000 per

workstation. Note that such a system is vastly superior to the the traditional multiterminal typesetting systems of yore, since each "terminal" is actually a powerful personal computer rather than a dumb terminal serving the typesetting machine.

## Laser Printers

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In the Fall of 1983, an announcement was made at the immense Comdex Computer Show in Las Vegas that drew little notice at the time, but that in retrospect marked the firing shot of the technological revolution we now call desktop publishing. That announcement was by Canon Corporation, a Japanese manufacturer better known for its cameras than for its computer equipment. At Comdex, Canon offered to provide other companies with laser printer engines for a price, when purchased in quantity, of under \$1000.

### Printer Engines

Unlike a car engine, a laser printer engine includes all the mechanical parts of the printer and usually the chassis as well--everything but the microelectronics controlling the machine. Previously, a price of under \$1000 for a laser printer engine would have been laughable. However, Canon had found ways of adapting the design of its low-cost office copiers, and was planning to push laser printers into the realm of mass production economies.

Among the first to take Canon up on the offer was Hewlett-Packard, which designed its own controller to add to the Canon engine, called it the HP LaserJet, and started selling the fast, quiet little printers to businesses for \$3500 each. Eventually, several scores of companies were to do likewise, customizing their own particular laser printer around the Canon engine.

To this day, laser printer manufacturers have continued to follow the pattern set by Canon and HP. A relatively small number of Japanese firms create the laser printer engines. Canon and Ricoh are the leaders; others include Kyocera, Kentek, and Epson. American and Japanese companies then enhance these engines with their own controller designs--companies such as Apple (LaserWriter family), QMS (KISS, SmartWriter, PS 800 and 800+, PS Jet and PS Jet+), Hewlett-Packard (LaserJet family), and AST (TurboLaser).

Since the engine is the physical mechanism of the printer, it affects such factors as print quality, durability, paper handling, and cost of replaceables such as toner. Since the controller is the brain of the printer, it controls such factors as availability of fonts and graphics capabilities. In general, most of the important matters to be concerned about are the controller's domain, since most of the printer engines (with some notable exceptions) are capable of competent printing and paper handling.

A number of criteria set them apart, including print quality (crispness of characters, quality of gray shades, blackness of blacks), paper handling, speed,

availability of fonts, graphics capabilities, compatibility with typesetting machines, and quality of graphics.

Among laser printer engines, the most basic difference is whether the printer uses write-black technology (Canon LBP-CX and LBP-SX, Kyocera) or write-white (Ricoh 4080 and Xerox 4045) marking technology. In a write-black engine, the portions of the drum marked by the laser are identical to the areas of black produced on the page. In a write-white engine, a reverse-imaging technique is used in which the portions of the drum marked by the laser are identical to the areas of white produced on the page. Write-black engines produce round pixels and are better at printing fine lines and serifs. Write-white engines produce diamond-shaped pixels and have trouble with fine lines and serifs; to compensate, write-white printers need specially designed fonts which have more pixels on serifs.

### Canon LBP-CX Engine

A year ago, the vast majority of laser printers were based on the Canon LBP-CX, the original engine sold to other manufacturers by Canon. It is used in the HP LaserJet, HP LaserJet Plus, HP LaserJet 500 Plus, Apple LaserWriter, Apple LaserWriter Plus, Cordata LP-300, QMS PS 800, QMS PS 800+, and many others. The LBP-CX has proved to be highly reliable and capable of crisp, clean output. The engine had some annoying drawbacks, notably small input and output

paper trays and blacks that weren't quite black.

### Ricoh 4080 Engine

These days a variety of printer engines are available, many designed to overcome some of the drawbacks of the LBP-CX. A competitor is the Ricoh 4080 engine, a heavy-duty beast used in the AST TurboLaser, the Texas Instruments OmniLaser, the Quadram Quadlaser, the OASYS LaserPro, and others. It's bigger and designed for longer service than the Canon LBP-CX. It also has larger paper trays and black areas are a true black, rather than the mottled and streaked black produced by the LBP-CX. The 4080 has two drawbacks. One is that it uses write-white printing technology, a departure from the write-black technology featured in the LBP-CX. In write-white printers, those areas of the light-sensitive printer drum that are not "spotted" by the laser beam attract toner and consequently are printed; in write-black printers, those areas of the drum that are spotted by the beam are printed.

In theory, it shouldn't matter whether a printer uses write-black or write-white technology. In practice, however, the write-black technology used by the LBP-CX engine seems to do a better job of producing fine lines and serifs (the tiny embellishments at the tips of characters). In addition, the output of some printers that use the Ricoh engine shows discernible clouds of stray toner, especially around boldface type.

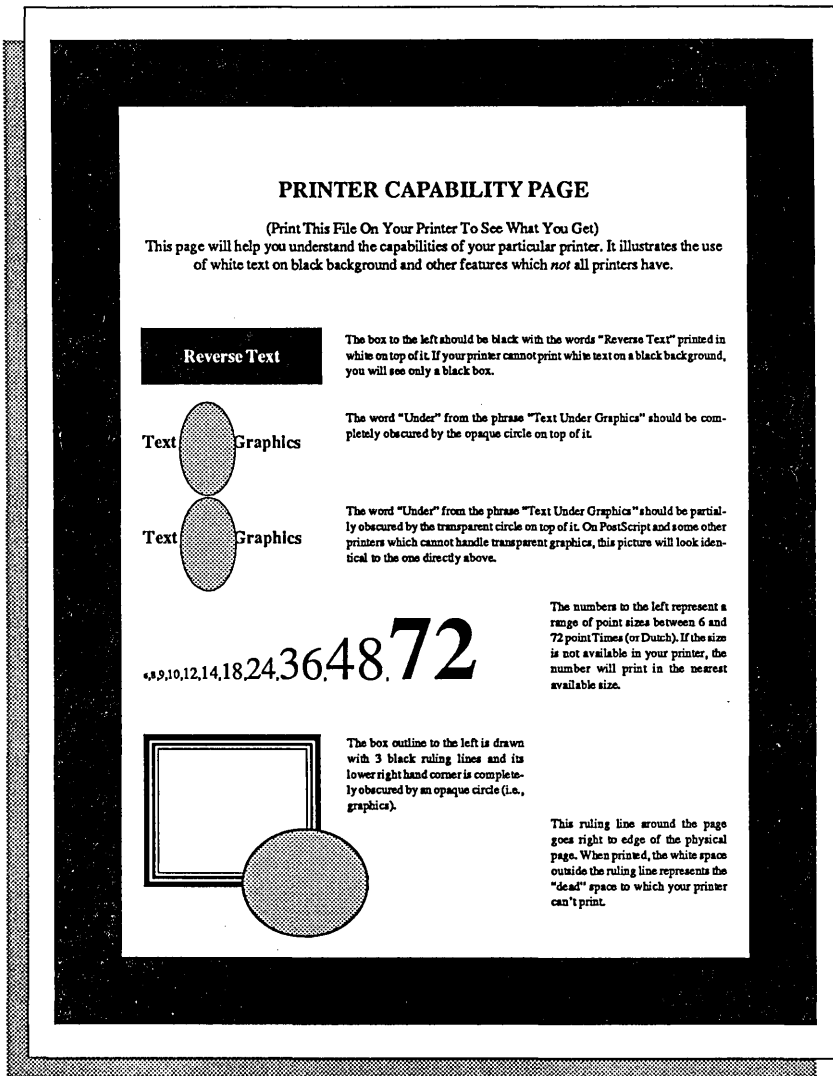


Figure 1: This is the printer capabilities test provided with Ventura. To use it, you load the CAPABIL.CHP from the \TYPESET subdirectory. Printing out this page on your printer shows you what the boundaries of the imaging area are, what sizes of fonts are available, whether your printer can handle transparent graphics, whether it can print reversed type, and whether it can print opaque shaded graphics on top of ruling lines of varying thicknesses.

## Kyocera Engine

Besides the Canon LBP-CX and the Ricoh 4080, several newer printer engines have appeared that are worthy of note. One is the Kyocera engine, which is used in Kyocera's own laser printers as well those printers sold by Mannesman Tally. It has excellent printing quality, paper handling, and durability. Toner is added separately from the belt and hence is not quite as convenient (or as neat and tidy) as the all-in-one cartridges used by the HP LaserJet family and other Canon-engine printers.

## Ricoh 1060 Engine

A second new engine is the Ricoh 1060 engine, used in the Epson CQ-3500, the Okidata Laserline 6, the Epson GQ-3500 and the Ricoh PC Laser 6000. Print quality of the Ricoh 1060 is excellent, with crisp serifs and black blacks. Printers that use the new Ricoh engine weigh only about 36 pounds, compared to 71 pounds for printers that use the Canon LBP-CX. Compared to the 8 page per minute rating of most laser printers on the market, the Ricoh 1060 is capable of six pages per minute.

## Canon LBP-SX Engine

A third new engine is the Canon LBP-SX, a major redesign of the LBP-CX. The first printer to use this engine is the HP LaserJet series II, but more manufacturers are expected to adopt the engine in the near future. Like the LBP-CX, the

LBP-SX has excellent print quality, and like the CX has all its replaceable supplies, including toner, in a single convenient cartridge. The new cartridge lasts for 4000 copies, compared to the 3000 copies of the old cartridge. Print quality is improved over the LBP-CX: the new engine retains the former one's crisp handling of serifs and fine lines, but now prints blacks that are truly black. An important feature is a toner intensity control, which lets you adjust the darkness of type to your liking. At 50 pounds, the LBP-SX is 30 percent lighter than the LBP-CX. However, paper trays are larger and paper emerges in the correct order (i.e. face down).

## Blacker Blacks?

Advertisement after advertisement emphasizes the ability of this printer or that one to print "blacker blacks." As is well known, the printing of the first low-cost laser engine, the Canon LBP-CX, was too light for most people's liking, and subsequent laser printer designs have all compensated for the problem.

However, perhaps more important than whether a printer can print true black is whether the printer provides a way of controlling the print intensity. This turns out to be extremely important if you are producing master copies on your laser printer that will be reproduced on a photocopying machine or at a print shop. As a general rule, master copies should be as light as possible without beginning to fade. That's because all reproduction methods tend to darken type.

Type that looks acceptable on the master tends to become excessively dark after reproduction.

Moral: When you buy a laser printer, check to see that it has an intensity control.

## 400 and 600 DPI Printers

While 300 dpi has become the de facto standard for laser printers, there is no reason that desktop laser printers should not graduate toward higher resolutions. The resolution of most laser printers is 300 dots per inch, which many people feel is slightly too coarse for replacing actual typeset output in most situations. On the other hand, printing at 1200 dpi, the low end of phototypesetting, is far more expensive. Some sort of technology is needed to bridge the gap between 300-dpi laser printing and 1200 dpi phototypesetting. That technology is now appearing in commercial products.

Three such high-resolution laser printers are the Compugraphic laser printer (400 dpi PostScript), the Varityper laser printer (600 dpi PostScript), and the Printware laser printer (600 by 1200 dpi, LaserJet Plus emulation and PostScript clone board). These machines are all priced at \$18,000 or more and are rated at up to 10 pages per minute. The Compugraphic and the Varityper sport the Atlas PostScript controller, which is faster than the PostScript controllers used by the Apple LaserWriter and other 300-dpi PostScript laser printers.

Raising the resolution to 600 dpi quadruples the number of dots per square

inch, with a corresponding improvement in the clarity of type and illustrations.

## RIPs and PDLs

The laser printer controller is the “brains” of the printer, the part that endows the printer with its ability to generate graphics and characters. It is also known as the raster image processor (RIP). In most cases, the RIP is located inside the printer itself. The AST Turbolaser, the Cordata laser printer, the IBM Personal Pageprinter, and some others locate their RIPs on circuit boards within the computer.

The capabilities of printer RIPs vary widely. As a result, some laser printers are capable of printing only one or two monospaced fonts and have no graphics capabilities, while others can print fonts of virtually any style or size as well as graphics of any sort. The difference is in the software used by the RIP, which is referred to as the page description language (PDL).

Ventura works with virtually all the page description languages on the market, including Adobe’s PostScript, HP’s Printer Command Language or PCL, and Xerox’s InterPress. However, the capabilities of Ventura will vary, depending on which page description language your printer is running. Let’s now look at each page description language in turn.

## PostScript

PostScript is by far the most important page description language. It was developed by Adobe Systems, which in turn sells other companies the rights to incorporate PostScript into their laser printers and typesetters. So far, the list of PostScript printers includes the Apple LaserWriter and LaserWriter Plus, the QMS PS 800 and PS 800+, the PS Jet and PS Jet Plus, the IBM Personal Pageprinter, the Texas Instruments OmniLaser, the 400 dpi Compugraphic laser printer, the 1250-dpi Allied Linotronic 100PS phototypesetter, the 2400-dpi Allied Linotronic 300PS typesetter, and many others.

The first notable feature of PostScript is that it allows device independence; that is, files created for any one of the printers listed above can be printed on any other (with certain exceptions related to differences in the amount of RAM built into the printers).

The second notable feature of PostScript is that it uses fonts generated from outlines. This method is vastly superior to the alternative, which is to store the actual pattern of dots in each font as a bit map. With PostScript's outline method, fonts of any size can be generated from a single outline, and only one master outline file needs to be stored for each typeface.

As this book was being written, the large library of high-quality PostScript fonts was being converted into IBM PC format by Adobe Systems. The Adobe collection includes scores of commercial typefaces licensed from the ITC, Mergen-

thaler, Stempel, and Haas type collections.

PostScript makes it possible to apply various graphic effects to type, including rotation, stretching, filling with patterns, and distorting. However, Ventura does not provide commands to exploit these talents. Similarly, PostScript's extraordinary abilities with graphics are not tapped by Ventura. The one exception is the Encapsulated PostScript option included in Version 1.1 of Ventura, which allows special effects written in PostScript to be incorporated into documents. At this writing, the only way to create the necessary Encapsulated PostScript code, aside from programming it yourself, is to create graphics on a Macintosh using high-level graphics programs such as Adobe Illustrator and Cricket Draw, and then transfer them to a PC. In the near future, however, PC programs will begin to support encapsulated PostScript, and at that point the graphics capabilities of PostScript printers in conjunction with Ventura will increase dramatically. For more information on the encapsulated PostScript format, see Chapter 15, "Encapsulated PostScript."

## InterPress

Developed by Xerox Corporation, InterPress is the page description language used by some versions of the Xerox 2700 and 9700 printers, which are supported by Ventura. The language exists in three implementations: the Commercial Set, the Publications Set, and the Professional Graphics Set. These differ in the sophis-



tication of their graphics capabilities. The Commercial Set is the implementation supported by Ventura. It lacks such sophisticated features as rotation of text and graphics, boundary clipping, and curved lines—but these features are not needed to support Ventura’s capabilities anyway.

Although InterPress uses the same basic imaging model as PostScript, the two have found their way into different markets. PostScript is supported by a larger number of vendors and is prevalent on low-end 8 page per minute laser printers. InterPress’s forte is very high speed printing, such as that provided by the 120 ppm Xerox 9700. To support such high-speed printing, the language includes a variety of special features, such as encoding of bit maps.

## PCL

PCL, or Printer Command Language, is Hewlett-Packard’s designation for the set of internal commands used by the LaserJet and the LaserJet Plus. Because of the popularity of the LaserJet family of printers, numerous other printer manufacturers have introduced printers that emulated the LaserJet or the LaserJet Plus.

Among these PCL printers, or “LaserJet clones,” are the Kyocera FT1010, the Mannesman Tally MT910, the Qume LaserTEN, the Quadram Quadlaser, the Genicom, the Epson, and the OASYS LaserPro. In addition, the newest generation of PostScript printers, including the PS Jet Plus and the QMS

PS 800+, have a LaserJet emulation option.

Having selected Ventura’s LaserJet Plus 300-dpi or 150-dpi driver, you can substitute a LaserJet Plus clone for a LaserJet Plus or a LaserJet series II when installing Ventura. Because these PCL printers are not certified by Hewlett-Packard, some differences tend to crop up from time to time. Generally speaking, the compatibles have no problem in handling fonts in HP format, including the fonts supplied with Ventura. As long as your documents are text-only, using a LaserJet Plus clone is a safe bet.

With graphics, clones frequently show subtle differences from the LaserJet Plus. These include streaking in scanned graphics or clip art, anomalous vertical lines, difficulties producing all eight shades of gray, and problems producing graphics in landscape orientation (i.e. across the length of the paper).

One big advantage of the LaserJet Plus clones is that they typically come configured with more RAM than the standard LaserJet Plus or LaserJet Series II.

## Ventura’s Internal RIP

A number of printers that work quite well with Ventura—including the AST TurboLaser, the Cordata laser printer, and printers retrofitted with the J Laser board—don’t use PostScript, InterPress, or PCL. How does Ventura manage to work with all these printers? The answer is that built into Ventura itself is a raster image processor, in effect a full-blown

laser printer controller. Ventura's PDL builds a bit map of each page and then transmits it directly to the RAM of the printer.

Since a full-page bit map requires one megabyte of RAM, this means that Ventura's RIP must generate and transmit to the printer a full megabyte of data for every page that is printed. If that data had to be sent over a normal serial or parallel connection it would simply take too long to be practical. Therefore, Ventura's RIP is only used in conjunction with laser printers whose controllers are located within the computer itself, as is the case with the AST, the Cordata, and the JLASER.

## Typesetter Proofing

Since Ventura drives typesetting machines, it is possible to use a laser printer for proofing a document before having it typeset on a PostScript phototypesetter such as the Linotronic 300. For example, you can use the program with the JLASER board but select the PostScript width table. In the Options menu, select Set Printer Info. Click on the JLASER option, then click on Load Different Font Width and select PostScript. The resulting printouts will be accurate in showing the correct line endings and word breaks that will ultimately be printed on the typesetter. Thus, you can proof your copy inexpensively on a laser printer before sending the document out for more costly typesetting.

## Speed

Speed is a major issue when using a program like Ventura. You want to be working on your document, not sipping coffee while the printer takes its time printing a page. The time it takes to print a document can vary tremendously from printer to printer. A page that requires 4 minutes on one printer may take 20 seconds on another. Two factors determine the speed of a printer.

The biggest factor affecting the speed of printing is the transmission channel between computer and printer. Many printers, such as the HP LaserJet and the Apple LaserWriter, are connected to the printer via a serial cable operating at 9600 baud. That may seem fast when you compare it to the typical 300 baud of older modems or 1200 to 2400 baud of newer modems. But actually, 9600 baud is terribly sluggish for handling the type of pages that Ventura produces. This is the slowest kind of printing option. Much faster is a parallel channel, an option with the LaserJet Plus and the Xerox 4045.

Faster yet are printers that place the RIP in the computer and connect it to the printer via an ultra-high speed interface. These include the AST TurboLASER, the Cordata, and printers retrofitted with the JLASER board or the LaserMaster controller.

The second factor affecting printer speed is the efficiency of the RIP and the type of page description language used by the printer. PostScript printers tend to be somewhat slower than other laser printers; PostScript typesetting machines are infamous for their sluggishness. The

situation for PostScript is gradually improving, however. The new Atlas controller used by some PostScript equipment is notably faster than the previous generation. In addition, it should be noted that Ventura's own PostScript driver has been souped up in Version 1.1 and is now rated at 30 percent faster than before.

Currently, the fastest option for printing with Ventura appears to be the LaserMaster controller, followed by the JLASER board and the AST TurboLaser. For an unbeatable combination of speed and quality, install a JLASER board or LaserMaster controller in a PC and connect it with an Apple LaserWriter Plus, QMS PS 800+, or PS Jet Plus. Then install Ventura for both the JLASER (or LaserMaster) and the PostScript printer. When you select the JLASER option, you'll have speed; when you select the PostScript printer you'll have a wide selection of fonts.

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## Monitors

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As ecumenical with monitors as it is with laser printers, Ventura gives you options ranging from the the 80 by 35 dpi resolution of the IBM Color Graphics Adapter (CGA) standard up to the 150 by 150 dpi resolution of the most expensive full-page monitors. Prices also vary widely, from a mere \$200 or so for a Hercules-clone graphics board and an accompanying amber monitor, to \$2500 or more for a 19-inch full-page monitor such as the

Viking I. At the low end, some standards exist that make it simple to mix and match equipment. At the high end, shopping and installation is complicated due to the absence of standards and the fact that such monitors tend to push personal computers to the limits of their performance.

In addition to the general information here on monitors, you can find information on specific monitors in the Product Guide at the end of the book.

### Monitor Lingo and Standards

Every monitor comes in two parts: the monitor itself and the adapter (also called the controller), a board in the computer that is connected via cable to the monitor. Monitors are generally classified according to their resolution, which is measured in horizontal pixels by vertical pixels.

Virtually every kind of monitor used with the IBM PC can be used with Ventura, except the Monochrome Display Adapter (MDA), the text-only "green screen" commonly used for word processing. The lowest resolution is provided by the Color Graphics Adapter (CGA). Its resolution is 640 by 240 pixels, or about 80 by 35 pixels per square inch.

Surprisingly, the resolution of Ventura on a CGA, though somewhat coarse, is still adequate for some types of work. I used Ventura on a CGA for several months and found the resolution acceptable even for creating complex layouts such as forms and brochures. The big drawback of using Ventura in CGA mode

is that you can't read most text in Normal view, which is possible in EGA and HGC (Hercules Graphics Card). Another annoying problem with the CGA is that when you attempt to select and move a small frame or a small box text graphic, you may inadvertently change its size. Otherwise, the CGA works well: when you need to read text, you merely switch into Expanded view.

One step above the CGA on the scale of resolution are the Enhanced Graphics Adapter (EGA) and the Hercules Graphics Card (HGC). The EGA provides a resolution of 640 by 350 pixels, or about 80 by 51 pixels per inch. The resolution of the Hercules Graphics Card is slightly better: 720 by 348 pixels, or about 90 by 51 pixels per inch.

Using Ventura with an EGA or a HGC board is much more comfortable than using it with a CGA board. With the EGA or the HGC, most text in normal view, ruling lines and frame boundaries are crisper, and it's much easier to move or stretch frames and boxes.

The advantage of the Hercules card over the EGA is that it can be used with a standard IBM Monochrome Monitor or an inexpensive monochrome monitor such as a Samsung, priced at around \$100. In addition, many makers of IBM XT or AT clones provide a Hercules clone board as standard equipment on their machines.

## Large-Screen Monitors

The big drawback of using standard monitors with Ventura is that you have

only a portion of your page on the screen at once. As a result, when you're working on a page, you suffer the annoyance of making lots of mouse trips over to the scroll bar to move the page up and down. Ironically, as explained below, large-screen monitors won't necessarily free you entirely of those trips to the scroll bar. But the ability to work with larger portions of the page at once and to read very small type is definitely a boon to productivity.

Large-screen monitors divide into two strata. The lower tier, which includes the Wyse, the Xerox, and the Genius, are priced as low as \$700 (the street price of the Wyse, which is also sold under the Amdek label). These monitors are smaller and do not let you see the full page in Normal view, so you still do quite a bit of scrolling.

The higher tier cost in excess of \$2000. Most of these monitors, including the Viking I, the Sigma LaserView, and the ConoVision 2800, use the 14-inch wide by 11-inch tall screen made by Moniterm Corporation and also used in workstations such as the Apollo and the Sun. Frequently, these monitors are called "19-inch monitors," a reference to the 19 inch diagonal measurement of the Moniterm screen.

19-inch monitors have drawn a tremendous amount of flak in the computer press recently, mainly because companies have tended to introduce models before all the software drivers were completely polished. It's important to keep in mind that what's frequently being criticized is faulty software rather than flawed hardware. For example, an article in *PC*

*World* severely criticized the Viking I monitor. However, after that article was written, Moniterm released new Ventura drivers and a consequently another magazine, *Publish!* singled out the Viking I as “the clear winner” among the five PC-compatible monitors it tested. This book was laid out on a Viking I monitor, and I can attest that using the monitor made the process of laying out pages at least twice as fast as working on a normal Hercules display. In addition, the Viking I performed flawlessly in emulating my word processor in normal monochrome mode and in emulating a Hercules display when I used PC Paintbrush Plus.

While I worked on this book with the Viking I, occasionally I would visit another writer who was attempting to break in a Sigma LaserView. Like the initial software for the Viking I, the LaserView’s drivers and screen fonts at first were substandard. But eventually, a new disk arrived and my friend’s complaints subsided into purrs of contentment.

My bottom-line opinion on large-screen monitors is that despite the high prices, they are a tremendous value because of how much faster you can work and how much less tired you are at the end of a work session. At the same time, because of the various issues described below (especially speed and quality of screen fonts) you should never buy one of these products until you have a chance to really try it out under realistic conditions (i.e. with a document that you typically work with). For specific product information on large-screen monitors, refer to Appendix A, “Product Information.” The following are some general factors

that you should consider as you check out systems:

**SCREEN FONTS:** It’s essential that your monitor have screen fonts in the standard sizes you use for type, such as 10 and 12 points. Without screen fonts, Ventura has to draw each character individually. Not only does this result in type that is difficult to read, but more seriously it drags down the speed of the display dramatically. Don’t get involved with any monitor that doesn’t have a full set of screen fonts.

**ASPECT RATIO OF PIXELS:** Some monitors have square pixels, others rectangular ones. For desktop publishing, square pixels are definitely preferable, since laser printers and typesetting machines universally use square pixels. If your monitor doesn’t have square pixels, your image of the final page will be distorted—either stretched vertically or horizontally.

**SIZE OF DISPLAY:** The reason large-screen monitors are known as “full page displays” is that all of them can display an entire page of text—66 lines—when used with a word processing program. The benefit here is obvious: if you can work with an entire page at a time, you don’t have to scroll up and down the page. Most of the “full page” monitors don’t actually let you see an entire page when used with Ventura in Ventura’s Normal View mode. For example, the Xerox monitor cuts off about an inch on the side of the page; the Wyse cuts off about an inch at the bottom of the page.

**FLICKER:** Large screen monitors have to display an immense number of pixels; to do so, some use a technique

called "interlacing," which means that every other scan line is refreshed during each cycle. Interlacing is apt to produce annoying flicker, though noninterlaced displays may also produce flicker if they don't refresh the screen often enough.

**HEAT AND POWER:** Large screen monitors and the boards that drive them draw lots of power and tend to produce lots of heat. If your computer is already running a bit on the hot side, you may need to install a larger power supply to handle the new monitor.

**SOFTWARE COMPATIBILITY:** Some monitors, such as the Wyse and the Genius, have been around long enough so that drivers now exist for many popular programs. With monitors that have been introduced more recently, you may find it difficult to use your favorite graphics program. Note that it's not enough to verify that your software will work with the monitor. You'll also need to find out whether the quality of the display is adequate. For example, when some monitors are emulating the CGA or EGA standards, they squeeze the display area into the upper left portion of the screen, making text excessively small. Make sure that you're buying something you can use with your software.

**PRIMARY VERSUS SECONDARY DISPLAY:** Some full-page monitors are designed to be used as the only monitor with your system. These are called "primary displays." Other monitors, called "secondary displays," can only be used if a standard graphics board (usually an EGA board) is installed in your computer as well. Make sure you know what kind of monitor you are getting.

**EASE OF INSTALLATION:** Some monitors require a substantial level of technical expertise to install and operate effectively. For example, if you have Above Board memory and are installing the Viking I, you may have to adjust the hexadecimal codes of the Above Board memory addresses to avoid a conflict between that memory and the Viking I controller. While the installation manuals for some monitors are quite good, most are poorly written and excessively technical.

**CONTRAST:** Some monitors allow contrast to be adjusted, a desirable feature in dealing with various lighting conditions.

**CABLING:** Surprisingly, some large screen monitors come with relatively short cords, a real drawback if you want to use the monitor for teaching purposes or move it aside so that you can run another monitor.

**COMPUTER COMPATIBILITY:** If you are using an IBM compatible or clone, you can generally expect to run into some compatibility difficulties when you attempt to install a full-page monitor. Make sure the vendor has tested the monitor with the type of computer you intend to use it with.

**EDGE EFFECTS:** Some monitors, such as the Genius, run the image right up to the edge of the screen, which can cause some distortion at corners and edges and make it difficult to work on those parts of a page. Other monitors, such as the Viking I, leave a roomy margin surrounding the active area of the screen and hence avoid such distortion.

**ORIENTATION:** For creating documents, it makes sense to have a monitor

that is taller than it is wide (since that's the shape of the page itself). Some monitors, including the Xerox and the Genius, are of the tall variety but may be slightly too thin, since they cut off some of the right edge of the page in Normal view. The 19-inch Moniterm tube would be excellent if turned sideways so that it is taller than wide—and that is precisely what Moniterm has announced plans to do in future versions of its Viking I.

**SPEED CONSIDERATIONS AND GRAPHICS COPROCESSORS:** Although a large-screen monitor is supposed to make you more productive, some put such a large computational burden on the computer's CPU that they slow down Ventura's operations to an unacceptable degree. The answer is a new generation of graphics coprocessor chips, introduced by Intel, Texas Instruments, Hitachi, and others. At this point the Viking I is the only monitor on the market that has any track record using such a chip (the Hitachi 63484), but the situation is changing fast. Whatever you do, don't burden a normal XT with a large-screen monitor that lacks a coprocessor.

**USE WITH A MOUSE:** Some monitors provide drivers for a variety of mice; others support only one mouse, a factor that can be a major nuisance if you don't happen to have that mouse. With some mice, such as older versions of the Microsoft Mouse, when you switch over to a large-screen scanner, you may find that the speed of your mouse has become a major bottleneck. The reason for that is that the mouse is preprogrammed with a "sensitivity factor" that causes the cursor to move a certain number of pixels on the

screen for every inch that the mouse itself travels on the desktop. With the smaller pixels of the large-screen monitor, it make take more rolling on the table to get the mouse to the menu line and back. The answer to this problem is to speed up the mouse by altering the sensitivity factor. Your mouse manual should describe the procedure for making that change.

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## Scanners

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The purpose of a scanner is to convert a two or three dimensional image into a digital form that can be processed by computer software. Scanners can be classified into two varieties, optical and video, depending on the method they use to convert a continuous image into a digital form. In the optical method, a bright light is scanned back and forth across a page, recording the intensity of the image at each point in a fine grid. Such scanners may provide a flat bed on which you place the image to be digitized; others require you to feed the image through the machine.

Video scanners work in conjunction with a video camera, processing the video signal into a digital one. The advantage of video scanners is that they can be used to process three-dimensional images. The advantage of optical scanners is that they are faster and more precise.

## Scanning Software

Some scanners are used with special controlling software provided by the scanner manufacturer. Generally with Ventura, however, you use a scanner in conjunction with a graphics program such as PC Paintbrush Plus, Publisher's Paintbrush, or Halo DPE.

With these programs the scanner is controlled using commands in a menu. For example, to scan an image from PC Paintbrush Plus, you select the Scan option from the Page menu. This brings up a dialog box that lets you specify brightness, contrast, scanning mode, type of dithering, and resolution. Once you have selected the options you wish to use, you select OK. The scanner then scans the picture and loads it automatically into PC Paintbrush Plus. With either of these programs there is an option on the menu that allows you to select the area of the page you want scanned. This pre-cropping is extremely useful, since it allows you to save storage space on your hard disk by saving less than the full 8.5 by 11 inch area. You also can specify whether you are scanning line art or images, and select a dithering pattern.

After you have used Paintbrush to scan the image, you can use Paintbrush's graphics tools to clean up stray pixels or otherwise alter the image. Then you can save it as a PCX file, a format recognized by Ventura.

At this point the scanned image has been converted into a digital image that can be altered using any of PC Paintbrush Plus's erasing or drawing tools. You can then save the image as a PCX file, a for-

mat recognized by Ventura. Other formats that can be used to store scanned images are the GEM IMG format and the MacPaint format (for images scanned via a Macintosh).

## Synthetic Halftones and Dithering

Scanners work in two modes, one for black and white images, the other for images with intermediate shading. Images that are black and white, such as graphic symbols and logos, hold up well under the scanning and printing process. The task of recording and then reproducing images that contain intermediate shading is a much more difficult one.

The trick is for the scanner and the laser printer to preserve the illusion of intermediate shades using only black and white dots. Various techniques are used for doing this, and they are referred to as synthetic halftones or dithering. All such techniques create various types of patterns to simulate gray.

For example, in spiral dithering, dots are printed in an even grid on the page. The darker the gray at a given point in the gray, the larger the dot is allowed to be at that point (i.e. the more laser printer spots are joined together to create the appearance of larger dots). In effect, the purpose of spiral dithering is to create a twofold illusion. The first illusion is that dots are a different size, depending on the shade of gray being rendered. (In reality, the dots that can be printed by a 300 dpi laser printer are uniform in size; to create the illusion of different sized dots, vary-



ing numbers of dots are fused together). The second illusion is that different shades of gray are being printed. (When you look more closely, you can see that the illusion is created by the fact that dots differ in size, depending on the shade of gray being simulated.)

## Scanner Limitations

In conjunction with a 300 dpi laser printer, the quality of halftones (i.e. photographs and other images containing intermediate shades) rendered by digital scanners is quite poor. The reason is that the laser printer simply does not have enough dots at its disposal to simulate the subtle gradation of dots necessary for halftones of the type used by newspapers and magazines. The traditional halftone method—photographing a continuous tone image through a screen—used screens of from 65 to 150 dots per inch. Those numbers may seem coarse compared to the 300 dpi of the laser printer; however, when you consider that the dots could vary continuously in size, that resolution was quite adequate to produce the necessary illusion.

In contrast, no matter what software, scanner, and laser printer you use, continuous images digitized by a scanner and printed on a laser printer will invariably have a “computer-generated” look. That’s alright for some types of publications, and may even be desirable as a special effect; however, in most circumstances it’s best to forgo the new technology in the interest of quality. The alternative is to create a block marking where the

image is to be placed, take the photograph to a graphic arts shop, and have a halftone made.

## CHAPTER SIX



# *Managing Files*

IF YOU'RE LIKE most people, your first exposure to personal computing was through word processing. When you use a word processing program, keeping track of files is simple, since each document you create is stored in exactly one file. When you need to send a document in the mail or over a modem, you merely transfer that file onto a floppy disk using the DOS COPY command.

With Ventura, file management is no longer so simple. Any document you create will comprise at least several files, and in many cases a dozen or more. Some of these are the text and graphics files you created with other programs and now are merging together with Ventura. Others are files generated by Ventura itself.

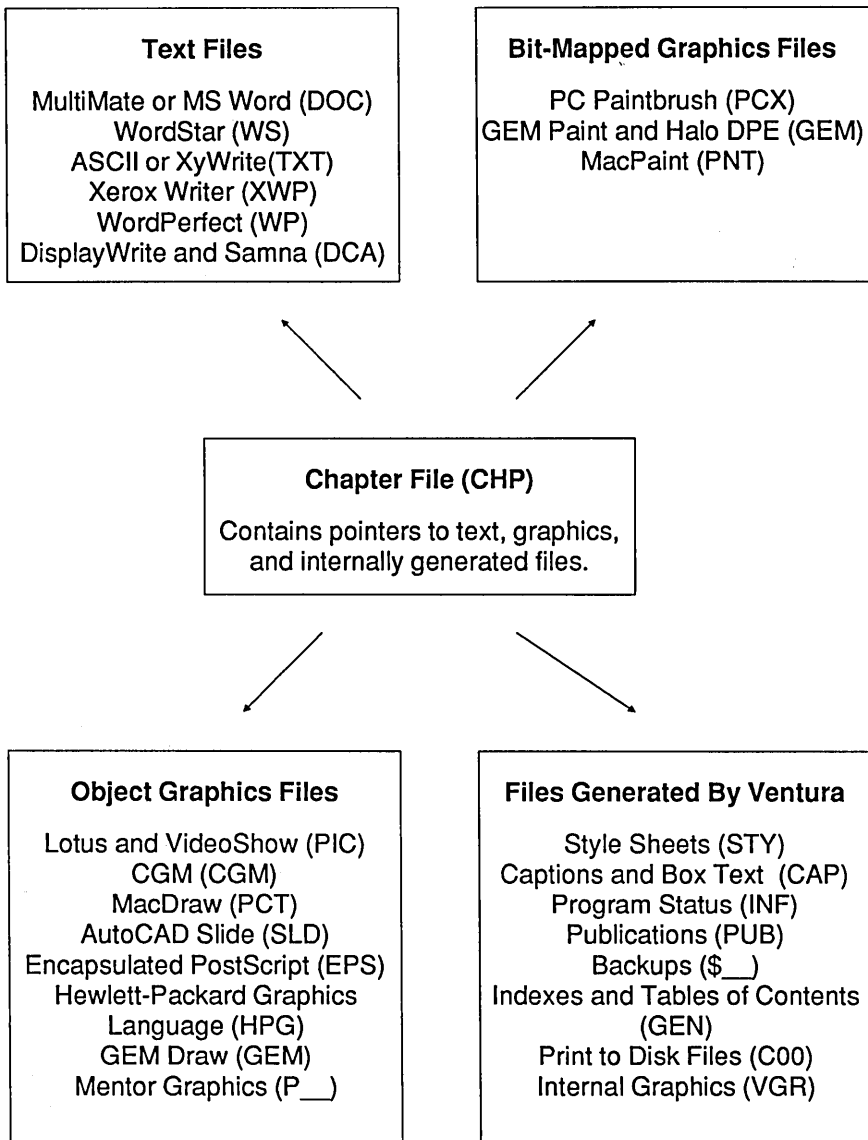
### **A Document Is a Family of Files**

It's easy—too easy, perhaps—to generate one document after another and never pay any particular attention to the various seemingly obscure files that Ventura

generates as you go about your work. Eventually, however, you will have to learn what those files are and deal with them directly. Here are two examples of when that might be necessary:

- If storage becomes tight on your hard disk, you'll need to start removing some of the documents stored there, which means removing the family of files associated with each document. One of the notable oversights in Ventura's design is that the program provides no easy way to delete a chapter and all its files. You'll have to do it using DOS commands.
- If you begin working with long documents or documents that include multiple graphics, you'll probably run into difficulty at some point getting a chapter to load. In that situation, a potential solution (described in detail in the tips at the end of this chapter) is to rename or move certain files associated with the chapter.

The first thing to note in becoming proficient at managing files is that every



*Figure 1: This schematic shows how the chapter file knits together other types of files, including text files, graphics files, and files generated by Ventura itself.*

document is a family of files. At the head of the family is the chapter file (CHP), which contains pointers to the location and contents of the other files. The categories and extensions of the other files shepherded by the chapter file are shown in Figure 1.

## The Chapter File

Having taken this summary tour of Ventura's user interface, let's take a step or two back and consider a bit more abstractly how Ventura organizes the information it needs to generate a document.

The key concept underlying Ventura's design is that a desktop publishing program should act as a hub for other programs, rather than being an all-powerful megaprogram. Hence Ventura does not replace existing tools such as word processors and graphic programs; instead, it provides avenues for you to import existing text files and pictures into the program.

This "don't reinvent the wheel" philosophy is key to understanding the function of Ventura's chapter and style sheet files.

The job of the chapter file is to act as master of ceremonies for the document. It contains pointers that keep track of the following:

- The text and graphics files that make up the contents of a document.
- The style sheet file in which Ventura stores the names of all the tags and the formatting information associated with each tag.

- The files generated by Ventura itself to store the contents of captions and headers, internally generated graphics, and other internal information.

Because Ventura's chapter file merely contains pointers to other files, rather than absorbing them into one enormous master program, you can continue to edit and change those files even after you have merged them to create a Ventura document. No matter how much you scale or distort a graphic within the Ventura document, the graphics file itself remains completely unaltered. Text files are altered somewhat, in that Ventura inserts the names of tags it uses to format them as well as other sorts of formatting information to indicate character attributes such as boldface. Generally speaking, the changes Ventura makes in original text files do not get in the way of reusing the same files when you have to revise the document—a real boon if you are creating manuals that need to be periodically updated.

Another real benefit of Ventura's use of the chapter file as the hub is that the text, graphics, and style sheet files used for a document need not all be located in a single subdirectory on the hard disk. The chapter file keeps track of the other files not only by name but by location. Thus, you might use one picture for several different documents, or apply the same style sheet to two different chapters.

## The Style Sheet File

Style sheet files, identifiable by their STY extension, are devoted mainly to storing the attributes of tags. In addition to storing tag specifications, the style sheet file contains the page size and orientation, widow and orphan settings, autonumbering settings, footnote settings, and margin and column settings for the underlying page.

Each chapter uses one style sheet—you can't have more than one style sheet attached to a single chapter at a time, even if the chapter comprises several text files. On the other hand, you can switch style sheets after you have formatted a chapter.

## The VP.INF File

While the chapter and style sheet files are the two main files created by Ventura when you lay out a document, a third file should also be noted. It is the VP.INF file, which is located in the \Ventura subdirectory.

Have you noticed that Ventura always remembers what preferences you have for whether a ruler is shown on the screen, what subdirectory you last looked into to find a graphics file, or whether pictures are shown or hidden? Even if you quit the program and load it again, and choose a different chapter to work on, those settings will remain in force. Keeping track of the myriad of user-selectable options is the job of the INF file.

## The Pub File

Most documents consist of a single chapter. At times, however, you may want to group chapters together to take advantage of Ventura's multichapter capabilities (sequential numbering, indexing, automatic table of contents). In that case, you'll work with the Multichapter selection of the Options menu to create a Publication (PUB) file. Note that you don't have to create a publication file every time you generate a document with more than one chapter. You can simply print one chapter at a time. As long as you're not interested in automatic numbering, indexing, and table of contents generation, you'll have no need to create a publication file.

## Other Files

Here are some of the other files that Ventura automatically generates as it formats a document:

- Caption files (CAP extension). These store not only text entered into captions, but also headers, footers, empty frames, and text boxes.
- Backup files (\$\*\* extension). These files are automatically created by Ventura as you work on a chapter, and are useful for reconstructing your document if the system locks up or crashes.
- Generated files (GEN extension). These are text files created by Ventura when you use the program's

capability to generate an index or a caption.

- Print to Disk files (C00 extension). This type of file is created on your hard disk when you direct Ventura to print to a file rather than sending information directly to the printer. It allows you to create documents on a computer that lacks an attached printer. Later, you can print the file by typing

```
COPY filename.C00 LPT1:
```

- Ventura Graphics files (VGR extension). These store graphics that you create using Ventura's graphics tools.

## Pros and Cons

At this point it may already seem to you that Ventura's way of splitting documents up into numerous files is needlessly complicated. The obvious question is: Why not simply have all the parts of a document combined into one single document file?

That, in fact, is the method used by PageMaker and many other desktop publishing programs. From the standpoint of easily keeping track of things the method clearly has its merits. Ventura's scheme, however, has these advantages:

- It is one of the major factors accounting for the program's unrivaled speed, due to the fact that the computer can get in and out of small files much faster than large ones.
- It allows for files to be modified after they have been merged together

in a document. That way, you can make a small change in a drawing or chart at the eleventh hour, or continually update a manual even after you've laid it out. Trying managing stunts like that with PageMaker.

But while Ventura's family-style way of dealing with files has its distinct benefits, it also places a burden on you to organize your hard disk in such a way that all those files don't lead to utter chaos on your hard disk. We'll now turn, therefore, to a review of the tools at your disposal for handling files, and to some suggestions regarding an architecture for organizing those files on your hard disk.

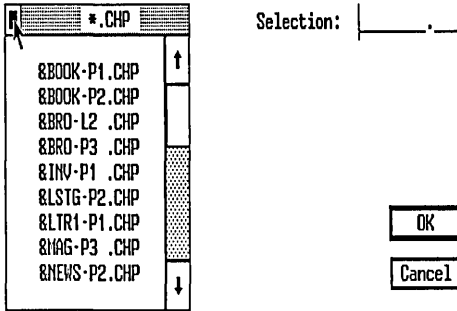
## Refresher on DOS

If you've avoided until now the chore of learning about how directories, paths, extensions, and filters work, you'll need to acquaint yourself with these terms as well as several DOS commands.

The DOS operating system provides a simple method for organizing computer files. At the highest level of organization are the floppy and hard disk drives used by your system, which are assigned letters, followed by a colon. Normally drives A and B are floppy disk drives. Drive C is normally a hard disk drive. Since DOS cannot handle drives larger than 20 Mb, a 40 Mb hard disk is typically partitioned into drive C and drive D. In addition, a block of RAM can be set up to appear to the system as a very fast drive. Such a drive is referred to as a "RAM drive" and is normally designated drive D or E.

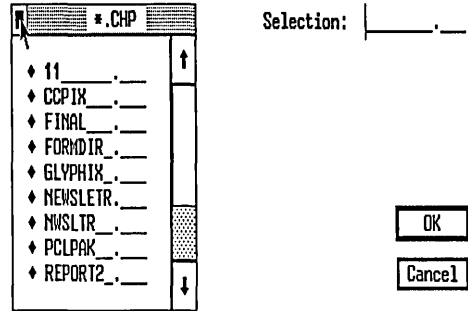
ITEM SELECTOR

Directory: D:\TYPESET\\*.CHP



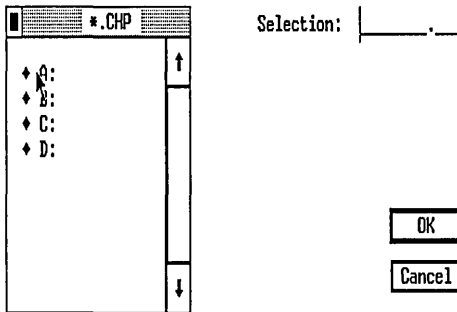
ITEM SELECTOR

Directory: D:\\*.CHP



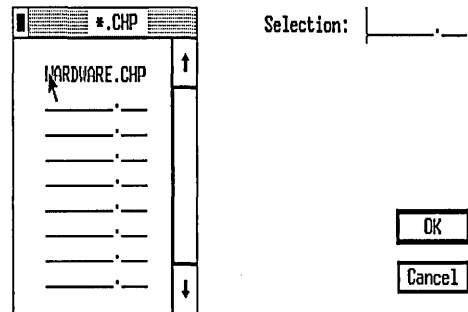
ITEM SELECTOR

Directory: D:\\*.CHP



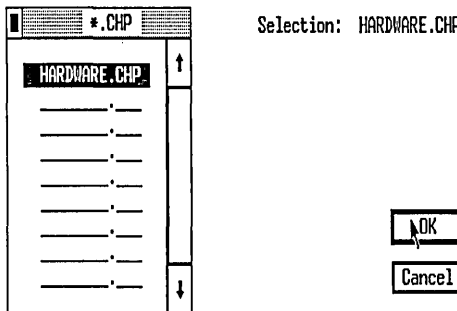
ITEM SELECTOR

Directory: A:\\*.CHP



ITEM SELECTOR

Directory: A:\\*.CHP



Figures 2A - 2E. This sequence shows the use of the Backup Button to change directories and select a file. Once the correct file is shown on the Selection line, you can select it by pressing OK. Alternatively, you can click twice while selecting or press Enter.

Each drive, such as C or D, may contain files and directories. Each directory may in turn contain additional directories or files. Any file can be described in terms of the subdirectory or subdirectories in which it is located, and this is known as the path to the file. Files are further identified by their names (up to eight characters) and an extension of three characters, which typically describes the type of program that created the file.

## Creating Directories

To create a new directory on drive C, let's say NEWDOCS, you type the following from the DOS prompt:

```
MD C:\NEWDPCS
```

You can also do this within Ventura via the DOS File Ops option in the Files menu. To create the NEWDOCS file from Ventura, execute the following steps:

- From the File menu, select the DOS File Ops option
- Backspace across the existing File Spec and type  
C:\NEWDPCS
- Select MAKE DIRECTORY.

Using a similar procedure, you could remove the directory. However, in order to remove the directory you must first delete all the files in the directory.

Once you have created a directory, you can create a subdirectory within that directory. To create the subdirectory C:\NEWDPCS\MARCH from the DOS prompt you type

```
MD C:\NEWDPCS\MARCH
```

Alternatively, you can use Ventura's File Ops option. Remember that you can't create the subdirectory C:\NEWDPCS\MARCH until you have created the directory C:\NEWDPCS.

## Paths and Filters

When you're using the DIR command in DOS to view the contents of a directory, you can tell the difference between files and subdirectories because files usually have three-letter extensions, whereas subdirectories are followed by the phrase DIR enclosed in angle brackets. When using Ventura dialog boxes to view the contents of a directory, subdirectories are recognizable because they are preceded by a diamond.

When searching for a file, the concepts of wildcard characters and filters come in handy. The asterisk (\*) is a wildcard that can be used to hold the place of either the file name or the extension. A filter is a description of a file containing a wildcard. By learning to use filters, you can learn to quickly find any type of file. For example, to see all the style sheet files (those with the STY extension) in the TYPESET directory, you can type the following from the DOS prompt:

```
DIR C:\TYPESET\*.STY
```

DOS responds by listing all the files with the STY extension.

## The Backup Button

Many DOS operations, especially searches for files using filters, can actu-



ally be conducted from within Ventura. Whenever you load a text file, a chapter, a style sheet, or an illustration, you can save a great deal of time if you learn to use Ventura's easy "stepladder" method of climbing up and down subdirectory hierarchies. The method, which can be used in any dialog box that contains a Directory line on top and a Selection line on the right, is shown in Figures 2A-2E.

Let's say you're looking for a chapter file (one with the CHP extension) but aren't sure where it is located on the hard disk. Do the following steps:

- From the File menu, select Open Chapter. Notice that Ventura automatically displays the \*.CHP filter on the Directory line.
- Place the cursor on the small black square, known as the Backup Button, in the corner of the scrolling list. As shown in Figures 2A-2E, each time you click on the Backup Button, you move one rung up the ladder; i.e., one level upward in the hierarchy of directories. After you click on it once or twice, the scrolling box will list the drives on your system—A, B, C, etc.

The diamond in front of the A, B, and C indicates that these are directories, not files. Now you can climb back down the directory hierarchy and see the contents of a particular drive.

- Select the drive on which you installed Ventura. In most cases that will be drive C.
- The scrolling box will now list all the directories in the C drive, as well

as all the files in the root directory of the C drive with the CHP extension.

- Select the TYPESET directory. The scroll bar now displays the list of chapter files in that directory.
- You can now select a chapter from that list. The name will appear in the Selection line at the right. You can choose that file by pressing Enter or selecting OK.

## Hands Off \TYPESET

When you install Ventura 1.1, two directories are automatically created on your hard disk: VENTURA and TYPESET. The former contains all the program files and fonts, the latter the sample chapter files and style sheets.

You'll find yourself frequently using the style sheets provided with the program, since it's generally easier to modify an existing style sheet than to create one from scratch for the specific sorts of documents you are formatting. Be careful, however, to always save a modified style sheet under a new name. Also, it's highly recommended that you save the modified style sheet in a directory other than TYPESET, as described below.

By renaming style sheets before you save them, you'll preserve the original style sheets for future use. If, however, you have already modified one of those style sheets and wish to restore the original version to the TYPESET directory, you can copy it from the Examples disk (#2).

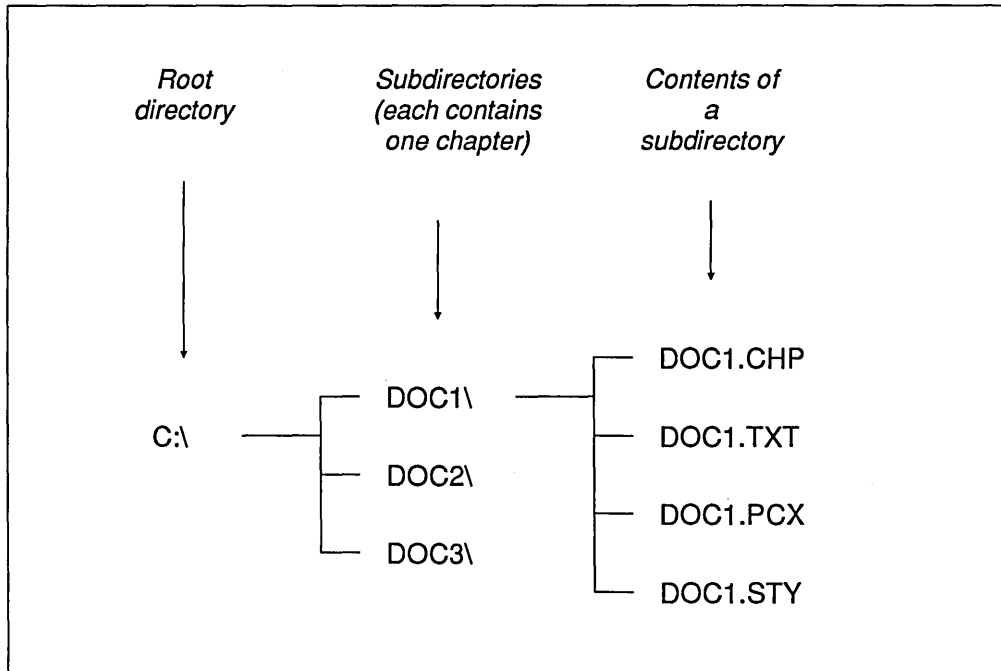


Figure 3: A suggested directory structure for single-chapter documents such as newsletters, forms, and directories.

## Two Organization Strategies

As I mentioned above, it's not a wise idea over the long run to save the chapters and style sheets you create in the TYPESET subdirectory. Doing so will very quickly cause the number of files in that directory to grow to an unmanageable size and cause real problems later when you have to move files off your hard disk. Therefore, you need to develop an effective structure for files on your hard disk so that you can easily locate the family of files that makes each chapter. Of course, no single method of organizing a hard disk is appropriate for every type of

work. I'll suggest two here; you may find others that work better for your needs. The point is to have a deliberate system.

### Plan I: A File Strategy for Short Documents

Perhaps the simplest way of avoiding confusion on your hard disk is to by means of the following method:

- Create a directory on your hard disk to contain all your Ventura documents;
- Within that directory, create a unique subdirectory to hold all the

files associated with a particular chapter.

This method is good for fairly short documents—i.e., those consisting of a single chapter. This applies to forms, business reports, short technical manuals, and newsletters. Later in this chapter, we'll cover a different method that is suitable for longer documents, such as books and technical manuals.

Figure 3 illustrates this method. On the hard disk, the subdirectory that holds all the Ventura documents is VPDOCS. Within that subdirectory, a subdirectory is created to hold each new chapter. These subdirectories are given names that identify the type of document within. For example: FORM1, FORM2, BK1, BK2, BK3, BK8, etc. If necessary, you might set up even more levels.

Within each subdirectory are all the files associated with a given chapter: document files, a chapter file, caption files, a style sheet file, image files, etc.

One big benefit of isolating all the files associated with a document is that it automatically provides protection for the style used with that document. Otherwise, if you make a change to a tag within one publication, perhaps to make the text fit the needs of that document's pagination, you will also affect any other publications you have saved that share the same style sheet.

Another benefit of the one chapter per subdirectory principle is that it allows you to easily move documents from one system to another or to take documents off the hard disk for floppy disk archiv-

ing when more room needs to be created on the hard disk.

Here are the specific steps to take to implement the system I've described above:

- From the DOS prompt, create a directory for all your Ventura documents. Type

```
MD \VPDOCS.
```

- Before beginning work on a document with Ventura, create a new subdirectory to hold the document. For example, if the document is a report, type

```
MD \VPDOCS\REPORT1
```

Copy all text and graphics files into the document subdirectory.

- After you enter Ventura, load the master style you want to use from the TYPESET subdirectory by selecting Load Diff. Style from the File menu. Place the cursor on the Directory line, press Escape to remove the entry that is already there, and type

```
C:\TYPESET\*.STY
```

to see the list of styles. Select the style you want to use as the master template for this document. With that style showing on the Selection line, select OK or press Enter.

- Select Save As New Style from the File menu. Place the cursor on the Directory line, press Escape to clear the line, and type

```
C:\VPDOCS\REPORT1
```

Then on the Selection line type

```
REPORT1.STY
```

and select OK.

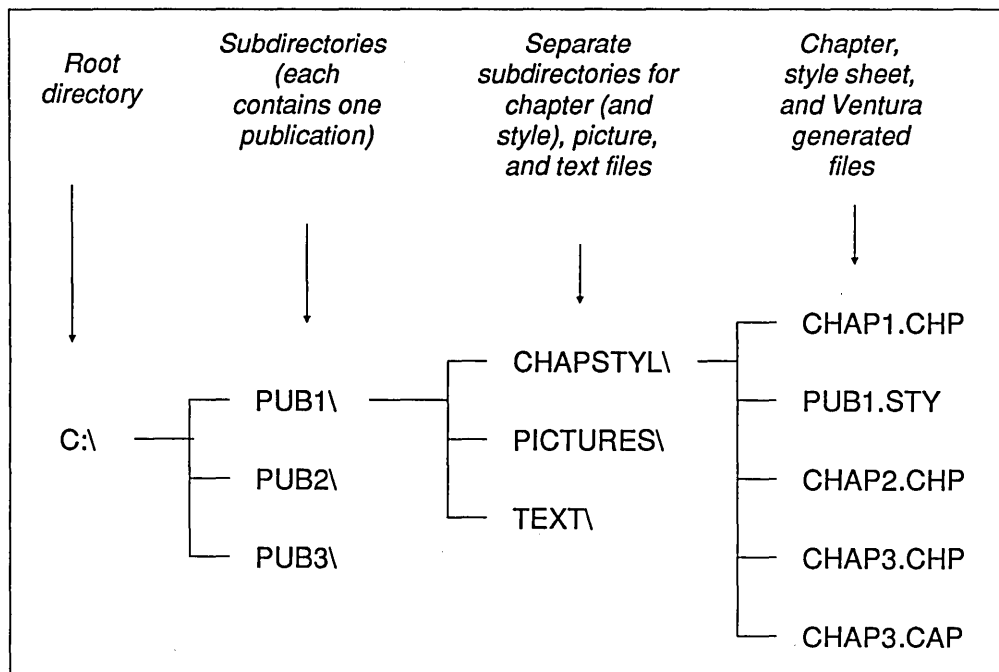


Figure 4: A suggested directory structure for multi-chapter documents such as books and technical manuals.

- From the File menu, select Save As... Enter C:\VPDOCS\REPORT1 on the Directory line. On the Selection line type **REPORT1.CHP** and select OK.

If you follow the above steps, each chapter you create will have its own unique subdirectory, containing all the text and graphics files associated with that chapter, along with all the files generated by Ventura itself.

## Plan II: A File Strategy for Long Documents

Now let's consider a different procedure that is more appropriate for long documents containing many chapters. It is illustrated in Figure 4. In this method you still create a new subdirectory for each document, but not for each chapter of that document. Instead, within the document subdirectory you create a subdirectory for all text files, a subdirectory for all graphics files, and a subdirectory for all style sheets and chapter files. Other files generated by Ventura will automatically be stored with the chapter files.

## Archiving and Transferring Documents

Often it is necessary to transfer all the files associated with a document from one computer system to another. This might be necessary, for example, if the computer used to create the document is not hooked up to a laser printer. Another task that is frequently necessary is to archive all the files associated with a document onto a floppy disk to clear some room on the hard disk.

If you have stored all the files associated with a document in a single subdirectory unique to that document, it is a relatively simple matter to use the DOS Copy command to transfer all the files from that subdirectory onto a formatted blank disk. But watch out: when you later recopy these files onto another computer or back onto the same computer, they must be placed back into a subdirectory with the identical name. For example, if they were originally in C:\VPDOCS\BOOK5 on computer A, they will have to be copied into subdirectory C:\VPDOCS\BOOK5 on computer B.

Why is it necessary to replace them in an identical subdirectory when you use the DOS Copy command to move them? The reason is that Ventura's master file, the .CHP file, keeps track of all the files that make up a document both by name and by subdirectory. If one of the text files that makes up a document is moved to another subdirectory, the program will not be able to find it.

There's another way to transfer documents, which has the advantage of

not requiring you to have the same subdirectories on both the source and the destination computer. It is to use Ventura's Multi-Chapter option.

## Using Multi-Chapter for Backups

In general, moving the files for a chapter onto a floppy and then back onto a hard disk is best done with the Multi-Chapter selection in the Options menu. Despite its name, the Multi-Chapter selection can and should be used even for backing up a single chapter. Its usefulness is that it automatically finds all the files associated with a given chapter, transfers them to the new location, and alters the pointers in the CHP file to reflect that new location.

You should use the Multi-Chapter selection no matter which direction you're going: both when you copy a document from a hard disk onto a floppy disk, and when you copy a document from a floppy disk onto a hard disk. Also, you can use it to copy a document into a new subdirectory if you reorganize your hard disk and find this necessary.

Here are the steps to follow in using the Multi-Chapter selection to copy all the files associated with a chapter onto a floppy:

- Select the Options menu.
- Select the Multi-Chapter option.
- Select Add Chapter in the dialog box.
- Select the appropriate Chapter file, just as you would to open a chapter.

(for example, on the Directory line, press Esc to clear the line and then type the name of the subdirectory containing the chapter you wish to move, followed by \\*.CHP. The name of that chapter should appear in the list of files. Select the name and then select OK.)

- The screen will now show the name of the Chapter file you have selected. Use your mouse to click on the Chapter name. If you do not confirm your selection by clicking on the Chapter name, you will not be able to access the Copy All feature.
- When Copy All lights up on the selections menu to the right, select Copy All.
- The screen should list as Source the letter of your hard disk, the subdirectory that your chapter file is in, and the name of your chapter file. Change the first destination point to A: You can save time by selecting the option to Make All Directories the Same. Select OK. Then sit back and relax while Ventura copies your files.

## Restoring a Chapter from a Floppy to a Hard Disk

Restoring a chapter back onto a hard disk is similar to the above operation, but it is a little more complicated. The steps are as follows:

- From the Options menu, select Multi-Chapter.
- Select Add Chapter. The dialogue box will display the drive letter of the hard disk together with a subdirectory name. Click on the Backup Button until the selection box lists the four drives. Then select drive A.
- Ventura will display a list of the chapter files on the floppy. You can now select the one you wish to copy and select OK. That chapter will appear in the MultiChapter list. To make Copy All light up, select the chapter name. If you don't click on the chapter name, the Copy All function will not become available.
- Select Copy All.
- A dialogue box will appear indicating a source and a destination. The source should be the name of your chapter file in drive A. Type the desired location in the first line and then select Make All Directories the Same As the First. Select OK.

## Tips on File Management

### Tip: The Whereis Utility

Because the various files that make up a document can be stored in different subdirectories, you may at times find it difficult to locate a particular file. A handy utility for such circumstances is WHEREIS.COM, which is available from most public domain software collections. To locate any file on your hard disk, you type `WHEREIS filename`, and WHEREIS lists all subdirectories containing that file. You can also use WHEREIS with wildcards. For instance,

WHEREIS \*.PCX will show you the location of all your files in PC Paintbrush format.

**Tip: Watch Out for Ventura's Long Reach**

As you know, Ventura throws its own embedded commands back into your text file. Therefore, any change you make to a text file while it is a part of a chapter file will have a permanent effect, when you save your chapter. Since this is a bit complicated in the abstract, consider the following example.

A technical writer wanted to make three somewhat different versions of a technical manual for three somewhat different models of a product. At first, she thought that the substitutions were so minor she might as well make them directly in Ventura. But she soon realized that if she did, she would corrupt the original version of the manual (which she wanted to keep intact). So she did the following instead:

- She kept her original chapter intact.
- She quit Ventura.
- She went into her TECHDOC1 sub-directory (where she kept not only her document files but also WordStar command files).
- She used the DOS COPY command to make a duplicate copy of her text file by another name.
- She used WordStar's word processing features such as Search and Replace to make the changes that were necessary in her text file.

- She returned to Ventura and loaded up the original chapter file.
- She used the Edit pop down menu to REMOVE TEXT FILE; that is, to remove her original chapter's text file from the list of files.
- She loaded her new text file.
- From the File menu she selected Save As and saved the chapter under a new name. All her formatting features were preserved. In this case, she had two manuals that included a number of picture files, and as luck would have it, the manuals were so similar that she could even leave the pictures as originally placed. By just making some very minor changes, she had two manuals done.

**Tip: Protect Those Style Sheets**

If you use the same style sheet for more than one publication, be careful. Anytime you make a change to a style sheet and you are not sure if you want to discard the existing style sheet with that name, be sure to save the new style under a different name. If you have inadvertently made a change, you may still be able to catch yourself before permanent damage has been done by selecting Quit from the File menu and abandoning the changes.

Archiving style sheets on floppies is an additional step that may be prudent if you are working in a multi-user environment—that is, if anyone other than you has access to the same computer. It is insidiously simple for one of your co-workers to thoroughly mess up your style sheet in a matter of seconds without real-

izing it, since the last style sheet to be used automatically pops up on the screen when someone sits down and types VP. If you have saved your style sheet onto a floppy, you can simply copy back the correct version.

**Tip: Keep Wordstar in the Same Subdirectory with Text Files.**

WordStar versions prior to release 4 were not capable of recognizing files in different subdirectories. The solution is simple: keep a copy of the word processor in the same subdirectory.

The advantages of keeping a copy of your word processor in your document subdirectory are numerous. Your word processor probably has a number of editing features that are not present in Ventura, such as Search and Replace. When you want to do some serious editing or rewriting, you quit Ventura and change into the subdirectory containing the document. When you have finished making the changes, you simply save the file and go back into Ventura. You don't even have to reload the file. Since Ventura stores a marker of where the file is located rather than the file itself, it will automatically incorporate your latest revisions into the existing chapter file.

**Tip: What to Do When a Chapter Won't Load**

I hope this never happens to you, but it frequently happens with me that Ventura will simply refuse to load a chapter. When I select Open Chapter from the File menu, the program starts to load the chapter but then freezes, forcing me to re-boot. I've talked to other people who ex-

perience the same thing, or who report that the program crashes all the way back to the DOS prompt. In any event, if this occurs, the first thing to do is simply try one more time. Often whatever was jamming the system turns out to have been a mysterious but transient fluke.

If the problem persists, try the following.

- Rather than open one chapter directly from another, try selecting New from the File menu and then pulling down some of the menus. This falls under the category of "Voodoo Tricks." It works for me and it may work for you.
- If your chapter uses lots of graphics and chapters files, try copying these into a different subdirectory or onto a floppy disk and then deleting them (or alternatively give them new names temporarily). Then attempt to reload. Ventura will object that it can't find all the constituent parts of your document, but it will possibly go ahead and load your new, slimmed-down chapter.
- Go into the Ventura subdirectory and find the VP.INF file. This is the file that preserves the current default state of various settings, mainly those in the Options menu. *Delete the file.* If it can't find the INF file, Ventura will revert to its original defaults. I've found this trick enabled me to load chapters that otherwise froze the system. Again, this borders on the occult, but it's worked for me and it's worked for others.



- If all else fails, find the most recent backup of your chapter. It will have the same name as your chapter file but will have the extension \$HP rather than CHP. (You did select Keep Preferences: Yes in the Set Preferences menu, didn't you?) Delete your CHP file and change the \$HP extension to CHP. This file should boot up, but be prepared for the fact that it will contain an earlier version of your chapter (the way it was when you saved 10 minutes or 2 hours ago).

**Tip: When to Use DOS Copy Rather Than the Multi-Chapter Option**

You can save time by using the DOS Copy command to move a chapter from one computer to another under the following conditions:

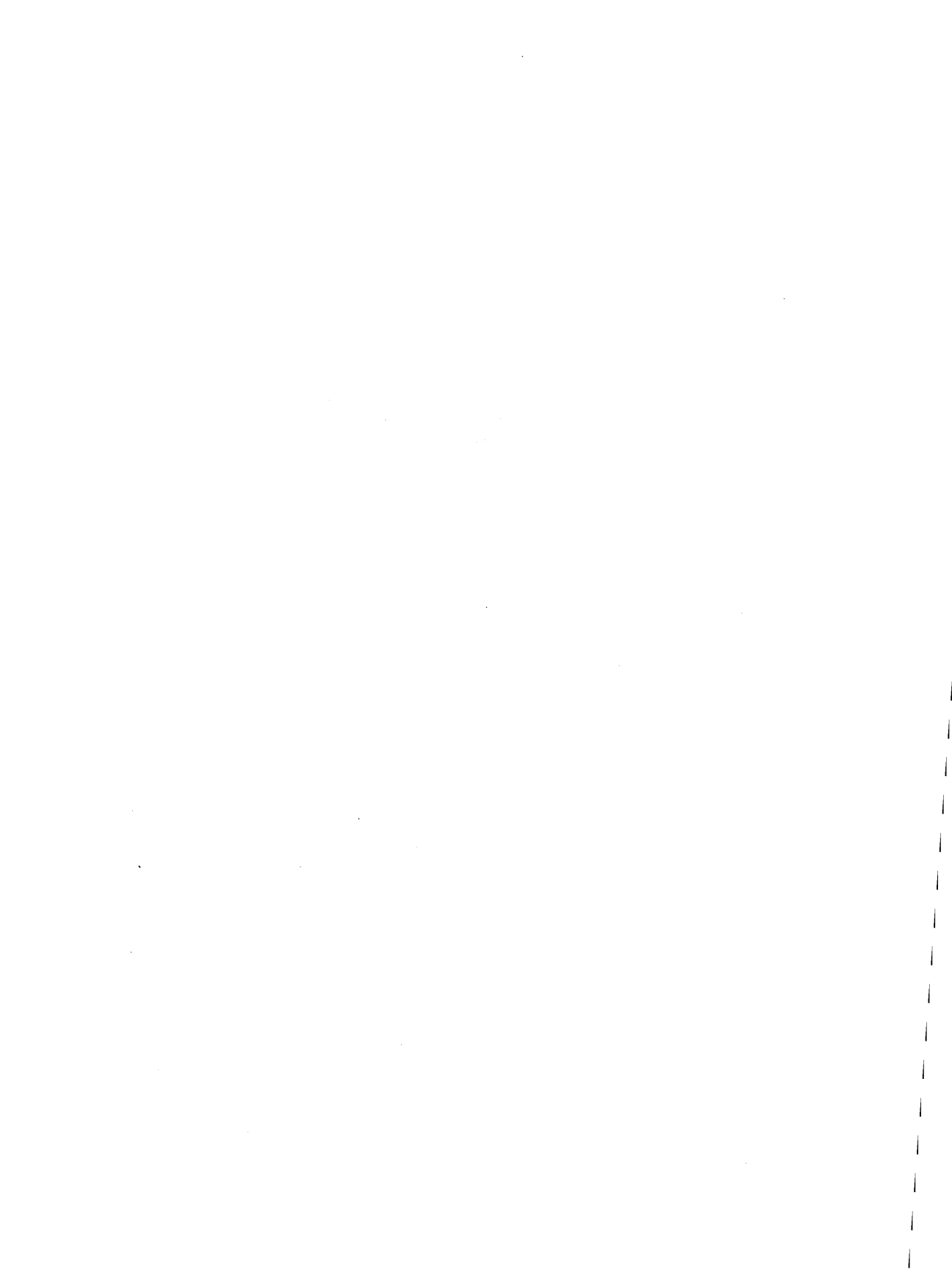
- If all the files used for the chapter are located in a single subdirectory.
- If that subdirectory is the same on computer A as on computer B.

If both conditions are met, you can simply use the command COPY \*.\* to copy the contents of the subdirectory onto a floppy disk, and then use COPY \*.\* again to copy them from the floppy onto the second computer.

III

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Using Ventura



## CHAPTER SEVEN



# *Preparing, Loading, and Tagging Text*

WHILE GRAPHICS ARE certainly a big part of Ventura, text is the meat and potatoes of publishing. Even if it were unable to handle graphics at all, there's no doubt that Ventura would be an extremely successful program merely on the basis of its virtuosity with text. This chapter covers the basics of preparing text with a word processor, importing it into Ventura, and then applying tags from a Ventura style sheet. It doesn't cover the typographic or page layout aspects of creating a Ventura style sheet—for information on those topics, refer to Chapter 8, "Typography," and Chapter 12, "Document Layout Strategies."

### **Preparing Text**

To create text you can use any of the most popular word processing programs. In addition, you can use Ventura's native text editor to type text directly into a document. As of Version 1.1, the list of word processor file formats that can be

imported includes WordPerfect, WordStar 3.3 and 3.4, WordStar UK, Microsoft Word, Windows Write, MultiMate, Xerox Writer III, and Xywrite III and IV. In addition, files in DCA (Document Content Architecture) can also be imported. Word processors that can produce text in DCA format include Displaywrite III and IV, Volkswriter 3, Office Writer, WordStar 2000, Samna Word, and Lotus Manuscript.

Finally, Ventura can load plain ASCII text, which means that you can format Sidekick note files, Lotus 1-2-3 spreadsheets, dBASE files, and files created by other spreadsheet and database programs. Generally, converting the output of such programs into ASCII format is done by creating a print file, that is, by specifying a file on your hard disk rather than the printer itself as the printing destination. For example, in Lotus 1-2-3, the command sequence to create a print file is /Print File. When you create a print

## Text Preparation Guidelines

Text Attributes	Line Endings
<p><b>Text attributes that carry over into Ventura:</b></p> <ul style="list-style-type: none"> <li>• <i>boldface, superscript, subscript, strikethrough, underline, discretionary hyphen, and nonbreaking space.</i></li> </ul> <p><b>Attributes that Ventura ignores:</b></p> <ul style="list-style-type: none"> <li>• <i>justification, margins, centering, headers, and fonts.</i></li> </ul> <p><b>Tabs</b></p> <ul style="list-style-type: none"> <li>• <i>Tab characters are carried over, but positions set for tabs in the word processor are not.</i></li> </ul>	<p><b>ASCII Text</b></p> <ul style="list-style-type: none"> <li>• <i>Separate paragraphs with two carriage returns.</i></li> <li>• <i>Import into Ventura as an ASCII file.</i></li> </ul> <p><b>Word Processed Text</b></p> <ul style="list-style-type: none"> <li>• <i>Separate paragraphs with one carriage return; or Separate paragraphs with two carriage returns and include @PARAFILTR ON = as the first line of the file before importing.</i></li> <li>• <i>Import into Ventura under the appropriate word processor format.</i></li> </ul>

*Table 1: The main rules of thumb for preparing text prior to importing it into Ventura.*

file, make sure you first set your margins to zero.

## Attributes: Converted and Ignored

In preparing text that will later be imported into Ventura, the following attributes in the word processed file will be

automatically carried over when that file is loaded into Ventura: boldface, superscript, subscript, strikethrough, underline, discretionary hyphen, and nonbreaking space. Discretionary hyphens are hyphens that will only be printed if they occur at a line break. Nonbreaking spaces are spaces that will not be broken by automatic word wrap; they are used if you

### Text Limitations

Size of Imported Files	500K	<i>If the size of the file exceeds available memory, it will be spilled out to the hard disk (or to a RAM disk). When this happens, you'll notice a definite reduction in performance even if the file is smaller than 500K.</i>
Number of Paragraphs Per Chapter	8,000.	<i>This is an approximate figure that depends on how much memory is taken for other uses such as graphics.</i>
Number of Tags Per Chapter	128	<i>The number of tags that can be included in a style sheet is 128. This includes tags you have created and tags generated by Ventura. In addition, if the text you are importing includes tags that are not included in the current style sheet, they too will be counted and if the total is more than 128 the file will not be loaded.</i>

Table 2: Limitations for imported files, paragraphs per chapter, and tags per chapter.

## Embedded Codes

### Breaks and Spaces

---

Line Break	<R>
Discretionary Hyphen	<->
Non-Breaking Space	<N>
Thin Space	< >
Figure Space	<+>
En Space	<->
Em Space	<->

### Character Attributes

---

Boldface	<B>
Italics	<I>
Medium Weight	<M>
Light Weight	<L>
Small	<S>
Underline	<U>
Double Underline	<=>
Overscore	<O>
Superscript	<^>
Subscript	<v>
Turn Off Special Attributes	<D>
Typeface (where nnn is the typeface number)	<Fnnn>
Point Size (where nnn is the point size)	<Pnnn>

### Special Codes

---

Footnote	<\$Ftext>
Picture Anchor (same page)	<\$&anchor name>
Picture Anchor (below)	<\$&anchor name[v]>
Picture Anchor (above)	<\$&anchor name[^]>
Hidden Text	<\$!text>

*Table 3: These codes can be used to format text with a word processor prior to importing.*

want to keep a particular combination of words all on the same line.

Other formatting done using the commands provided by your word processing program in your word processed files will not carry over once you have loaded a document into Ventura. And when you save the chapter containing that file, the formatting will be lost in the original file. This implies that when you prepare text for Ventura you shouldn't waste time setting margins, centering headlines, and the like.

## Preformatting

On the other hand, it is possible to embed a variety of special formatting codes in text files, a procedure known as "preformatting." Preformatting may be appropriate in work environments where writers and editors need to specify certain formatting information to the production staff. By embedding the appropriate codes in their text files, they can specify words to be printed in boldface, for example, or lines to be bulleted. The topic of embedded codes is covered below. First, however, we need to mention a couple of peculiarities in how Ventura handles line endings and tabs.

## Line Endings

In standard ASCII format, line endings are indicated with a carriage return, the same character used by Ventura to denote the end of a paragraph. Obviously, it wouldn't make sense for Ventura to make each line of the ASCII text file a separate

paragraph, so Ventura simply ignores any isolated carriage returns it encounters. When the program encounters two carriage returns in a row, however, it substitutes a paragraph break. Thus, when creating an ASCII file, press Enter twice to separate your paragraphs.

With spreadsheets, you do want every line of information to constitute a separate paragraph once the file is imported into Ventura; otherwise, separate lines would run together and wrap around continuously rather than breaking. The solution here, after creating a print file from Lotus, is to load the file into Ventura as a WordStar file. For more suggestions on how to properly save and load Lotus worksheets and graphics, see Chapter 16, "Lotus Worksheets and Graphics."

Unlike ASCII, most word processor formats do not use a carriage return to indicate a new line. Like Ventura itself, they reserve the carriage return command to indicate new paragraphs. Thus, Ventura doesn't have to filter out solitary carriage returns from such files. With ASCII files, it was recommended above that you press Enter twice between each paragraph. With files in word processor formats, that's not necessary; in fact, if your files do have two carriage returns between every paragraph those carriage returns will result in an extraneous blank paragraph once the file has been imported.

Many people, of course, are in the habit of pressing Enter twice between paragraphs in order to make the text more readable. You can continue to do that if



you embed the following command on the first line of your text file:

**@PARAFILTR ON =**

with spaces both before and after the equal sign. When it encounters this command, Ventura will automatically replace double carriage returns with paragraph breaks.

## Beware of Tabs

Ventura does allow you to include tabs in your word processed document. However, as discussed in Chapter 8, "Typography," tabs are handled differently by Ventura than by word processing programs. For example, a tab placed in justified text will be ignored. And a tab placed in unjustified text will prevent that text from wrapping onto a second line. So, unless you need to use them for a table or for some other special purpose, avoid including tabs in the files you import. In particular, do not use a tab to indent the first line of a paragraph. Instead, use the In/Outdent setting from the Alignment dialog box (in the Paragraph menu) to set your indents.

WordStar tabs are a special case. If Vari-Tab is turned on in WordStar, the program will insert spaces into a document rather than a true tab. Then, after the document is loaded into Ventura, the "tab" will show up as five or six fixed spaces on the screen (denoted by a marker that looks like an upward pointing staple). To turn Vari-Tab off, use Ctrl-O Ctrl-V. Also, when preparing text with WordStar you should turn soft hyphens and hyphen help off.

## Embedding Formatting Information

Embedded formatting is a topic that you don't need to concern yourself with while you are learning Ventura. At first, you can simply create your text with your word processing program and do all the formatting within Ventura. However, after you become proficient at formatting within Ventura, you may decide to explore the possibilities for embedding special formatting codes in your original text files. There are two possible reasons for using embedded formats:

- In organizations where one work group prepares text and a different work group lays it out with Ventura, embedded formatting may provide a way of giving the first work group a larger role in formatting text.
- Embedding codes, especially with the aid of a keyboard macro program, is frequently faster than doing the formatting within Ventura.

The following types of formatting can be done with embedded codes:

- Breaks and Spaces. For example, to force a line break you would insert <R> at the point where you want the line break to occur. To insert a discretionary hyphen, insert <->. For other codes, see Table 3.
- Character Attributes. Examples include uppercase or boldface. The codes for such attributes are shown in Table 3. Note that to format a word with <B> you must end the

## Nonkeyboard Character Codes

128	Ç	151	ù	174	«	197	—
129	ü	152	ÿ	175	»	198	°
130	é	153	Ö	176	ã	199	Á
131	â	154	Ü	177	õ	200	Â
132	ä	155	ç	178	Ø	201	È
133	à	156	£	179	ø	202	Ê
134	â	157	¥	180	œ	203	Ë
135	ç	158	¤	181	Œ	204	Ì
136	ê	159	f	182	À	205	Í
137	ë	160	á	183	Ã	206	Î
138	è	161	í	184	Õ	207	Ï
139	ï	162	ó	185	§	208	Ò
140	î	163	ú	186	‡	209	Ó
141	ì	164	ñ	187	†	210	Ô
142	Ä	165	Ñ	188	¶	211	Š
143	Å	166	ª	189	©	212	š
144	É	167	º	190	®	213	Ù
145	æ	168	¸	191	™	214	Ú
146	Æ	169	“	192	„	215	Û
147	ô	170	”	193	...	216	ÿ
148	ö	171	<	194	‰	217	ß
149	ò	172	>	195	•	218	Ž
150	û	173	¡	196	—		

*Table 4: The code assignments for the nonkeyboard characters of Ventura's International character set. To embed these characters in a file prior to importing the file into Ventura, type the code number in angle brackets. For example, to insert ‡ in text, type <186>. Once the file is loaded into Ventura, you can embed a nonkeyboard character into text by holding down the Alt key while typing the code on the numeric keypad. For example, to insert ‡ from within Ventura, type Alt-186. To see the code assignments for Ventura's Symbol typeface, load the chapter CHARSET.CHP from the TYPESET directory.*

formatting with <D>, not with a second <B>.

- **Special Codes.** You can embed formatting information for footnotes, anchors, and hidden text. See Table 3.
- **Nonkeyboard Characters.** Only those characters in the ASCII range below 127 are displayed on the keyboard, yet many fonts include characters numbered from 128 to 255. These include symbols needed by European alphabets, graphics symbols, typographic symbols, and special symbols. To embed a nonkeyboard character in text, insert its ASCII code within angle brackets. For example, to insert the © sign, insert <189> at the appropriate place in your text. A list of codes is provided in Table 4.

## An Example

Here's the sequence that was used to prepare the text files for this book:

- First, text was created in normal fashion using a word processor.
- Next, text was run through the word processor's spelling checker.
- Third, a search and replace was done to replace every occurrence of two consecutive hyphens (--) with the ASCII characters for a true dash (—), <197>.
- Fourth, a search and replace was done to replace every occurrence of a space followed by a straight quotation mark (") with the ASCII character for a left quotation mark ("), <169>.
- Fifth, a search and replace was done to replace every remaining occurrence of a straight quotation mark with the ASCII character for a right quotation mark ("), <170>.
- Sixth, tags such as "@BULLET = " and "@SUBHEAD = " were embedded in the text. We'll cover embedded tags later in this chapter.

## Loading Text

Once you have created a text file using your word processor (or by generating a report file or print file with your database program or spreadsheet), you can load the file into Ventura. The procedure for loading text files into Ventura is summarized briefly as follows. For a more detailed description, please refer to the tutorial chapters in Section I of this book.

- Create a frame on a Ventura page, or select the base page.
- Select Load Text/Picture from the File menu.
- Select the appropriate file type in the Load Text/Picture dialog box.
- Use the Backup Button (the small black square) to select the directory containing the file. For a detailed explanation of the Backup Button, see Chapter 6, "Managing Files."
- The text file will now be listed in the list of files. To load it into the cur-

rent frame, point to the name of the file and click the mouse button.

- If the file is not immediately loaded onto the page, select the Framing icon, select the frame you wish to load it into and again select the name of the file.

## Ventura's Text Editor

Having loaded a text file into Ventura, you can alter it using Ventura's internal text editor, which is activated when you select the Text icon. Note that any changes made using Ventura's text editor will be reflected in your original text file, so if you want to preserve the original version of that file, be sure to make a copy before editing it with Ventura.

The operation of Ventura's text editor is simple and intuitive. To insert text, you place the cursor in the desired spot, click once to insert the text editing cursor, and begin typing. You can move the text editing cursor by using the keyboard cursor keys. Forward deletion is done with the Del key; backward deletion with the Backspace key. To highlight a block of text you hold down the mouse button while dragging it across the desired text. Alternatively, you place the text cursor at one end of the block, then move the mouse cursor to the other end and hold down the Shift key while clicking. Blocks can be deleted to the buffer by pressing Del, and can be inserted into a different location by pressing Ins. Table 5 summarizes these and other operations that are available in text editing mode.

## Tagging Text

As described in Chapter 4, "How Ventura Works," Ventura stores information about a document in three locations: the chapter file (CHP), the Ventura information file (INF), and the style sheet file (STY). The style sheet file contains some information that applies to the document as a whole, such as the settings for size and orientation of the paper. Mainly, however, it stores a list of tag names and the formatting information associated with each tag.

To tag text, you first have to load a style sheet. This is done by selecting Load Diff Style from the File menu.

If you load one of the style sheets provided with Ventura (contained in the Typeset subdirectory and indicated with an & as the first character), you should make sure to save it under a new name before you make any modifications. That way, the sample style sheet will remain intact for future use.

Once you have loaded a style sheet, its name is shown in parentheses at the top of the screen. Now you can start tagging.

Tags can only be applied to entire paragraphs. To format a portion of a paragraph, such as changing a single word to a different font, use the procedure described below under "Formatting Words Within a Paragraph."

The procedure for tagging text is as follows:

- Select the Tagging icon.
- Select a paragraph.
- Select a tag name from the Assignment List.

## Ventura's Text Editing Operations

**DEL** - Deletes one character to the right of the cursor. Or, if you have selected a passage by dragging a cursor across it, the Del key places the selected passage in the scrap (i.e. saves it for later insertion). You can use this for moving blocks of text.

**INS** - Inserts material from the scrap at the cursor point.

**BACKSPACE** - Deletes one character to the left.

**CURSOR KEYS** - Once you have clicked the mouse while the cursor is within a passage of text, a separate text cursor appears on the screen (a thin vertical line). You can move this with the cursor keys.

**HOME AND END** - Move you to the first or last page of the document.

**PGUP AND PGDN** - Move you to the previous page or the next page.

**ENTER** - Starts a new paragraph.

**CTRL-ENTER** - Inserts a line break (i.e. starts a new line without starting a new paragraph).

**CTRL-HYPHEN** - Inserts a discretionary hyphen.

**CTRL-SPACEBAR** - Inserts a non-breaking space.

**CTRL-SHIFT-F** - Inserts a figure space (1/4 the width of an Em space).

**CTRL-SHIFT-N** - Inserts an En space (1/2 the width of an Em space).

**CTRL-SHIFT-M** - Inserts an Em space (measured as the same width as the current font; for example, in 12-point text an Em space measures 12 points in width, or 1/6 inch).

**CTRL-SHIFT-[ or CTRL-SHIFT-]** Inserts a left or right quotation mark.

**CTRL-[** - Inserts an En dash

**CTRL-]** - Inserts an Em dash.

**CTRL-SHIFT-T** - Inserts a thin space.

**CTRL-SHIFT-C** - Inserts ©.

**CTRL-SHIFT-R** - Inserts ®.

**CTRL-SHIFT-2** - Inserts ™

Table 5: The text editing commands provided by Ventura when you select the Text icon.

Altering the attributes of a tag is done by selecting a paragraph and then selecting options from the Paragraph menu. To create a new tag, select the Add New Tag button and copy the attributes of a similar tag. Then use the menu options to customize the tag.

The options for customizing a style sheet are discussed in Chapter 8, “Typography,” Chapter 9, “Using Fonts,” and Chapter 11, “Graphics.”

## Tagging With the Function Keys

Within Ventura, it is also possible to speed up tagging by using the Assign Function Keys option in the Paragraph menu. You can assign up to ten tags to the ten function keys and perform tagging without leaving text mode. Select the Assign Func Keys option of the Paragraph menu (or press Ctrl-K).

## Tagging With a Word Processor

You can attach tags to the elements of a document before importing it into Ventura from any word processor. Simply type the @ symbol, the name of the style in capital letters, a space, the = sign, and another space. Thus, all tags take the form @tagname = . Better yet, use a keyboard macro program such as SuperKey. With such a program you can assign any string of characters to a single key combination. For example, store the phrase “@SUBHEAD = ” as Alt-S. To format all subheads, you merely type Alt-S at the beginning of each.

Note: when you insert tags with your word processor, the @ sign must be the first character in the line. Otherwise it will not be recognized as a tag.

## Generated Tags

When you create text within Ventura using the box text, caption, header, and footer operations, Ventura automatically creates tags called generated tags. These tags all begin with the letter Z and are not listed in the sidebar unless you select Preferences from the Options menu and specify Generated Tags: Shown.

You can alter generated tags in the same manner used to alter other tags. You can also assign new tags to boxed text and captions; headers and footers, however, can only be tagged with the generated Z tags. This allows text in two different boxes, or text for two different captions, to be formatted with different fonts and typographic attributes.

## Formatting Words Within Paragraphs

Although tags apply only to entire paragraphs, you can use the Set Font option to make formatting changes within a paragraph. The procedure is as follows:

- Select Text mode.
- Select a passage of text by dragging the mouse cursor across it.
- Select one of the attributes in the assignment list.  
or  
Select the Set Font option.

- Enter the desired font settings in the dialog box.

## Tips

### Tip: Removing Tag Names from Text Files

Like cats, most documents go through many lives. Typically, not long after a technical manual is written and printed, a writer begins work on the next revision.

With Ventura, any changes made up and saved in the chapter file are reflected back in the original document file. That provides a great deal of convenience in keeping the document up to date. The one drawback of Ventura's way of working is that the numerous tags embedded in a document become distracting.

Let's say you've completed printing out a document and now wish to remove all the tags from the original text file so that you can continue editing it without the distraction of the embedded @ signs, tag names, and = signs. Obviously, you could go through the file with your word processing program and manually delete all the tags. But there is a quicker procedure:

- From the File menu, select Save As.
- Enter a new chapter name on the Selector line.
- Select OK or press Enter.
- From the File menu, select Load Diff Style.
- Click on the Backup Button (the small black box) to return to the root

directory, then select the TYPESET directory.

- From the list of styles, select DEFAULT.STY.
- From the File menu, select Save.
- Quit from Ventura, load your word processor, and load the document. All the tags will be removed. The reason is that the DEFAULT style sheet only uses the Body Text style, which is not embedded in the document (since it is the default style for all style sheets).

### Tip: Reminding Yourself of the Function Key Assignments

For a quick reminder of the function key assignments, press Ctrl-K. This will show you the names of the function keys and the tag assigned to each.

### Tip: Tagging with Microsoft Word

When using Microsoft Word to prepare pre-tagged text for Ventura Publisher, the F3 key can be used for rapid tagging of paragraphs. Save each tag name, preceded with an @ and followed by a space, an equal sign, and another space; for example

@HEADLINE =

in a glossary and assign each glossary a one or two letter name. To do that, type the passage you wish to assign to a glossary, highlight the passage, and press Esc for the Word command line and then C for the Copy command. When Word prompts you with Copy to: {}, type a one or two letter name. To apply this tag to the passage, place the cursor at the beginning of the first line of the paragraph,

press the key combination assigned to that tag, and immediately press F3.

**Tip: Reusing a Layout.**

If you use the same format over and over, such as printing a monthly newsletter, you can save time by reusing your layout. Most newsletters are best formatted by setting up a two or three-column master page, and then drawing a frame for each column. After printing out the newsletter, remove the text files from the frames and then save the chapter. Next time you format the newsletter, you merely insert new text files into frames and adjust the lengths of the frames.

**Tip: Ventura's Default Style Sheet.**

Often it's easier to start from a scratch style sheet (i.e., one containing no tags) than to adapt one of the style sheets provided with Ventura. When you need to start with a blank style sheet, select DEFAULT.STY from the \TYPESET directory. This style sheet only contains one tag, the one for Body Text.

**Tip: Saving Formatting Information**

If your word processing file contains formatting information that Ventura does not recognize when it loads the file, that information will be stripped away and lost during the loading process. If you want to preserve the formats of your original document, save a new copy under a different name before you load it into Ventura.

**Tip: Keeping Track of Tags**

In the sidebar, tags are listed in alphabetical order, and those that begin with num-

bers precede those that begin with letters. By paying attention to how you name your tags, you can make sure that the ones you use most frequently are closest to the top of the list. If you are using a single style sheet for a multiple chapter document such as a book or a manual, it makes sense to group the tags generated specifically for one of the chapters in the document together. For example, when you're working in Section 5 of your manual, make S5 the first two characters of any tag you create. That way, if the style sheet grows to be too long and you have to use different versions for different chapters, you'll be able to tell which tags need to be preserved in which versions of the style sheet.

**Tip: Converting Text Files**

A common problem in offices is converting documents from one word processing format to another—for instance from MultiMate to WordPerfect. You can use Ventura for this routine task. Load the text file into a chapter, then select File Type/Rename from the Edit menu. You'll be given the option to choose a new subdirectory, name, and word processing format for the file.

**Tip: Changing Generated Tags**

When you use the Box Text tool, Ventura automatically creates a tag called Z\_BOX-TEXT. This tag won't be listed in the sidebar unless you select the Preferences option from the Options menu and specify Generated Tags: Shown. Other generated tags include Z\_LABEL CAP, Z\_CAPTION, Z\_FOOTER, and Z\_HEADER.



Although Ventura starts out automatically formatting any boxed text with Z\_BOXTEXT, you can assign other tags to boxed text. Thus, text in one box can look one way and text in another box can look another way. That is not the case with headers and footers, however.

### Tip: Using Shift-Select

In Text mode, the problem often arises that after dragging the mouse across a passage of text, you realize that the highlight didn't include all the text you intended. To pick up the remaining characters, leave the passage selected and release the mouse button. Move the mouse so that the mouse cursor is positioned just in front of the additional text you wish to select. Now hold down the Shift key while you click the mouse button. The area selected will increase to include the new portion.

### Tip: Exceeding the Tag Limit

Sometimes, when trying to load a text file into a chapter, you may get the error message, "You've used 128 tags, files, or chapters" even if there are less than 128 tags in your current style sheet. The reason for this seemingly erroneous error message is that when Ventura counts tags, it includes the tags you created in your style sheet; the tags automatically created by Ventura itself for captions, box text, and other attributes; and the tag names embedded in your text files, even if they're not included in the current style sheet. To correct the problem, use your word processor to remove tag names from the text file that are not included in your current style sheet.

### Tip: Fixing Problems With the Cursor on Large-Screen Monitors

Ventura provides screen fonts for common text sizes, including 10, 12, 14, 18, 24, and 36 points. If you're editing text in other point sizes, however, the characters may look rough and you may run into difficulties positioning the cursor. To overcome those problems, you can use DOS's Debug utility to generate fonts in odd sizes such as 9, 11, and 13 points.

The procedure to create a 13-point font for Times Roman is as follows:

- Locate the file IBMET12I.EGA in the VENTURA directory.
- Type

```
COPY IBMET12I.EGA IBMET13I.EGA
```

- Type

```
DEBUG IBMET13I.EGA
```

- Debug will provide you with a new prompt (-). Type

```
-d and press <Enter>
```

```
-e 0102 and press <Enter>
```

- You'll now see 0C. Type

```
0D and press <Enter>
```

following the 0C. What you're doing is substituting hex 13 for hex 12 in the third byte of the file. Now type

```
-w and press <Enter>
```

```
-q and press <Enter>
```

to save your work and quit. Follow the same procedure to create 9- and 11-point type from 10-point, 15-point type from 14-point type, etc. Don't create unnecessary screen fonts, however, because each screen font in the system reduces the amount of memory available for holding text and graphics.

**Tip: Problems Changing Text Attributes**

Sometimes when you try to apply text attributes to a word or phrase, using the list of attributes in the Text mode sidebar, you'll find that the attributes won't take effect. The first thing you should do is highlight the passage, select Normal from the list of attributes, and then select your attributes again. If this does not work, the problem is that hidden attribute settings are preempting the attributes you wish to apply to the text. For example, when you highlight a passage and select Bold, the text will remain in italics. In that case, position the cursor just in front of the material you are attempting to reformat and press Del. When you know you're in the right location when you see the words Attr. Setting in the Current Selection Box, located in the lower left corner of the screen.

**Tip: Avoid Double Spaces**

If you ever took a typing course, you were probably taught to type two spaces after every sentence. When preparing text for Ventura, you should avoid doing so or else do a search and replace to get rid of double spaces. The reason is that Ventura converts the first space into a normal space but converts the second space into a non-breaking space.

**Tip: Suppressing Hyphenation**

You can keep Ventura from hyphenating a word by placing a discretionary hyphen (<->) directly in front of the word when you prepare text with your word processor.

**Tip: Fixing an Isolated Paragraph Mark**

After you load text into Ventura you'll sometimes notice a blank line with nothing on it but the paragraph sign (¶). This is caused if you press the Spacebar after the period of a sentence and then press Enter. To get rid of the unwanted blank line, select the Text icon, place the cursor in front of the paragraph mark, and press Backspace.

**Tip: Beep**

When you're loading text, you may hear a beep. This occurs if there are more than 128 text files in the directory you are loading text from. The purpose of the beep is to notify you that only the first 128 files in the directory are being listed.

**Tip: Text Selection Won't Go Away**

Sometimes when you highlight a passage of text and then attempt to highlight a different passage, the first passage will stay highlighted. The solution is to press PgDn and then press PgUp. The unwanted highlighting will disappear.

**Questions**

*Q: After I tagged some text in a frame it disappeared. What happened?*

A: The problem is one of the following: (1) You switched to a font that was too large for the frame. Ventura won't display or print any characters that it can not fit entirely character within a frame. (2) You specified additional space above the text, which pushed the text out of the frame. To fix the problem you need to change

the specifications associated with the tag. This might seem impossible, however, since the text is no longer visible. If you haven't selected any other paragraphs, the paragraph you were working with should still be selected even though it is not visible. If the paragraph is no longer tagged, you can still fix the problem by tagging another paragraph with the same tag and changing the font or the spacing for that paragraph. The change will automatically apply to the disappeared text and it will appear again.

*Q: I drew a frame, selected the File menu, selected the Load Text/Picture option, and selected a text file to load. However, the text did not load into the frame and the frame remained blank. How do I get the text to load into the frame?*

A: After you select the text file to load using the Load Text/Picture option, its name should appear in the Selection Menu on the left side of the screen. Select the frame you want to pour the text into. When you point at its name in that menu and click with the mouse, it will appear in that frame.

*Q: I'm laying out a newsletter that has articles in several different files. I loaded them into Ventura by selecting the Load Text/Picture option from the File menu. In the Load Text/Picture dialog box I selected # of Files: Several. Then I selected three files. However, only one of them appeared in the*

*document. How do I put multiple text files in a chapter?*

A: If you are loading text onto the base page, you can only put one text file in a chapter. To create a chapter with multiple text files, such as a newsletter, you need to following a different layout method. Instead of loading text onto the base page, draw a frame for each column of your newsletter. Then load text files into these frames. An example of this way of working is in the tutorial chapter on laying out a newsletter.

*Q: Why are some lines highlighted in black?*

A: This is a new feature of Version 1.1 that shows "loose lines." Loose lines are lines in which Ventura has been forced to exceed the Maximum Space Width value in order to justify a line. Several solutions are available to correct a loose line. One is to insert hyphenate words in adjacent lines. Another is to select Typographic Controls option from the Paragraph menu and set Letter Spacing on. This causes Ventura to adjust the spacing between characters within words, as described in the Chapter 8, "Typography." Note, however, that after you turn letter spacing on, the loose lines will still be highlighted.

*Q: I want to have two captions that are different. How can I do this, since they both use the Z\_Caption tag?*

A: When you generate a caption it is automatically assigned the Z\_Caption tag.

However, you can then apply a different tag to a particular caption.

*Q: My footer appeared fine on the screen. However, when I printed the document it disappeared.*

A: The problem is that the footer is located in the unprintable area for your laser printer. This unprintable area varies for different printers. To find out the boundaries of the printable area, print CAPABILI.CHP, which is located in the Typeset subdirectory. You can print your footer if you either change the bottom margin of the underlying page or else change the top margin of the footer.

*Q: I tagged some text before loading it into Ventura by typing an @ followed by the name of the tag and an equal sign. However, the effect was that the name of the tag printed rather than causing the text to be formatted? Why?*

A: The most likely reason is that the @ sign was not positioned as the first letter of the line (perhaps you preceded it with a space or a tab). To be recognized by Ventura, the @ sign must be in the first line and the first column of a paragraph. .



## CHAPTER EIGHT



# *Typography*

TO BE ABLE to meet the demands of professional typographic applications, a desktop publishing program must have the flexibility to control spacing on a number of levels, must be able to create ruling lines, and must provide for selection of fonts. In this chapter we cover spacing and ruling lines. Fonts are covered separately in Chapter 9, "Using Fonts," and Chapter 13, "Adding Fonts."

The first level of spacing control is between the individual letters within words. That means being able to tighten up the spaces between pairs of letters to create a better pairwise fit (kerning), globally tightening up the spacing between letters (tracking), and adjusting the spacing between letters on a line-by-line basis to assist the justification process (letter spacing).

Second, such a program must provide for controlling the spacing between words, termed spaceband or space width control. And it must provide the operator with the ability to embed spaces of a predetermined, unalterable width in a line.

Third, the program's typographic controls must allow control of the vertical

spacing between lines and paragraphs (leading).

Fourth, the program must allow control of indents, tabs, margins, and spaces around illustrations and ruling lines. And it must provide such specialized features as large first capitals and bullets.

With regard to generating rules, a program must be able to create a variety of vertical and horizontal rules of any thickness, and allow these lines to be freely positioned in absolute positions on the page as well as in positions relative to text.

As of Release 1.1, Ventura does a very complete job of meeting all these demands of traditional typography. This chapter surveys the program's typographic controls and then provides some tips on how you can use these features most effectively.

## **Spaces Between Letters**

The spacing between characters is controlled primarily by a width table that is part of a font. Unless you are using a font

editor to create entirely new characters, there's no need to worry about this width table. Because of the width table, Ventura automatically performs proportional spacing, assigning more space to an i, for example, than to a W. For altering the spacing between letters, Ventura provides four types of controls: (1) manual kerning, (2) automatic kerning, (3) tracking, and (4) letter spacing.

**MANUAL KERNING:** It is easiest to do manual kerning while you're in Enlarged View. To perform manual kerning you select the Text function, then hold down the mouse button and drag the cur-

sor across the letter immediately to the right of the letter space that you wish to close up. Next, select the Set Font button. A dialog box appears that allows you to type a value next to the word Kern. That value is the amount of space by which the highlighted letter and all letters to the right of it will be shifted to the left. If you don't want to use the units shown, point directly at the units with the mouse and click. For example, if the units shown are picas & points, you should change them to something else, to give yourself finer control over the placement of the letters.

<b>Kerning Options</b>		
<b>Menu/Option</b>	<b>Applies To</b>	<b>Notes</b>
<i>Page Menu: Page Layout</i>	<i>Global Kerning</i>	<i>Selecting Globally On does not cause the document to be kerned, it merely allows the automatic kerning specified in each tag to go forward. Selecting Globally Off overrides the automatic kerning specified in each tag. It does not affect manual kerning.</i>
<i>Paragraph Menu: Typographic Controls</i>	<i>Kerning at the Tag Level</i>	<i>Selecting Automatic Kerning: On activates kerning for any paragraph assigned this tag.</i>
<i>Set Font</i>	<i>Manual Kerning</i>	<i>This option is used in Text mode. It moves the selected characters to the left.</i>

Table 1: The three methods of kerning.

**AUTOMATIC KERNING:** Ventura provides two controls for automatic kerning. To control kerning on a tag-specific basis, select the Tagging function, then select a paragraph. From the Paragraph menu select the Typographic Controls option. Select Automatic Kerning: On. Note that automatic kerning will only be performed if the font width table you are using includes a matrix of kerning values. Adobe's PostScript fonts do include that information; most other fonts do not. You can globally override the automatic tagging specified in the tags by selecting Kerning: Globally Off from the Page Layout option of the Page menu. Note that selecting Kerning: Globally On does not cause your entire document to be automatically kerned; it merely turns off the override and allows kerning to occur in those paragraphs so tagged.

**TRACKING:** The difference between kerning and tracking is that kerning means tightening up particular pairs of characters whose shapes allow them to fit more closely together, while tracking refers to uniform tightening up of the text in an entire paragraph. To change the tracking settings for a single tag, select a paragraph. From the Paragraph menu select the Typographic Controls option. Select the Looser or Tighter options, and enter an amount (always measured in Ems). The size of an Em is relative to the size of the font in the selected paragraph. One Em equals the point size of the font. So if the paragraph is set in 12-point type, an Em is 12 points, or 1/6 inch, wide. Setting the tracking to 0.050 Ems tighter would reduce the amount of space

between each character by .6 points, or 1/60 inch.

**LETTER SPACING:** In normal typography, adjusting the lengths of lines to create justified text is normally done by adding or subtracting the amount of space between words. Of course, adding too much space between words may give text an undesirable appearance. Lines in which the amount of space between words exceeds a certain desirable maximum are referred to as "loose lines." To deal with a loose line, a typographic system can resort to increasing the amount of space between letters within words. This is known as "letter spacing."

Here's how Ventura goes about setting lines. First, it tries to justify lines by adding space between words. If the amount of space between words exceeds a specified limit, you have a "loose line." The specified limit is the Maximum Space Width setting shown in the Typographic Controls dialog box, selected from the Paragraph Menu. As long as you have chosen not to activate letter spacing, Ventura will go ahead and print loose lines, that is, lines in which spaces between words exceed this maximum. However, if you turn the letter spacing option on, Ventura will attempt to fix the loose line by adding spaces between letters.

To turn letter spacing on, start by selecting a paragraph. From the Paragraph menu select the Typographic Controls option. Select Letter Spacing: On and enter a figure next to "Up to:" This controls the maximum amount of space that Ventura will add to the already ex-



isting spaces between characters to try to fill out the line.

To see which lines in a document are in need of letter spacing, select the Show Loose Lines option of the Options menu.

## Spaces Between Words

Ventura provides several ways of controlling the spaces between words, known in typography as spacebands. These are as follows: (1) setting alignment to ragged, in which all spacebands are of equal width, or to justified, in which spacebands are adjusted to make all lines of equal width; (2) minimum, normal, and maximum settings for space widths (these indicate the range of spacebands within which Ventura can adjust word spacing to justify lines); (3) four fixed spaces, which are unchangeable

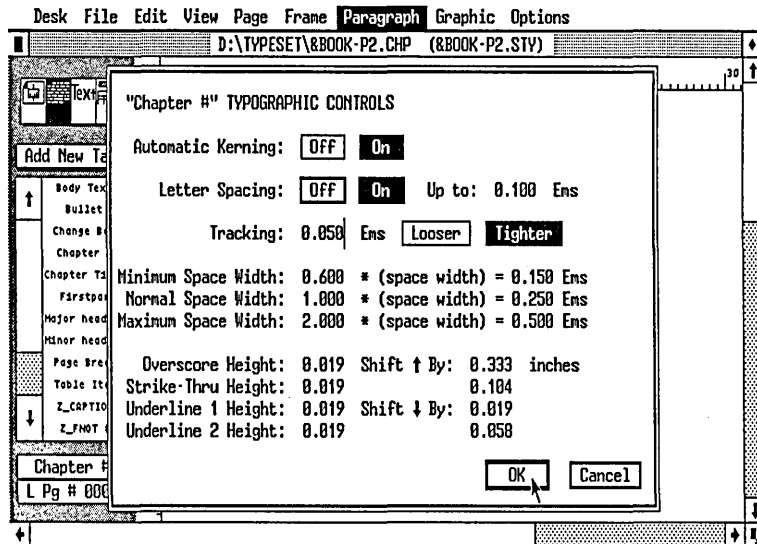
spaces inserted into text like characters; and (4) customized fixed spaces, a trick for creating spaces of any width using white type.

## Alignment and Spaceband Control

The first way to vary the spaces between words is by choosing ragged or justified alignment. Start by selecting a paragraph. From the Paragraph menu select the Alignment option. Left, Center, and Right are all ragged alignments; if you select one of these the word spacing will be constant throughout the paragraph. It will be equal to the Normal Space Width setting in the Typographic Controls dialog box.

If you select Justified in the Alignment dialog box, Ventura will make all

Figure 1: The Typographic Controls dialog box.



lines the same length by squeezing the amount of space between words or by adding space between words. Minimum spacing will never be smaller than the setting indicated in the Typographic Controls dialog box under Minimum Space Width. If necessary to justify a line, Ventura will exceed the Maximum Space Width setting. Lines where that maximum is exceeded are highlighted if you select the Show Loose Lines option of the Options menu.

## Fixed Spaces

If you want to place spaces that are of a fixed width and will not be squeezed or expanded by Ventura, you can do so using several fixed space options. Ventura provides the following types of fixed spaces: figure spaces, Em spaces, En spaces, and thin spaces.

**FIGURE SPACE:** The width of a figure space is the same as the width of a numeral (traditionally in typesetting, all digits from 0 to 9 are given the same width). Such spaces can be used for aligning tables of numbers. To insert a figure space into a passage using Ventura's text editor, hold down the Alt key while pressing the Spacebar. To insert a figure space into a passage using your own word processor, type a + surrounded by angle brackets.

**EM SPACE:** The width of an Em space is the same as the point size of the font in use. Thus, an Em space is a passage of 12-point Times Roman is 12 points wide, or 1/6 of an inch. To insert

an Em space into a passage using Ventura's text editor, hold down the Shift and Ctrl keys while pressing the M. To insert an Em space into a passage using your own word processor, type an underline surrounded by angle brackets. (<\_>).

**EN SPACE:** The width of an En space is half the width of an Em space. Thus, a thin space in a passage of 12-point Times Roman is 6 points wide, or 1/12 of an inch. To insert an En space into a passage using Ventura's text editor, hold down the Shift and Ctrl keys while pressing N. To insert a figure space into a passage using your own word processor, type a tilde surrounded by angle brackets (<~>).

**THIN SPACE:** The width of a thin space is half the width of an En space. Thus, a thin space in a passage of 12-point Times Roman is 3 points wide, or 1/24 of an inch. To insert a thin space into a passage using Ventura's text editor, hold down the Shift and Ctrl keys while pressing T. To insert a thin space into a passage using your own word processor, type a | surrounded by angle brackets.

**CUSTOMIZED FIXED SPACES:** Although Ventura provides four types of fixed spaces, you can create more simply by typing a character and setting its color to white. To do so, select the Text function. Then type the character from the keyboard and highlight it with the mouse by dragging the mouse across it while holding down the mouse button. Select the Set Font button. From the font setting dialog box, select White as the color. On the screen the character will not be seen, but its place will be kept in the text.

## How to Calculate Spacing Between Paragraphs

*Case 1*  
 When paragraph A and paragraph B have the same tag

Interline space

+

Interparagraph space

+

Above space for A or  
 Below space for B  
 (whichever is greater)

+

Width of ruling lines

---

Total space between paragraphs

*Case 2*  
 When paragraph A and paragraph B have different tags

Interline space for paragraph A

+

Interparagraph space  
 (only if identical for A and B)

+

Below space for A or  
 Above space for B  
 (whichever is greater)

+

Width of ruling lines

---

Total space between paragraphs

Table 2: The amount of space that Ventura places between two paragraphs is determined by four factors: interline spacing, interparagraph spacing, above/below spacing, and width of ruling lines.

## Spaces Between Lines and Paragraphs

Spacing between lines and paragraphs, termed leading in typography, is controlled by the Spacing option of the Paragraph menu. For each tag, you can specify the spacing above the paragraph, below the paragraph, between lines of the same paragraph, and between two paragraphs with the same tag. In practice, the interaction of these various kinds of spacing becomes rather complex, but by knowing the rules Ventura uses to combine different kinds of spacing you can learn to control precisely the desired distance between lines and paragraphs.

Spacing is always measured from baseline to baseline. Thus, the space between two lines is measured from the baseline of the first to the baseline of the second. Similarly, the space between two paragraphs is measured from the baseline of the last line in the first paragraph to the baseline of the first line in the second paragraph.

**INTERLINE SPACING:** To set the interline spacing for a paragraph, select the Tagging function and select a paragraph. Select the Spacing option from the Paragraph menu. The Spacing dialog box will appear. Enter the desired figure for Interline spacing. The figure you enter will determine the distance from the baseline of one line to the baseline of the next line. Since type is measured in points, it is generally best to use points as your measuring units. To change measurement units, point at the units themselves with the mouse and click. For example, to

change from inches to picas & points, point at the word inches and click.

### **SPACING BETWEEN PARAGRAPHS:**

Any two paragraphs will automatically be separated by at least the amount of line spacing specified for the previous paragraph. Additional paragraph spacing can be specified via three controls in the Spacing dialog box. To set these controls, first select the Tagging function and then select a paragraph. Select the Spacing option from the Paragraph menu. The Spacing dialog box will appear. The three controls are (1) Above, (2) Below, and (3) Inter-Paragraph.

To master Below, Above, and Inter-Paragraph spacing, you need to know the rules for combining the two. These rules are summarized in Table 2.

In working with text, the Rule of Thumb is that you should set Above and Below Spaces as the amount of additional space (besides normal interline spacing) that you want to have between paragraphs. Set Interparagraph Spacing to 0.

## Margins and Indents

In the case of spaces between lines and paragraphs, people tend to get confused because they're not sure whether they should add two settings together or take the greater of the two. With margins and indents, the confusion is much less: you simply add all the settings to determine the entire amount of indent. The difficulty comes in knowing where the settings are located, since they are scattered among several menus.

The best way for how Ventura determines the location of a particular paragraph relative to the edge of a page is to calculate its distance from the edge. You can use the following formula:

Distance of a line from left edge of page = A + B + C + D

Where:

A = Upper Left X position of the Frame within which the text is located. This is set by selecting the Frame function, selecting the Frame itself, selecting the Sizing & Scaling option of the Frame

menu, and specifying a value for Upper Left X.

B = The Left margin of the Frame within which the text is located. This is set by selecting the Frame function, selecting the Frame itself, selecting the Margins & Columns option of the Frame menu, and specifying a value for Left Margin.

C = The In From Left space specified for the tag of the paragraph of that text. This is set by selecting the Tagging function, selecting the paragraph, selecting the Spacing option of the Paragraph menu, and entering a value for In From Left. This indent is referred to as a "temporary indent," since it can change from one paragraph to the next.

D = the Indent Width. This only applies to the first line (or several lines) of a paragraph. To set it, you start by selecting the Tagging function, selecting the paragraph, selecting the Alignment option of the Paragraph menu, and entering values for In/Outdent Width and In/Outdent Height. In addition, you can specify a Relative Indent, which causes the line to be indented so that it starts at the vertical point at which the previous line ended.

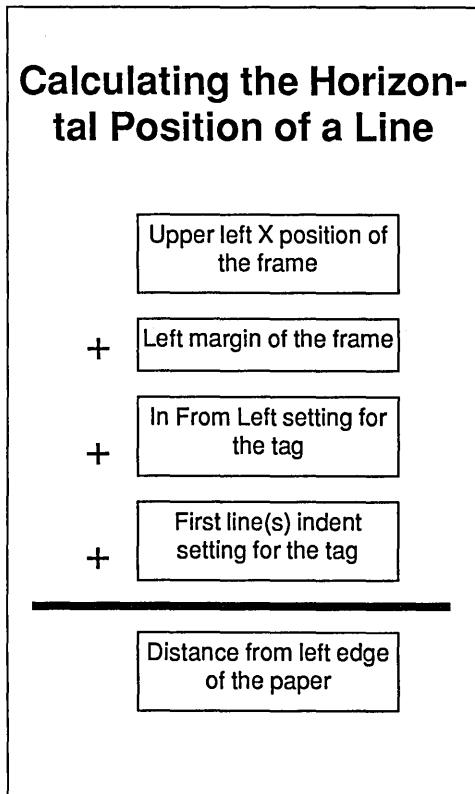


Table 3: Determining the distance of a line from the edge of the paper.

## More on Tabs

The way Ventura handles tabs is quite logical, but since it is different than the methods used by most other programs it tends to cause confusion. Here are some things to keep in mind about Ventura tabs:

- Tabs are measured from the edge of the current column (not the edge of the text in that column). To find out where the edge of the column is located, select Show Column Guides from the Options menu.
- Tabs cannot be set in justified text. For ideas on how to get around this limitation, see the tips below.
- Once a tab is set, Ventura no longer performs word wrap for that paragraph. That means you cannot use tabs for first line indents.
- Ventura will preserve tabs set in your word processor, but not the settings for the tab. Instead, it will substitute its own settings. WordStar tabs are not preserved, but instead are converted into fixed spaces.
- With decimal tabs, the tab aligns with the decimal, a useful feature for

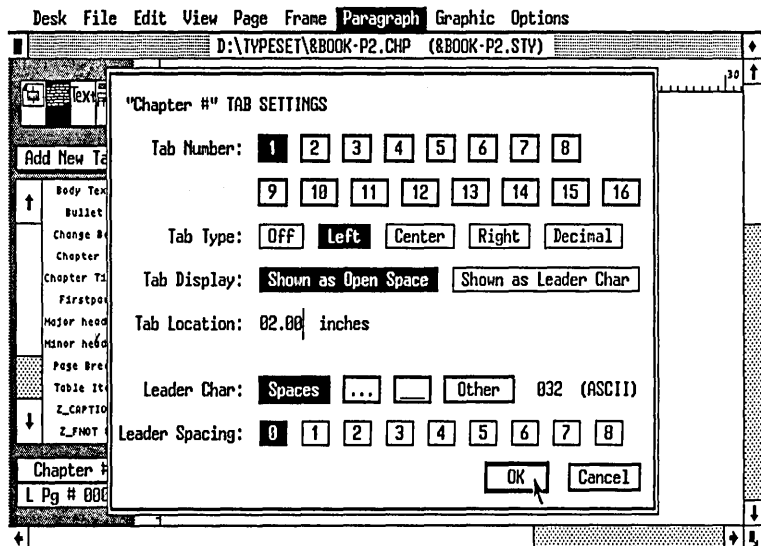
columns for money amounts. In European currencies, a comma rather than a period is used for the decimal point. Since Ventura looks for a period, you need to select Set Preferences from the Options menu and specify a new Decimal Tab Character. The comma is decimal 44.

### Tabs, Breaks, or Box Text?

There are three ways of setting up tabular material, illustrated in the two passages shown below. The first method is to use tabs; the second is to use breaks; the third is to use boxed text.

Tabs should be used when the material in each column does not need to wrap within that column, such as the passage shown below. For the tags to work, the paragraph must be formatted as left-

Figure 2: The Tab Settings dialog box.



justified. In the following example, the first tab is a left tab at 6,06 picas and points and the second is a right tab at 18 picas.

column 1	column 2	column 3
column 1	column 2	column 3
column1	column 2	column 3

Breaks rather than tabs should be used when the material in each column needs to wrap, as in the example below. To set up such material you first type it as separate paragraphs and create three tags. The settings for the three tags are as shown in the columns.

*To create the first tag, select the Alignment option from the Paragraph menu and set Alignment to Justified and Indent Width to 0. Select the Spacing option of the Paragraph menu and set In From Left to 0 picas and In From Right at 13 picas. Select the Breaks option and select Before but not After and Normal for Next Y Position.*

*To create the second tag, select the Alignment option from the Paragraph menu and set Alignment to Justified and In/Outdent Width to 0. Select the Spacing option of the Paragraph menu and set In From Left at 6,06 picas and In From Right at 6,06 picas. Select the Breaks option and select None and Normal for Next Y Position.*

*To create the third tag, select the Alignment option from the Paragraph menu and set Alignment to Justified and In/Outdent Width to 0. Select the Spacing option of the Paragraph menu and set In From Left at 13 picas and In From Right at 0 picas. Select the Breaks option and select After and Normal for Next Y Position.*

The most complex layouts, such as that shown below, are most easily handled by using the Box Text tool in graphics mode, typing text into the boxes, and then setting Line Attributes at None to eliminate the boundaries of the boxes. The drawback of this method is that surrounding text does not flow around boxes, so you'll have to create empty space or draw a frame to contain the boxes.

## Frame Padding

Frame padding is a new feature of Version 1.1 that corrects the problem of text running right up against frames inserted in text blocks containing pictures or tables. To specify padding, select Frame mode, select the frame you want to place padding around, select Sizing & Scaling from the Frame menu, and type settings for Frame X Padding and Frame Y Padding. Frame X Padding sets up a "no entry" zone on either side of the frame; Frame Y Padding sets up a "no entry" zone above and below the frame.

## Reference Points

The position of text is always measured relative to the edge of the paper, even if a particular printer is not capable of printing all the way to the edge of the paper, as is normally the case with laser printers. Ventura does not stop you from specifying margins from frames that go into the unprintable edges of the paper; if

you do so that portion of your page will simply be cut off.

## Simulating Tabs in Justified Text

Ventura doesn't allow you to place normal tabs in justified text. If you do, the program will simply ignore them. Sometimes, however, it is necessary to format text with a hanging indent, such as the following:

Section I.     The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.

With many word processors, you would format this paragraph by specifying a negative indent for the first line of the paragraph, then creating a tab that is the same as the indent for the rest of the paragraph. With Ventura you need to separate the paragraph into two separate paragraphs, typing them as follows:

**Section I.**  
**The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.**

Select the Tagging icon, select the first paragraph, and select Breaks from the Paragraph menu. If the dialog box shows Line Break: No or Line Break:

Before, then you don't have to make any changes. Press Cancel.

If the dialog box shows Line Break: After or Line Break: Before and After, press Cancel, then press the Add New Tag button. Type the previous paragraph's tag next to Tag Name to Copy From, and type a new tag name next to Tag Name to Add:

Select the Breaks option of the Paragraph menu and change the setting to Line Break: Before. Press Enter.

Now select the second paragraph, and press the Add New Tag button. Type the previous paragraph's tag next to Tag Name to Copy From, and type a new tag name next to Tag Name to Add:

Select Spacing from the Paragraph menu and enter the amount of the indent next to In From Left.

Select Breaks and specify Line Break: After.

## Ruling Lines

Ventura allows the creation of a variety of ruling lines: horizontal, vertical, surrounding frames, dashed, and shaded.

Ventura lets you add ruling lines to either a frame or a paragraph tag. The choices are either Ruling Line Below, Ruling Line Above, or Ruling Box Around. In each of these cases, you must specify the line height within the dialog box. You can indicate up to three ruling lines by indicating Height of Rule 1, Height of Rule 2, and Height of Rule 3. If you just want one line, simply specify a Height of Rule 1 and leave the other





lengthen a column. The easiest way to accomplish this is to create a tag called One Point. Move the cursor between the paragraphs, press Enter, and select the Tagging function. Select the paragraph sign between the two paragraphs, select Add New Tag, name the tag One Point, select the Spacing option in the Paragraph menu, and set interline spacing to one point. The effect will be to add an additional point of leading between the two paragraphs.

**Tip: When to Use Tracking and Letter Spacing**

With normal body type set in wide columns, tracking and letter spacing are not necessary. Tracking, which uniformly tightens up the spaces between characters, is used in the following situations:

- In headlines and other text that uses large fonts (such as the chapter titles in this book). Normally, large type sizes are too loose without tracking.
- With italic fonts, which sometimes appear too loose without tracking.
- How to Squeeze Copy Within a Given Area.

Letter spacing, which allows Ventura to add space within words to make up for too much space between words, is generally used in text set in very narrow columns.

**Tip: Using Ctrl-Enter for New Lines**

When setting more than one line using the same tag, such as in a headline or a table, use Ctrl-Enter rather than Enter.

That way, Ventura will not start a new paragraph and spacing will remain the standard interline distance. For multiple-line headlines, this avoids the problem of having the Space Above and Space Below distances added between every line.

**Tip: Using Fixed Spaces Instead of Tabs**

Occasionally, you want to tab a line a certain distance that does not correspond to one of the tabs that have been set for that tag. Rather than setting up a new tab (which will affect other paragraphs with the same tag), try using fixed spaces to achieve a tabbing effect. After inserting the fixed spaces, use the Set Font button to convert them to 12 point type. That way their widths will be the following:

Thin Space (Ctrl-Alt-Spacebar): 3 points or 1/24 inch.

En Space (Alt-Spacebar): 6 points or 1/12 inch.

Em Space (Alt-Shift-Spacebar): 12 points or 1/6 inch.

Fixed spaces are also handy to substitute for tabs in justified text, since Ventura does not allow tabs in justified text. To insert an indent into a single paragraph without affecting other paragraphs, use em-spaces. For a one-inch indent, insert six em-spaces by pressing the Alt-Spacebar combination six times.

**Tip: Line Snap**

To activate line snap, select Line Snap On from the Options menu. Line snap sets up an invisible grid on the page. The width of this grid is the interline spacing used by the Body Text tag. The reference

point is the baseline of Body Text set on the base page. Unlike standard typographic programs, Ventura measures that baseline from the bottom of the descenders of type on a line. You can use line snap for the following:

- Creating a thin frame that is exactly the same height as a single line. Such a frame can be used to adjust vertical spacing in a column of text.
- Making text in adjacent columns line up.
- Allowing two frames to adjoin each other exactly.

#### Tip: Setting Text on a Skew

To set text on a skew, as shown in Figure 4, select the Graphics function and select the line drawing tool, then draw a diagonal line to mark the skew. Select the Frame function and select Turn Line Snap On in the Options menu. Using the

line you have drawn as a guide, you can draw a stairway of frames, each one line in height, from the left margin to the skew line. Text will reformat to flow around the stairway and thus will align with the skew line.

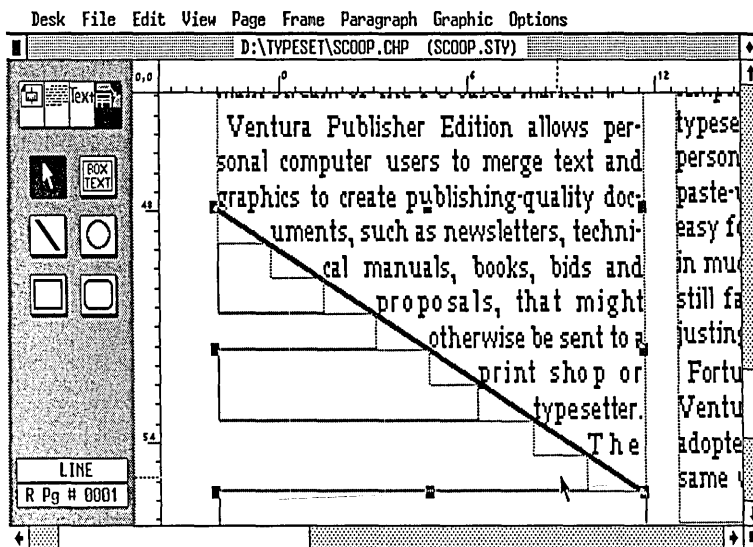
#### Tip: Marker Characters

Ventura uses a variety of markers to indicate the hidden characters used for tabs, paragraph endings, discretionary hyphens, etc. These marks will be shown on the page if you press Ctrl-T or select Show Tabs & Returns from the options menu.

#### Tip: Customized Fixed Spaces

Ventura provides four different fixed spaces: Em space, En space, figure space, and thin space. In addition, you can create your own customized fixed spaces. For example, to insert a fixed space the width of the letter W, type that letter,

*Figure 4:*  
When setting text on a skew, draw a diagonal line for a guide, then draw small frames in a stairway pattern.



highlight the letter by dragging the cursor across it while holding down the mouse button, select Set Font, and in the dialog box select White as the color of the type. Since its color is white, the letter will not print, but Ventura will hold its place in the text passage.

**Tip: Frame Breaks**

In Ventura, there is no Frame Break option to automatically push subsequent text to the next Frame. To create a frame break effect, create a new tag and call it Frame Break. To create the tag, select the Text function, press Enter, select the Tagging function, select the paragraph mark, select Add New Tag, type Frame Break, select Breaks from the Paragraph menu, and select Page Break: After. You can use this tag when you are loading text into multiple frames on the same pages and you wish to break text to the next frame on the same page.

**Tip: Decimal Tab Characters**

Normally, when you specify a decimal tab (from the Tab selection of the Paragraph menu), it is for the purpose of aligning columns of dollar figures at the decimal point. Another use of the decimal tab character is to create an invisible marker to arbitrarily align lines of text. The best character to use for that purpose is | (ASCII 124). You can “hide” this character in a line of text by using Set Font to change its color from black to white (since it takes up barely any horizontal space). By using the decimal tab option in conjunction with this hidden character, you can position horizontal lines freely without using fixed


characters or generating multiple tags. Remember that text containing tags must be left justified.

**Tip: Changing the Size of the Bullet**

If you don’t like the size of the bullet, you can create a larger one. Tag the paragraph and select Special Effects from the Paragraph menu. Select Bullet and select Set Font Properties. By indicating a larger point size, you’ll get a larger bullet even though the size of your text will remain the same. If you select a large point size for your bullet, you’ll also have to use the Shift option to nudge it down slightly.

- Small
- Medium
- Large
- Humongous
- Brobdingnagian

**Tip: Solid Box**

 You can create a tag that places a solid black box at the beginning of a paragraph. To do this you’ll need to first type press Enter in the line above the paragraph to create a blank paragraph. You next need to create two tags, one to format the blank paragraph into the box and the other to format the text so that it is indented to make room for the box. Call the first tag Box and set Breaks to Before. Then select the Ruling Lines Above option and enter the settings as follows: Custom Width selected; Solid

Pattern; Height of Rule 1 equal to the desired height of the box (the example shown here used 3 picas for the height); Custom Width set equal to height; and Space Below Rule 3 slightly greater (3,04 picas and points in this example, more or less depending on the size of the box). For the paragraph itself, use the Alignment option to specify an indent width slightly larger than the width of the box, and to specify the desired number of lines to be indented.

**TIP: SMALL CAPS**

Small caps are capital letters set one point size smaller than the size of current text. Among other purposes, they are useful for making acronyms less conspicuous. In Ventura, creating small caps is easy. Type the text as normal, then highlight it (still working in Text rather than Tagging mode) and select Upper Case and Small from the Assignment List. For an enhanced effect, keep the initial letters of words that would otherwise be capitalized in normal type, as shown above.

**Tip: Vertical Dashed Lines**

Ventura has no command for vertical dashed lines, such as you would use to indicate cutting out a page. Make a frame of zero width and surround it with dashes

**Tip: White on Black**

To create white type on a black background, use the Ruling Line Above option and set Height of Rule 1 to a value slightly larger than the point size of the current font. Enter the same value for

Space Below Rule 3 and select the minus sign (-).

**Tip: Disappearing Rules**

If your ruling line doesn't show, you probably forgot to specify height of ruling line. Ventura will show you a ruling line right inside the dialog box once you specify the line height.

**Tip: Making Mistakes with Picas and Points**

When you're entering measurements for picas and points in dialog boxes, it's easy to neglect both decimal places reserved for points. For example, you might make the mistake of typing 1,6 instead of 1,06. Ventura will interpret the 1,6 as 1 pica and 60 points.

**Tip: Rule To End**

Here's how to make a ruling line extend from the end of the current line to the outer margin. First, select the Tagging icon, select the paragraph, and select Add New Tag. If it is Body Text, rename it Body Text (R).

From the Paragraph menu, select Breaks and set Line Break to Before. Select OK.

Select the Text icon, place the cursor at the end of the line, and press Enter and then press the Tab key to create a blank line containing a single tab. Select the Tagging icon and select the blank line. Select Add New Tag and name the tag Line to End. From the Paragraph menu, select Breaks and set Line Break to After. From the Paragraph menu, select Tabs and make the settings for Tab Number 1 as follows:

- Tab Type: Right
- Tab Display: Shown as Leader Char
- Tab Location: (distance to right margin)

From the Paragraph menu, select Alignment and set Relative Indent to Length of Previous Line.

From the Paragraph menu, select Ruling Line Above and set width to Text, Height of Rule 1 to 12 points, and Space Below Rule 1 to 12 points. Select the minus sign and select OK.

## Questions

*Q: How do you make one paragraph slightly different without affecting all the other ones that have the same tag?*

A: Select the paragraph, then select Add New Tag. When the dialog box appears, type in a new name. Now, any settings you choose for the new tag will apply only to that single paragraph (and any others that you subsequently tag with the new tag).

*Q: How do I change the font for just one word in a paragraph?*

A: Switch to Text mode and select the word (by dragging the cursor across it while holding down the mouse button). Select Set Font. The Font Setting dialog box will now appear, allowing you to change the font for the selected text.

*Q: How can I make a headline that goes across several columns?*

A: Select tagging mode. Tag the headline. Select the Paragraph menu. Select the Alignment option. Select Overall Width: Frame-Wide.

*Q: When I select the Font option from the Paragraph menu, the Kern control is in light gray. How can I get kerning to work?*

A: Kerning cannot be done via the Paragraph menu. Manual kerning is done in Text Mode using Set Font and automatic kerning is done from the Typographics option of the Paragraph menu. To perform manual kerning, select the Text icon, highlight the character to the right of the space you wish to tighten, and select Set Font.

*Q: I turned kerning on in the Page Layout dialog box of the Page menu, but doing so did not cause the text to be kerned. Why not?*

A: In order for automatic kerning to function, the font you're using must include spacing information for each kerning pair (each pair of characters that is to be automatically kerned). Such information is part of PostScript fonts but not of the other fonts provided by Ventura for the HP LaserJet Plus, the AST TurboLaser, or the Cordata laser printer.

*Q: What's the way to make dotted leader characters?*

A: Use the Tab Settings dialog box of the Paragraph menu.

*Q: What is the difference between tracking and space width?*

A: Tracking is a way of globally tightening up the distance between characters. Space width settings provide a minimum, an optimum, and a maximum allowable amount of space between words.

*Q: Kerning looked fine on the screen but did not print correctly.*

A: This is an unavoidable side effect of the fact that the resolution of graphic displays is so much lower than of output devices. At the level of character spacing, true WYSIWYG is still in the future.

*Q: What does Letter Spacing: On/Off mean in the Typographic Controls dialog box of the Paragraph menu?*

A: As long as letter spacing is turned off, Ventura will only adjust the spaces between words as it justifies lines of text. If the program does not succeed in keeping these interword spaces within the limits you have specified for maximum spaceband values, it will highlight the line as a "loose line." By turning on letter spacing, you can then allow the program to adjust the spacing between letters within words, so that the spaces between words can be narrowed. Note that even after you turn letter spacing on, the lines will still be highlighted as loose.

*Q: Some of the measurements in the menus are shown as ~~,~~ rather than*

*as numbers. What is the meaning of these marks?*

A: They denote that the measurement is out of range. Generally, this occurs when you are using fractional points as your measurement units. Any number larger than 99.99 points (about 1.4 inches) will be shown as ~~,~~ fractional points. The solution is to change measurement units, which is done by pointing directly at the words fractional points and clicking with the mouse.

## CHAPTER NINE



# *Using Fonts*

AMONG all the desktop publishing products on the market, Ventura's support for fonts is remarkable in several respects. First, for most laser printers the program provides a set of high quality fonts from Bitstream, guaranteeing all users—no matter what printer they're using—with a solid typographic foundation. (The only exception is that as of Version 1.1 the program supports only one of the HP LaserJet cartridges—the F cartridge.) Second, the program supports more laser printer standards than any other. Third, for most of these laser printers, Ventura provides a way of adding more fonts to those already provided with the program and of converting fonts from one printer format to another.

In this chapter it's assumed that you've installed Ventura for at least one printer and thus have a set of fonts to work with. The next chapter explores ways of increasing the number of fonts at your disposal.

## **Font Terminology**

Generally, the word "typeface" refers to a particular type design, such as Times Roman italic or Helvetica. "Font," on the other hand, refers to the source from which type is generated, usually a file on a computer disk. A "type family" refers to variations on a typeface, such as bold, light, roman (i.e. normal), compressed, extended, obliqued (i.e. slanted), and italic.

Typefaces can be divided into several groups. Display faces are specially designed for use in titles and headlines. Generally, such faces are bold and dramatic. Decorative faces are highly distinctive, used for special-purposes such as advertisements and diplomas.

Text faces are designed for maximum readability. In most cases, text should be in a serif face. (At one time it was thought that serifs enhance readability by providing the eye with helpful visual "clues." More recently, studies have shown that serif type is more readable for those who grew up with serif type, and sans serif type is more readable



for those who grew up with sans serif. In this country, of course, virtually everyone is accustomed to reading text set in serif type.)

The standard unit of font measurement is the point, of which there are 6 to a pica or 72 to an inch. The point size of a font is generally measured from the top of the highest ascender to the bottom of the lowest descender. Point size is deceptive at times because it understates the size of fonts with short ascenders and descenders.

## Bit Map Fonts and Outline Fonts

Both laser printers and digital typesetters are raster devices. That is, the text and images they print are actually patterns of dots on a very fine rectangular grid. Prior to being printed, the arrangement of dots that constitutes a single character is stored as a corresponding arrangement of digital bits, or bit map, in the memory of the laser printer.

Laser printers with sophisticated page description languages such as PostScript and InterPress store type as sets of mathematic descriptions of the character outlines. When called upon to print a 12-point Times Roman italic, the printer uses the outline to generate the appropriate bit map, or pattern of dots.

One advantage of the outline method is that type of any size can be generated from a single set of outlines, thereby providing the ultimate in flexibility while consuming relatively little storage space. A slight disadvantage of the outline

method is that the computations necessary to generate bit maps from outlines exact a toll on printer performance; however, PostScript automatically stores bit maps generated from outlines in a temporary font cache, which generally makes it unnecessary for the system to generate a bit map each time a particular character is needed.

A second advantage of outline fonts is that they are resolution-independent. The same fonts can be used on a 300-dpi laser printer or a 2400-dpi typesetter; in either case, type will be printed at the maximum resolution available.

The alternative method of storing fonts, used by the HP LaserJet, the AST TurboLaser, and most other non-PostScript printers, is to work with a separate set of bit maps for each font size, rather than generate all sizes of a font from a single master outline. The advantage of the bit map method is that size-specific bit maps can produce higher quality than fonts generated from outlines. The drawback of the bit map method is storage space, since you must use a separate file for every font.

Let's say that you want the roman, italic, bold, and bold italic versions of Garamond in every size from 6 points to 36 point. With a printer that uses the outline method, you have to store four outline files: one for roman, one for italic, one for bold, and one for bold italic. With a printer that uses the bit map method, however, you'd need 124 separate fonts (31 sizes times 4 styles). The size of a single bit map file ranges from about 12K for a six point font to 32K for a 12

point font and 105K for a 24 point font. Notice that the amount of memory increases faster than the point size. Above 30 points, bit map font files become so large as to be unwieldy.

Generally, printers that use bit mapped rather than outline fonts are a good deal less expensive than PostScript and other printers that use outline fonts, but the drawback of using such printers is that your range of sizes and styles is more restricted.

One way around the restriction, if your printer uses bit mapped fonts and you do have an occasional need for larger type than 30 points, is a new type of software that provides outlines and can produce bit maps in the appropriate format for printers such as the HP LaserJet. Such bit map generating software is discussed later in this chapter.

## Storage Requirements

The file containing a font outline or bit map may be stored in one of several locations: in the printer, in a plug-in cartridge, or in the computer. Some fonts, designated as resident, are permanently stored in printer ROM and hence are always available for use. In the Apple LaserWriter, for example, Times Roman, Helvetica, Courier, and Symbol are resident in the printer. The LaserWriter Plus has those four plus an additional seven typefaces: Zapf Dingbats, Zapf Chancery, Century Schoolbook, Palatino, Helvetica Narrow, ITC Bookman, ITC Avant Garde. The HP LaserJet Plus and Series

II store Courier 12-point medium and bold, and 8-point Line Printer.

A closely related method of font storage is plug-in ROM cartridges. No PostScript printers on the market use such cartridges. The HP LaserJet, LaserJet Plus, and LaserJet Series II do have a slot for font cartridges and approximately two dozen are available from Hewlett-Packard. Ventura, however, can be used only with the F font cartridge, which contains 14.4-point bold Helv, 10-point TMS RMN medium, bold, and italic, 8-point TMS RMN medium, and 8.5-point Line Printer medium.

A third method of storing fonts is on floppy or hard disks in the computer. These are called soft fonts. A set for the HP LaserJet Plus, the AST TurboLaser, the Cordata, and the J Laser board are provided with Ventura. Additional soft fonts are available from a variety of vendors.

The amount of storage space you'll need on your hard disk for font files varies considerably, depending on whether the fonts are in outline or bit mapped format. In the case of the the AST TurboLaser, the Cordata laser printer, or the J Laser board, 1.2 Mb are required. In the case of the HP LaserJet Plus or Series II, or the Xerox 4045, the amount of storage necessary is twice that much—2.4 Mb—because these printers require that each font be stored separately in portrait and landscape orientation.

## Selecting Fonts in Ventura

There are two ways to specify type characteristics within Ventura—we'll call them the Tag Method and the Set Font Method. The Tag Method is done in tagging mode and sets the font for the entire paragraph; the Set Font Method is done in text mode and sets the font for a portion of the paragraph, such as a single letter, a word, or a group of words. You can also use your word processor to embed the codes used by Ventura for specifying type.

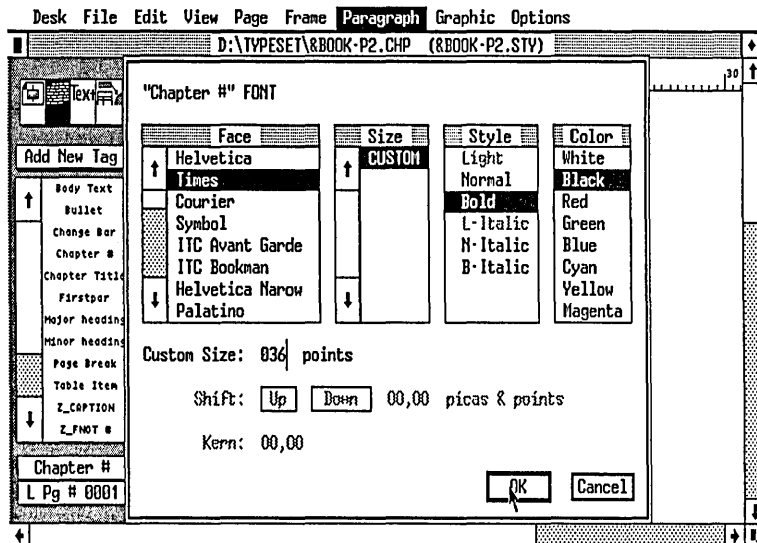
**TAG METHOD:** When you select a paragraph in tagging mode and then select a tag, the font characteristics stored in that tag are automatically applied to the entire paragraph. To change the font information stored in a tag, select a paragraph, select the Font from the Paragraph menu, and choose the Face, Size, Style, and Color from the dialog box.

Under Face, the menu displays the typefaces available for the printer whose width table you are currently using. Note that the width table need not be the same as the printer you are using. We'll discuss the implications of that later in this chapter.

With printers that use bit mapped fonts, the size menu shows you the options you have available. With PostScript and InterPress printers, you can select any custom size (Figures 1). Under the Styles heading, those styles that are available in a particular size are shown in black; others are shown in gray. For other printers, the size options are listed in the scroll bar.

You can also use this dialog box to indicate the color of type. Selecting white causes Ventura to save the amount of space that would be taken up if the text were printed, or prints the characters in white if the background is gray or black.

*Figure 1: The Font Setting dialog box for the PostScript width table.*



This is an extremely useful capability with many possible applications, such as preparing color separations, printing white on black, and creating custom fixed space characters (see the tips below).

You'll notice that the controls for vertical shifting and for kerning are shown in gray in the Font dialog box. These controls are only accessible with the Set Font method of setting fonts.

**SET FONT METHOD:** Use this method when you want to change a single letter, word, or group of words within a paragraph to a different font, or when you want to vertically shift or kern a single word.

To use the text method, select the Text function, then hold down the mouse button while you drag the mouse across the characters you wish to select. Alternatively, click the mouse button once at your starting point the move it to your ending point and click again. The passage, which must be contiguous text, will be highlighted in black. Now select Set Font. The dialog box that appears is identical to the dialog box used by the Tag method, except that now the shifting and kerning controls are available.

Shifting means simply that the selected characters are moved up or down the specified distance. Kerning means that characters are moved to the left to tighten up spaces within the word. The most frequent use of kerning is in situations where large type is used, such as titles.

When using the shift or kern controls, you should normally work in fractional points. If the measurement units

are different, change them to fractional points by pointing the cursor directly at the word inches, centimeters, or picas & points and clicking. With kerning, the number you type determines the distance that Ventura will move the two characters closer together.

Manual kerning should not be confused with automatic kerning, which is also possible in Ventura provided that the font vendor has included the relevant kerning information in the font width table.

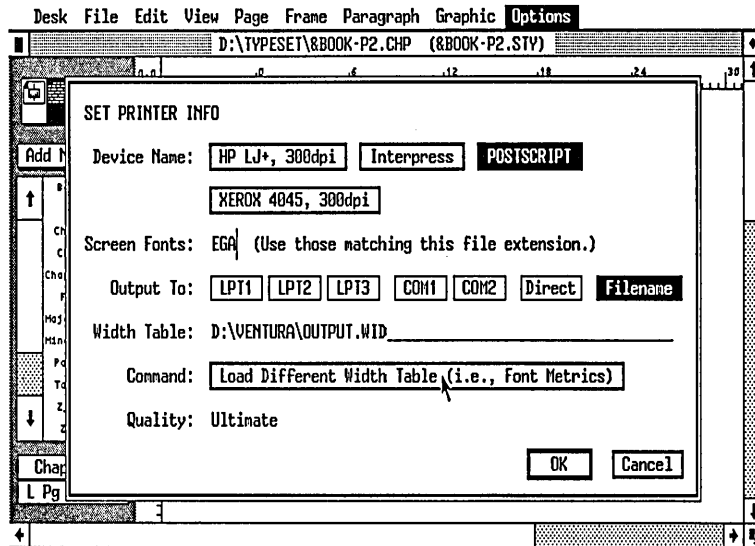
**PREFORMATTING TYPE SPECIFICATIONS:** In addition to using Tags or the Set Font option to specify type, you can also embed codes directly in text files using a word processor. This option is described in Chapter 7, "Preparing, Loading, and Tagging Text."

## Downloading Fonts

Since soft fonts are not resident in the printer or stored on cartridges, they must be downloaded from your hard disk into the printer each time the printer is turned on. Ventura handles this task automatically: each time you print a chapter the program will download the fonts used in that chapter.

While the automatic downloading feature is certainly convenient, you may want to turn it off. For example, typically, it is necessary to print a document several times before you finally get it just right. Particularly if your printer uses a serial port, you'll find that waiting for the fonts to be downloaded each time is more time consuming than you'd wish. One of the

Figure 2: The Set Printer Info dialog box for the PostScript width table.



tips below explains a method for creating a font downloading file that you can send to the printer when you turn it on. You can then turn off the automatic downloading feature.

## Draft and Ultimate Printing

One of the benefits of PostScript printers is their device independence. This means that you can generate draft copies on a PostScript laser printer and then print the final copy of the same copy on a PostScript typesetter. Except for the higher resolution of the typesetter, the two copies will be identical. Thus, the draft copy will give you an accurate preview of your final master.

What if you don't have access to a PostScript printer, but instead are using a more inexpensive laser printer such as a LaserJet Series II? With Ventura, there is

still a way to produce accurate draft copies on the LaserJet that will closely match the final output of the PostScript typesetter. Letter spacing will not match up, but line breaks will be the same.

To set the system up for printing draft copies, select Set Printer Info from the Options menu. Select the LaserJet as your draft printer. Then select the Load Different Width Table command, as shown, in Figure 3. The Item Selector dialog box will appear. Now select the PostScript width table from the list of files. If that width table is not shown as an option, change the Directory line to read: C:\VENTURA\\*.WID.

Since the LaserJet has been selected as the printer, you'll be able to print Ventura documents on that printer as usual. However, since you've selected a PostScript width table, the space allotted to each character will be the same as if you

## Making a LaserJet Download File

If you have a LaserJet Plus, LaserJet Series II, or LaserJet 2000, you can download fonts into the printer. The best tool for creating LaserJet download files is Hewlett-Packard's PCLPak utility, though other tools like SoftStyle's Printworks for Lasers (800/367-5600) can be used as well.

Let's say you want to have two fonts, 18-point and 24-point Swiss bold downloaded automatically to the printer when you type the name of the batch file, SW1824.BAT.

To create this batch file, first load PCLPak by copying PCLPAK.EXE and USENG.CAT from the PCLPak disk to the Ventura subdirectory.

- Place the PCLPak disk in drive A
- Type `COPY A:\PCLPAK.EXE C:\VENTURA`
- Type `COPY A:\USENG.CAT C:\VENTURA`
- Type **2** to select LaserJet+, **M** to select ManageFiles, **D** to select Destination
- Type `C:\VENTURA\SW18B`
- Type **Q** for Quitmenu, **F** for Fonts, **D** for Download, **F** for Filename
- Type `HLVB3018.SFP`
- Type **I** for ID
- Type **1**
- Under current settings, check to see that temp/perm is set to permanent. If not, type **T** to toggle the setting to permanent.
- Type **G** for Go. This will create the file sw18b in your Ventura directory. Now repeat the procedure to create the file sw24b in the same directory. Exit PCLPak by typing **Q**, **Q**, **Y**.
- You should now be in the Ventura subdirectory. Type the following

```
COPY CON SW1824.BAT
COPY/B SW18 LPT1:
COPY/B SW24 LPT1:
^Z
```

Now, when you first turn on your printer you can type `SW1824` to download both files to the printer. They will remain there as permanent fonts until it is turned off again.

were using a PostScript laser printer or typesetter. Thus, line breaks will all be accurate.

Here's another case in which you can take advantage of Ventura's ability to use one printer's width table with another printer. If you have a PostScript laser printer, you'll find that printing pages that contain illustrations is slow because these printers use a serial connection to the computer. You can speed up a PostScript printer considerably if you install a J Laser board in your computer, which uses a high-speed interface cable that bypasses the PostScript controller and connects directly to the printer engine.

Once the J Laser board is installed, you'll have two cables connecting your computer to your printer. When you need high-speed printing you can choose J Laser as your printer; when you want higher quality printing you can choose PostScript. For drafts, you can choose the J Laser as your printer and specify the PostScript width table. Letter spacing will not be accurate, but line breaks on the draft copies will be correct.

## Tips on Using Fonts

### Tip: Creating a Download File for the LaserJet

With the LaserJet Plus or Series II, you can download all the fonts you need for the day and then turn off Ventura's automatic downloading. As a result, you won't have to wait while Ventura downloads fonts each time it prints out a chapter. This approach is especially recommended if you have added to the

512K base memory of the printer with one of HP's memory expansion options.

The procedure for creating a download file and loading it into the printer at the beginning of each work session is shown in the sidebar, "Making A LaserJet Download File."

Once you have created a download file, you also need to modify the HPLJPLUS.CNF file in the Ventura directory. HPLJPLUS.CNF is an ASCII file that lists the fonts you have downloaded as well as the ID number assigned to each. Each font is listed as follows:

permfont(n fontname)

Where n is the ID number and fontname is replaced by the full name of the font, including the SFP or SFL extension.

Now select Add/Remove Fonts from the Options menu and change all the fonts included on the download file to "Resident." Select Save As New Width Table. Henceforth, Ventura will no longer download those fonts each time it prints a document.

### Tip: Big First Character

Big first characters are the large capital letters traditionally used in magazine and book publishing to open an article or a chapter. In Ventura, you can make a big first character a part of your FIRSTPAR tag. From the Paragraph menu, select Special Effects. Select Set Font Properties and specify the font to be used for the large character. Ventura automatically takes care of indenting the remainder of the paragraph to make room for the big character.

You have the option of selecting either Normal or Custom spacing for the first character. If you choose Normal, Ventura will align the top of the big character with the top line of text. If you choose Custom and x lines, it will align the bottom of the character on the base of the xth line. In other words, if you select Custom and 3 lines, it will rest the big character on the baseline of the third line of text.

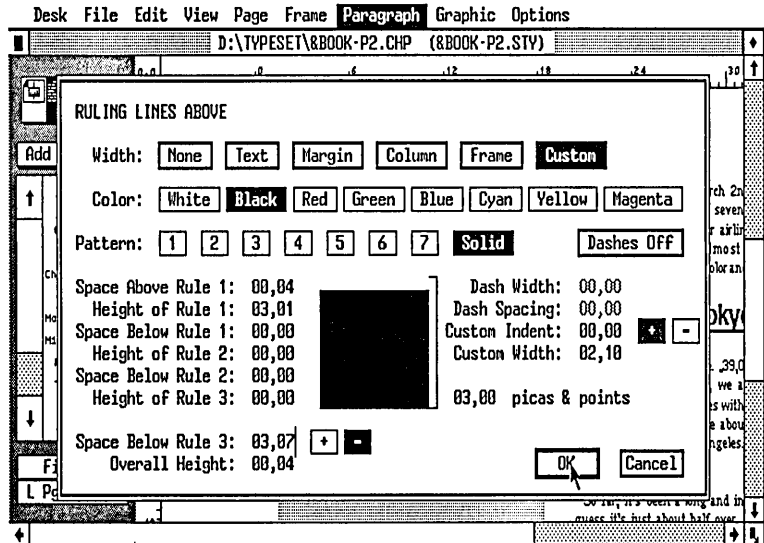
This paragraph shows the result of selecting 36-point Times Roman bold and Normal Spacing in text that is 13-point Times Roman on 15 points of leading.

This paragraph shows the result of selecting 36-point Times Roman bold and Custom Spacing (set to 2 lines) in text that is 13-point Times Roman on 15 points of leading.

This paragraph shows the result of selecting 50-point Times Roman bold and Custom Spacing (set to 2 lines) in text that is 13-point Times Roman on 15 points of leading.

This paragraph shows the result of selecting 54-point Times Roman bold and Custom Spacing (set to 3 lines) in text that is 13-point Times Roman on 15 points of leading. The color of the Big First Character is set to White. The black box is created by using the Ruling Line Above, with settings shown in Figure 3.

Figure 3: The settings in the Ruling Line Above dialog box for creating the white on black drop cap shown above.







## CHAPTER TEN



# *Pagination*

IN THE JARGON of word processing, pagination refers to the capability of a program to automatically print a page number on each page. In publishing parlance, however, the word refers more broadly to the process of assembling the parts of a page and then assembling pages together into chapters and entire documents.

This chapter is about the ways in which Ventura handles the pagination process. While many other desktop publishing programs leave you to handle the pagination task more or less manually, Ventura automates the work to a large degree.

### **Headers and Footers**

You can create a header or a footer at any point after loading a document. To create a header, select Headers & Footers from the Page menu. Select whether the header/footer is for a right or left page, select Usage: On, and type the material you want contained in the header/footer. The three lines—left, center, and right—

are for material that will be aligned left, centered, or aligned right in the header. If you select Chapter # or Page #, Ventura will insert the chapter or page number within the header/footer.

The 1st Match and Last Match commands allow you to select material from your page to include in the header. This is especially useful in references such as the phone book, where the name of the first person listed on the page is also included in the header for that page. If you select 1st Match or Last Match, Ventura inserts a marker that contains the words “tag name.” You must backspace across these words and type the name of the tag that you wish to have as the 1st Match or Last Match.

When you select Text Attr, Ventura inserts a D surrounded by angle brackets. You can replace the D with any of the text attribute codes listed in Appendix D of the manual. These codes allow you to change the font or type attributes of a single word within a header. For example, to make a single word appear in bold weight, include a B on the left side

of the word and an M (to return to medium) on the right side of the word.

When you select Copy To Facing Page, Ventura translates your header to the opposite page, switching the left and right entries of the header/footer to make facing pages symmetrical.

## Tagging Headers and Footers

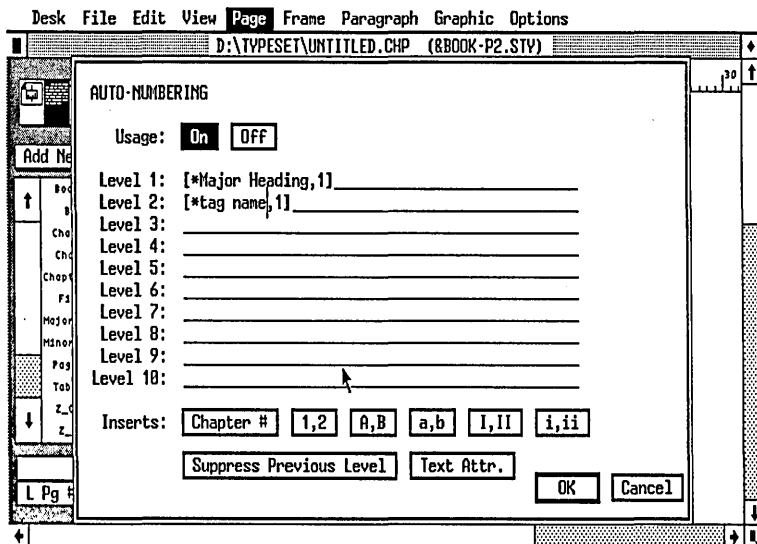
Once you have created a header or footer, Ventura automatically creates a tag, either Z\_Header or Z\_Footer. The Z marks it as a “generated tag.” Such tags can be altered by means of the same procedure used for altering any other tag. If you do not see any generated tags in the Assignment List when the Tagging function is selected, select the Set Preferences option of the Options menu and then select Generated Tags: Shown.

Just as with any other tag, you can alter the font, alignment, spacing, and other features of the header or footer tag. The only limitation is that a header or a footer can have no more than two lines of text.

## Header and Footer Spacing

The relation between header or footer spacing and the margins set for the rest of the page can be confusing. Generally, you should think of the two as being completely separate. No matter what you specify as the spacing above and below a header, the margin for the rest of the page will continue to be constant. In other words, once you set the margins for the rest of the page, they will not be affected no matter what settings you choose for the header or footer.

Figure 1: The autonumbering dialog box



There is one exception to the independence between headers/footers and the rest of the page. It is that if the above and below space set for the header exceeds that of the margin, the margin will be expanded.

One source of confusion for those setting header/footer margins is that the Z\_Header and Z\_Footer tags alone do not completely determine the distance between the tags and the top of the page. For every header and footer, Ventura also generates a new frame and automatically sets up top, bottom, left, and right margins for that frame. So the margin above the header is the top margin of the header frame (set by selecting the Frame function, selecting the header frame, and selecting Margins & Columns from the Frame menu) plus the Space Above setting in the Z\_Header tag (set by selecting the Tag function, selecting the header, and selecting Spacing from the Paragraph menu.)

## Widows and Orphans

Another function of the pagination process is making sure that isolated lines do not appear at the top or the bottom of pages. Such lines are referred to as widows when occurring at the top of the page, or as orphans when occurring at the bottom. The Widows & Orphans selection of the Page menu allows you to specify the minimum number of lines that may be isolated at the top or the bottom of the page. Normally, this should be set to 2 for both orphans and widows, since this will prevent single isolated lines.

## Automatic Numbering

With Ventura, you have the capability of automatically numbering chapters, pages, subheads, and captions. These options are controlled with the Chapter Counter, Page Counter, Autonumbering, and Re-number Chapter options of the Page menu. Of these, the most important dialog box is Autonumbering.

Although it is straightforward, the autonumbering process requires a good deal of attention to detail. The procedure is as follows:

- Select Auto-Numbering from the Page menu.
- Select Usage: On.
- Select 1,2; A,B; a,b; I,II; or i,ii to indicate the type of numbering you want.
- Replace the word “tag name” with the name of the tag you wish to have numbered in your document.
- If you wish to start numbering at a number other than 1, type a comma and the number (as an arabic numeral, e.g. 3) just inside the right bracket.
- If you wish to have any text or punctuation accompanying the number, type it to the right or left of the bracketed portion.
- If you want to have part of the automatically generated material appear in a different font, select Text Attr. Ventura will insert a D surrounded by angle brackets. You can replace the D with one of the formatting

codes shown in Chapter 7 of this book or in Appendix D of the Ventura manual.

- If you don't want the numbers for higher levels combined with the number for a lower level, move the cursor to the beginning of the line and select Suppress Previous Level.
- Once you have completed filling out the lines of the Auto-Numbering dialog box, select OK or press Enter to execute the Auto-Numbering.
- If you wish to change the font or spacing of the number, select the Tag function and select the number. It will have a tag such as Z\_Sec1. Using the options in the Paragraph menu, you can change the font, the spacing, the alignment, and other features of the number.
- If you want the number to appear on the same line as the following text, select the Tag function, select the number, select Breaks from the Paragraph menu, and set Line Break to Before. Then select the following paragraph and set Line Break to After. Adjust the indentation of the first line of the paragraph to avoid overlap. Next, change the tags of other paragraphs to Line Break: After, to avoid overlaps with those paragraphs.
- Automatic numbers are not automatically adjusted if text is edited. If you do perform any text editing, such as deleting a few paragraphs, select Chapter Counter from the Page menu. Contrary to the sound of

its name, this does not renumber the chapters in a publication, but rather resets the automatic numbering used within a chapter.

## Frame Anchoring

Frame anchoring is a useful feature that is new in Ventura 1.1. In the previous version, frames remained stationary unless you manually changed their position. This created problems in long documents, where the addition or deletion of a few paragraphs on page 1 might cause text to flow away from the accompanying illustrations in subsequent pages of the document.

By using the frame anchoring capability, you can keep illustrations with their accompanying text. The procedure for anchoring a frame to a passage of text is as follows:

- Select the Text function.
- Place the cursor in the paragraph to which you want to anchor the frame and click.
- Select Insert/Edit Anchor from the Edit menu.
- Give the frame a name, and select whether you want it to remain on the same page as the anchor, below the line containing the anchor, or above the line containing the anchor.
- Select the Frame function.
- Select the frame you want to anchor, and select Anchors & Captions from the Frame menu. Type the Anchor name. (Note: Ignore the remainder

of this dialog box; the above, below, left, right selections apply to captions rather than anchors.)

Ventura will not automatically adjust the position of anchored frames unless you specifically direct it to. If changes in the text cause frames to flow away from their anchor points, select Re-Anchor Frames from the Page menu. Ventura will attempt to move the frames into the designated positions relative to their anchor points. Frequently, frames will end up in the margins of the page. In that case, you'll have to adjust them manually.

## **Automatic Text Insertion**

You can use the auto-numbering feature of Ventura to place a standardized passage of text in front of every paragraph with a designated tag. By deleting the number within the brackets, no numbering will occur; however, any text you print on that line will be printed at the beginning of every paragraph with that tag. Up to 35 characters of specified text can be automatically inserted using this technique.



## CHAPTER ELEVEN



# Graphics

IN CONTRAST TO the typographic nuances and annoyances of formatting text, the process of loading graphics into Ventura is simple and straightforward.

In working with graphics, the first distinction to keep in mind is the difference between bit-mapped graphics (which Ventura refers to as images) and object graphics (referred to as line art).

Images, which are produced by scanners and by most painting programs, are stored in the computer as patterns of 0's and 1's. The digital pattern in the computer has a one-to-one correspondence to the pattern of dots in the image.

Line art is produced by CAD programs such as AutoCad and by most business graphics programs. Here, the picture is stored in the form of a compact mathematical description.

The advantage of line art over images is that line art can be scaled to any extent without degradation, while images look ragged when scaled. When printed on a high-resolution output device such as a typesetter, diagonal lines in line art become smooth, whereas such lines in images show noticeable “jaggies.”

### Scanning Images

In conjunction with 300-dpi laser printers, digital scanners provide a great deal of utility but also pose some distinct drawbacks. The area in which these devices are of the greatest use is in converting pictures that are black and white only with no intermediate shades of gray (what graphic artists refer to as “line art”—though that term has a different meaning within Ventura Publisher). The quality of such images stands up well when converted into a computer file by the scanner and printed on the laser printer. In contrast, pictures containing shades of gray, such as photographs, are poor candidates for scanning, due to the inherent limitations of a 300-dpi output device. For publications that must stand up to commercial standards of quality, you should always have photographs screened using traditional methods at a graphic arts shop and then paste the half-tone into your document.

To be imported into Ventura, a scanned image must be in one of the formats recognized by Ventura—either PC



Paintbrush (PCX), Gem, or MacPaint (PIC). Most PC scanners can be operated by software that generates files with the PCX or the GEM extension. For example, the Eye-Star software that drives the Microtek MS-300A scanner can produce either GEM or PCX format. The Publish Pac software that drives the Dest Corporation PC Scan Plus scanner can produce PCX files. In addition, both PC Paintbrush Plus (or Publisher's Paintbrush) and Halo DPE can drive scanners directly.



To digitize the Peachpit Press logo shown here, I used PC Paintbrush Plus to drive a Canon IX-12 scanner. To operate the Canon (or other scanners supported by PC Paint-

brush, such as the Dest PC Scan, the ShapeScan, the Datacopy 730, and the HP ScanJet), you select the Scanning op-

tion from the Page menu, as shown in Figure 1. After you select a scanning area, the scanner automatically feeds the image and PC Paintbrush displays the final picture, as shown in Figure 2. You should make the scanning area as small as possible, since even though PC Paintbrush performs some data compression, each square inch of an image can take up as much as 11K on your hard disk. As shown in Figures 3 and 4, you have two levels of zoom available for editing the individual pixels that make up the image. After you alter or clean up the image with pixel editing, you can save the image as a PCX file.

### Loading Graphics

To load a graphic into a Ventura document, follow these steps:

*Figure 1: To scan a picture, you select the Scanning command from the PC Paintbrush Plus or Publisher's Paintbrush Page menu.*

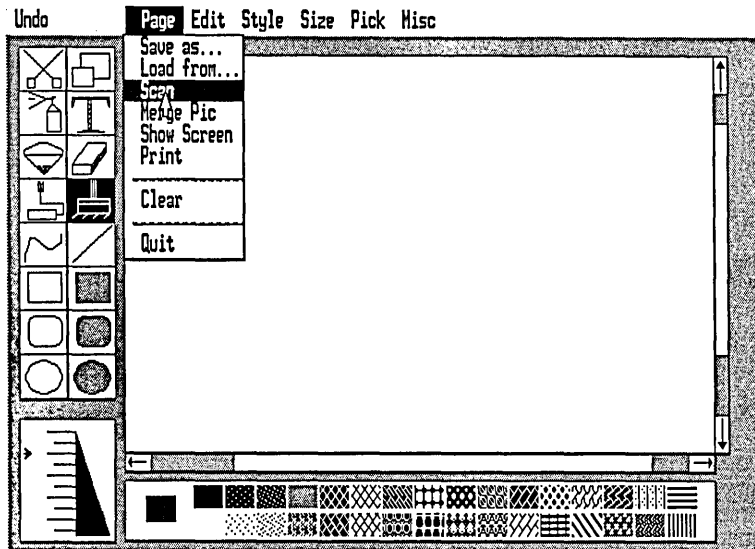


Figure 2: After you scan the graphic, it appears on the PC Paintbrush screen as shown here.

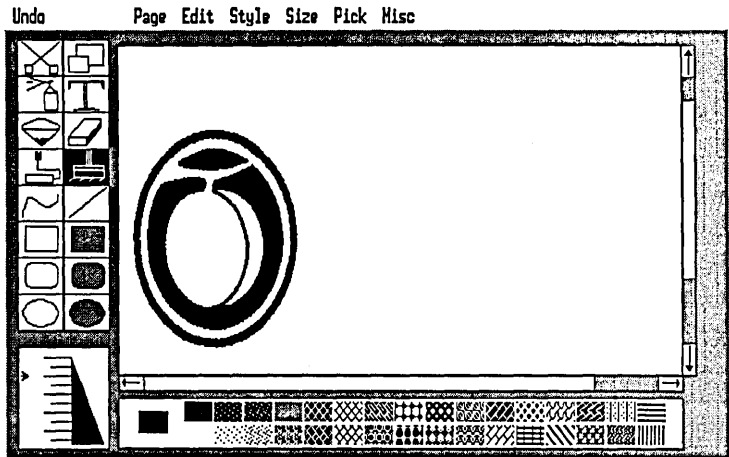


Figure 3: After you select the zoom-in option from PC Paintbrush's Misc menu, you can edit individual pixels.

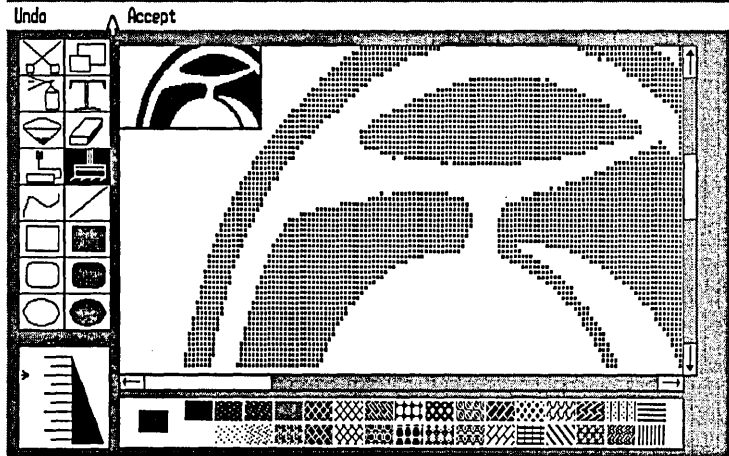
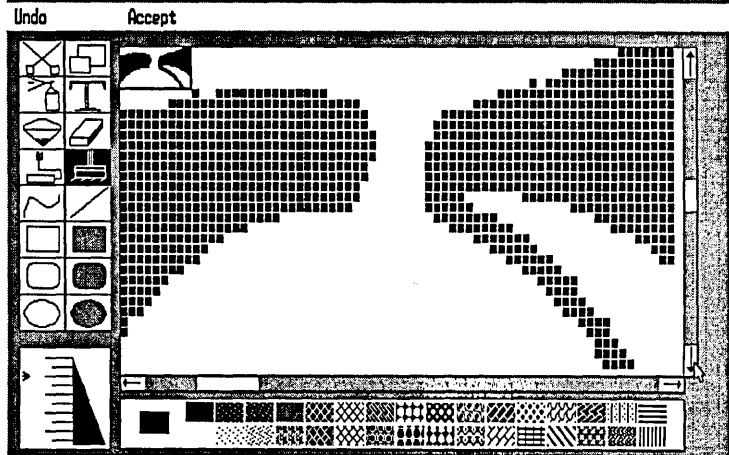


Figure 4: With the ZOOM-IN option, you can work even more closely at the pixel level. The portion of the picture being enlarged is shown in the upper left.



## Programs That Use CGM Format

20/20 - Access Technology	Publishing
A/GRAPH - Donovan Data Systems	Hornet 5000 - Claremont Controls
Allspice - Acotech	IRMAGRAF - Eastman Kodak
Apollo - ABA Groups	Labtech Notebook - Laboratory Technology Corporation
ARC+ - Architecture and Computer Aids	LARSA - Innovative Analysis
ASI Font System - Analytical Software	LLCOGO - Lewis and Lewis
Business Strategist and Business Simulator - Reality Development Corporation	MathPlan 3.0 - Wordperfect Corporation
CADTEC - Itautec Information S/A	Matrix-X - Integrated Systems
Cadwrite - IBM	Mavis - Robinson Associates
CASE Manager - Computer Aided Structural Engineering	Metal Building Program - International Structural Engineers
COGO Pac - Mapttech	Micro Cadam - CADAM
Concept 100 - Concept Technologies	MicroCAD - Imagimedia Technologies
Custom/QC - Stochos	MicroCUBE - McDonnell Douglas
DaVinci Business Graphics Package - Professional Research Consultants	MicroTrak - SofTrak Systems
Display - ISSCO	OPTEC - Sciopt Enterprises
ESTIMATION/Automatics - Tipnis	Opus - Optim Electronics
Excalibur - Communication Dynamics	PC Link A Graph - ISSCO
Fortgraph APA - Digital Communications Associates	PC-DOE - CA Systems International
Freelance - Lotus	pcEXPRESS - Information Resources
GAF - Simulation Software Systems	Personal Engineer - Computervision Corporation
GPOS-7 - Planmetrics	PlotTrack - SofTrak Systems
GRAFTIME - Genigraphics Corporation	PMS80 - Pinnell Engineering
Graph 6 Application Development Facility - Honeywell Corporation	PROCAD 4.02 - Interactive CAD Systems
Graphics Operating System - University of Texas	Q.E.D. DAC - Hart Scientific
Harvard Presentation Graphics - Software	R:BASE Graphics - Microrim
	Redliner - Auto-Trol Technology
	Route Assist - Logistics Resource

*Table 1: Programs that create files in CGM format (Source: VPUG).*

Sigma-Plot and Sigma-Scan - Jandel Scientific	als Management Systems
Simsript II.5 - CACI	Technology Futures Software Library - Technology Futures
SIPSURF - Delfts Spline Systems	TextCharts - Hewlett-Packard
Sound Presentations - Communication Dynamics	Timepiece - Communications Dynamics
SPC-PC - Quality America	VIA - Tektronix
SPD - Tektronix	Viewpoint Graphics - Computer Aided Management
ST-PC Translator - Sangamo Weston	VSA Software - Applied Computer Solutions
Super Sceptre - Austria Microsystems	XICAMM - Xiris Corporation.
Surface Display System - Design Profession-	

Table 1 (continued).

<b>Programs That Use VideoShow Format</b>	
Autumn - Zenographics	orgCHART - TNET
Microsoft Chart - Microsoft	PC Presents! - Imedia
ChartMaster - Decision Resources	PC Slide Showmaker - Management Graphics
Ego - Zenographics	PictureIt - General Parametrics
EnerGraphics - Enertronics	PicturePak Eye Openers - Marketing Graphics
FlexDraw - TNET	PicturePak Business World - Marketing Graphics
Freelance - Lotus	PicturePak Maps - Marketing Graphics
Graphwriter - Lotus	SignMaster - Decision Resources
Graphic Decision Support System - Data Business Vision	Speaker Support Plus - Meta-4
Hot Shots - New Vision Technologies	VideoShow - General Parametrics
Image Management System - Electronic Cottage	VIP - Matrices
Impressionist - ExecuComp	Visual Express - Visual Media
Mirage - Zenographics	

Table 2: Programs that support VideoShow format (Source: VPUG).

- Prepare the graphic with your graphics program or scanner software.
- Load Ventura and open the chapter into which you want to place the graphic
- Create a new frame for the graphic by selecting the Frame icon, selecting Add New Frame, and then drawing the frame on the page.
- Select Load Text/Picture from the File menu. The Load Text/Picture dialog box will appear.
- Select Line-Art or Image, then select the appropriate format. The Item Selector dialog box will appear.
- Enter the name of the path and extension on the Directory line, and enter the name of the file on the Selection line. For shortcut methods of selecting paths, extensions, and file names, refer to Chapter 6, "Managing Files."

## Types of File Formats

Ventura can import the following formats for line art: GEM, AutoCAD SLD, Lotus and Symphony PIC, Mentor Graphics, VideoShow, MacDraw and other Macintosh PICT, Computer Graphics Metafile (CGM), Encapsulated Postscript Standard Format (EPSF), and Hewlett-Packard Graphics Language (HPGL).

Table 1 lists the programs that can produce files in VideoShow format. Table 2 lists programs that produce files in CGM format.

## Cropping, Scaling, and Positioning

More controls have been provided in Ventura 1.1 for handling graphics. Previously, it was not possible to crop line art, for example. Now all the operations for that apply to images apply to line art as well.

Once a graphic has been loaded into a frame, you can proceed to crop, scale and position it. Select the Frame icon and select the frame containing the graphic. Next, select the Sizing & Scaling option of the Frame menu. All the controls for manipulating imported graphics are located in the Sizing & Scaling dialog box, shown in Figure 5.

## Sizing the Frame

Underneath the text flow control, which allows you to specify whether you want text to make room for the new frame, the next set of controls is for changing the position and size of the frame itself and for creating a margin around the frame.

The figures shown for Upper Left X, Upper Left Y, Frame Width, and Frame Height are the current parameters of the frame you have drawn. The Upper Left X coordinate measures the distance of the upper left corner of the frame from the left side of the page and the Upper Left Y coordinate measures the distance of the frame from the top of the page. By entering new settings for the upper left corner of the frame and for its width and height, you can move a frame or position it more precisely. By using the two settings for

padding, you can create additional space around the frame.

To the right of Vertical Padding is the unit of measurement unit that applies to all settings in the Sizing & Scaling dialog box. You can change this by placing the cursor directly on top of the unit of measurement (i.e. the word inches, picas & points, etc.), and clicking the mouse button.

### Scaling and Aspect Ratio

Underneath the settings that control the position and size of the frame are settings that let you scale and crop the graphic. If you choose Fit in Frame, Ventura will make the picture as large as possible without exceeding the boundaries of the frame. If you also choose Distorted, Ventura will enlarge it to both the horizontal and the vertical edges of the frame; if you choose Maintained, the program will pre-

serve the original ratio of its horizontal and vertical dimensions.

Selecting the By Scale Factors option lets you crop an image and manually enter its width and height. The X Crop Offset moves the picture to the left if you select the plus sign, and to the right if you select the minus sign. The Y Crop Offset moves the picture up if you select the plus sign and down if you select the minus sign.

Another way of cropping is to hold down the Alt key while holding down the mouse key and moving the mouse.

### Internal Graphics

To use Ventura's internal graphics, you select the Graphics icon and then select the tool you wish to use. After creating the graphic, such as a line or a box, select the Line Attributes or Fill Attributes to set the thickness, color, or end styles (in

Figure 5: The Sizing & Scaling dialog box.

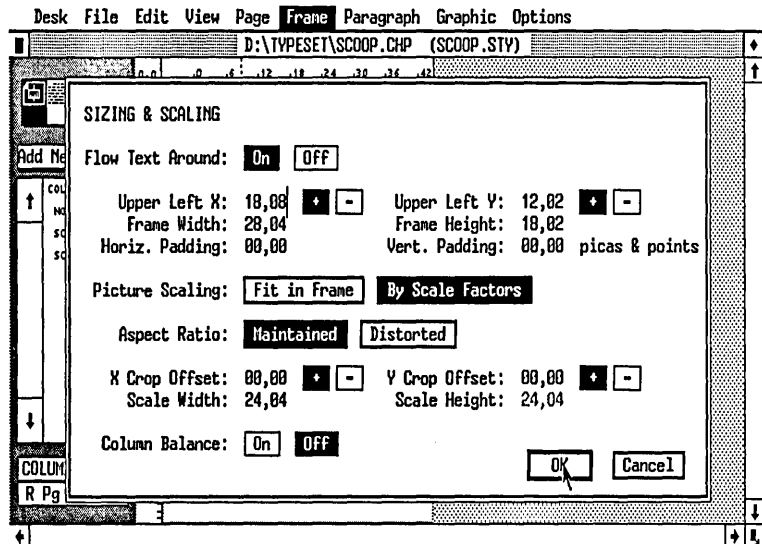


Figure 6: By substituting other tags for the Box Text tag, you can vary the format of text contained in boxes on the same page.

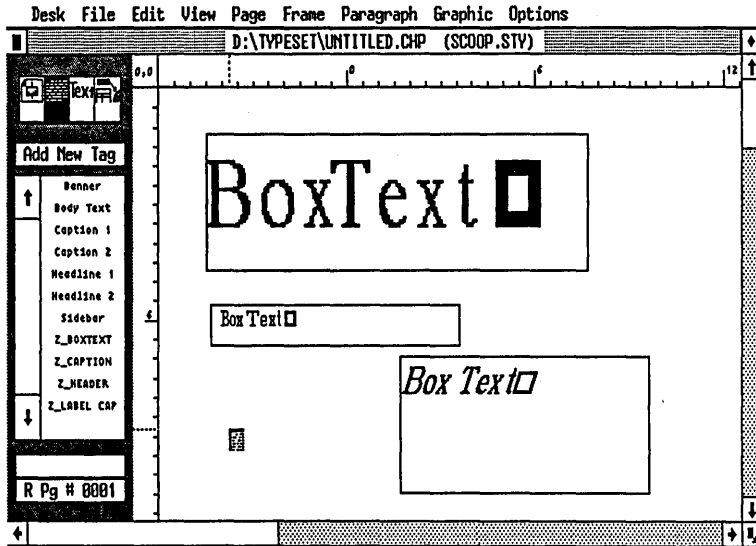
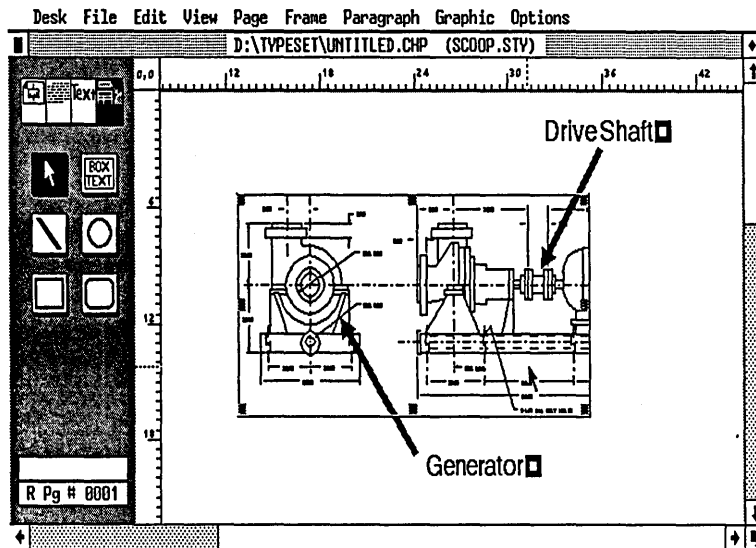


Figure 7: Labeling graphics with box text "Post-Its."



the case of lines), or color, fill pattern, and opaqueness or transparency (in the case of boxes and circles).

If you want to draw a series of graphics and have them all be the same attributes (such as five arrows), select the attributes for the first arrow and select Defaults: Save To. From then on, all the graphics of that type that you draw will have the same attributes.

After you use a graphic tool, the selection defaults to the selector arrow. If you want to quickly draw several lines or boxes without selecting the line or box key each time, hold down the Shift key while you draw the graphics.

## Selecting Graphics

Once you have drawn a graphic, you can always go back and change its appearance, stretch it, or move it. To do so, simply select the pointer icon (the one that looks like an arrow) and point at the graphic. Six small black boxes will appear around the graphic to indicate that it is selected.

Once selected, a graphic can be stretched by selecting one of the edge boxes, holding down the mouse button and dragging that edge inward or outward. It can be moved by placing the cursor within the graphic, holding the mouse button down, and dragging the graphic to a new location. Finally, once selected, you can change the settings for the graphic from the Graphic menu.

After printing a draft of a document, you will no longer be able to select graphics that you previously were work-

ing with. The reason is that Ventura defaults to the base page frame after printing. To select a graphic after printing, select the Frame icon, select the frame to which the graphics are attached, then select the Graphics icon again.

It is possible to select multiple graphics. This allows you to change all their settings together or to drag them as a group. There are two ways to select multiple graphics:

- Hold down the Shift key while selecting them one at a time.
- From the Graphics menu, Choose Select All. Then hold down the shift key while de-selecting those graphics you don't want in the group.

## Graphics and Frames

An important point to note is that every graphic you draw is "attached" to the most recent frame that you selected. However, the graphic does not have to actually be within the boundaries of the frame. That allows arrows to be drawn pointing into an imported graphic. It also provides the basis for some useful tricks described below.

A second important point to note is that graphics drawn directly on the base page frame will be repeated on every page.

## Box Text

The box text drawing tool allows you to draw boxes that can also contain text. To



use box text you select the box text tool and then hold down the mouse key while drawing the box. The words Box Text should appear in the box. Switch to text mode, place the cursor within the phrase, backspace across it, and type any text.

Initially, Ventura generates its own tag Z\_BOXTEXT, for the text you type in a box. However, you can label boxes with other tags instead of Z\_BOXTEXT, just as you would tag any other text. In fact, if your box contains two paragraphs you can use two different tags within the box, as shown in Figure 6.

## Labelling Graphics

Box text is especially useful for labeling graphics, as shown in Figure 7. Notice that it is not necessary for the boxed text to be within the frame containing the graphic. After you create the box, you can specify Line Attributes: None so that

the box itself disappears and only the frame is left. If you select the frame containing the graphic while drawing the boxes and arrows, the labels and arrows will move if you move the frame to a new location.

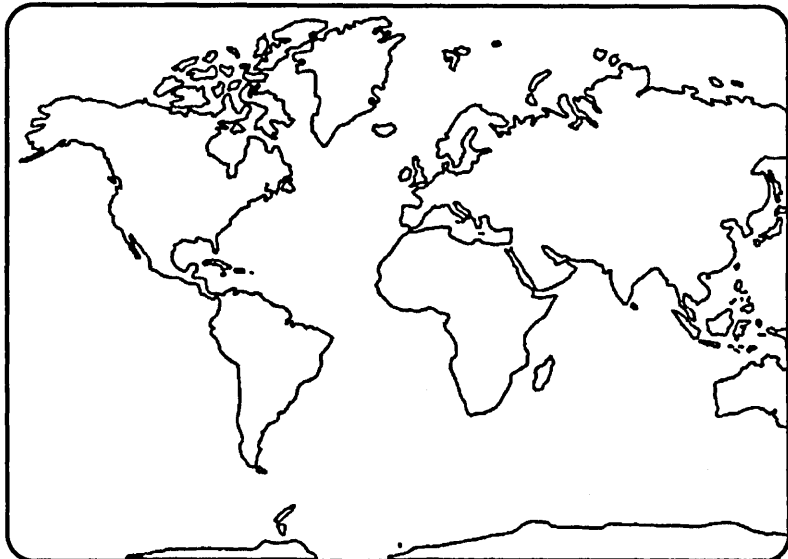
## Creating Tables

Another useful application of box text is for creating forms and complex tabular material, as illustrated in Chapter 2, "Tutorial: A Form," and Chapter 8, "Typography." When using box text for forms and tables, you can have the option of using different line and fill attributes, or of eliminating the box lines entirely.

## Frames or Box Text?

When should you use frames and when should you use box text? Generally, you

*Figure 8: Each set of disks in the PC Quik-Art collection is devoted to one topic. Among the subjects included are holidays, sports, advertising tools, religion, business and finance, and cartoons. This image is taken from the US and World Maps disk.*



should only draw a frame on a page to hold text when you are loading text from a word processed file, when the text must be in multiple columns, or when the text must jump to another frame. Otherwise, you should use box text because of the greater control provided by the grid settings feature and because a group of boxes can all be moved together, retaining their relative positions, when you select and drag the frame to which they are attached.

## Clip Art

Clip art refers to collections of non-copyrighted professional illustrations used by graphic artists. With the advent of MacPaint on the Macintosh and similar programs on the PC, large clip art collections have been assembled on disk. Because of Ventura's ability to import images in MacPaint, MacDraw, PC Paintbrush, and other formats, these large collections can now be utilized in Ventura documents.

Images on Macintosh disks, of course, must be transferred to PC formatted disks using a conversion setup such as TOPS from Centram or PC MacBridge from Tangent Technologies. However, some Macintosh clip art companies have stated the intention of providing their graphic images on PC disks as well.

Although less clip art is available in PC graphics software formats than in Macintosh formats, some of it is of excellent quality and is worth investigating. The largest collection of PC Paintbrush images is the one sold by PC Quik-Art in

Athens, Georgia (800/523-1796), which has converted over 40,000 commercial illustrations from SCW Services, an established graphic arts supplier. Information on other products is included in the Product Information appendix.

One thing to find out before you purchase a clip art collection is whether each piece of art is contained in a separate file. Collections in which several pieces of art are in each file are difficult to use because you have to go through the trouble of cropping out the unwanted images.

## Tips on Graphics

### Tip: Using a Scanned Graphic for Large Type

Many non-PostScript printers cannot print large type. For example, the AST TurboLaser, HP LaserJet Plus, and the Cordata laser printer are limited to type of 30 points or smaller, and the JLASER board is limited to type of 48 points or smaller. If you were printing a monthly newsletter and wanted very large type for your masthead, you could have the masthead prepared at a typeshop, use a scanner to convert it into a graphic image, and then load it into Ventura as an image. This option, of course, is only practical for something that is used over and over, like the newsletter masthead.

### Tip: Precise Positioning of Graphics.

If you want to precisely position a graphic, one way is to use the current position indicators, the small dotted lines on the rulers. An even more precise method, however, is to create a special position marker on the page. To do so,

Figure 9: This scanned image provides a template for tracing using Ventura's graphics tools.

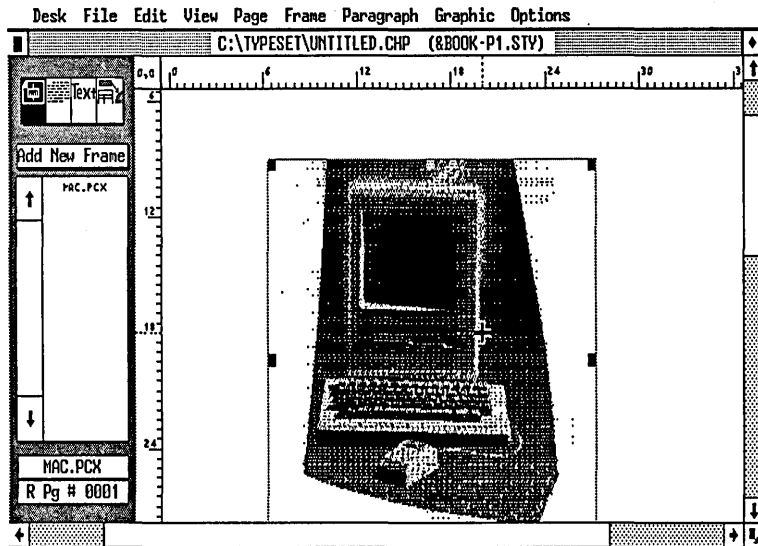
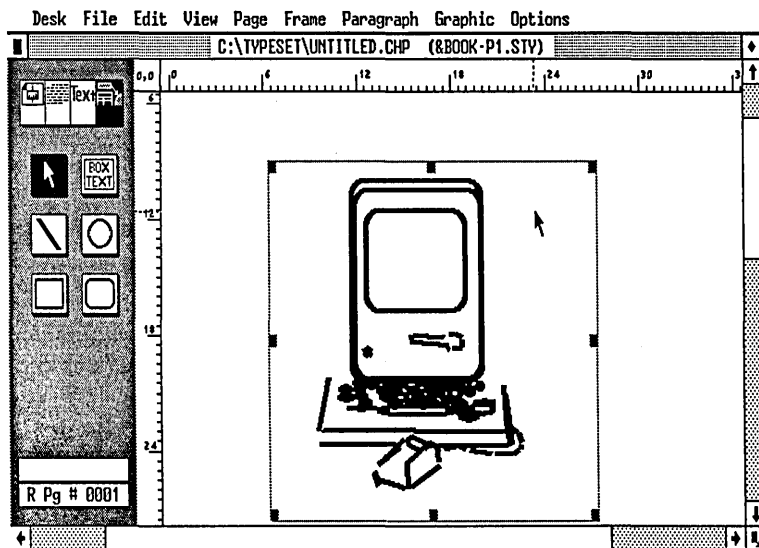


Figure 10: After using Ventura's graphics tools to trace the image, you can remove it from the page using the Remove Text/File option of the Edit menu.



draw a small frame. From the Frame menu, choose the Sizing & Scaling option. Type the coordinates you wish to mark next to Upper Left X and Upper Left Y. You now know the precise location on the page of the upper left corner of this "positioning frame." Deactivate the frame by clicking on a different one, so that the positioning frame will be used for reference purposes only, rather than to hold the graphic you are about to draw. After drawing the graphic, you can reactivate and delete the frame, which has served its purpose as a reference point. This is a handy trick for placing crop marks at odd locations, like 1.3 inches from the top and left sides of the paper.

**Tip: Using a Tracing Template**

It is possible to load a scanned image into a frame and then trace on top of it using Ventura's drawing tools, as shown in Figures 9 and 10. After you finish tracing, you can then select Remove Text/File from the Edit menu to remove the image. By holding down the Shift key while drawing with the Line tool, you can rapidly generate a traced sketch on top of the scanned image. To enhance the quality of the result, trace it larger than you intend to print it, then shrink it to the desired final size.

**Tip: Making Room Around Graphics**

Ventura automatically flows text around graphics frames, but the fit may be too tight for your liking. To create some extra space, use the new padding option of the Sizing and Scaling menu.

**Tip: Trouble Selecting Graphics**

In graphics mode, if you have trouble selecting a graphic element such as a box or a circle, select the Frame icon, select the frame containing the graphic, then return to graphic mode.

**Tip: Moving Objects Without Distortion**

Often when you click on a small graphic, the cursor will take the shape of a pointing hand and immediately distort the object before you move the mouse. To make it easier to move such hard-to-grab graphics, create a box in the same frame and choose Select All from the Graphics menu. When you move the box, the small graphic will also be moved.

**Tip: Lotus 1-2-3 Graphics**

With most laser printers, the Lotus 123 PrintGraph program is limited to a crude 75 dot-per-inch resolution. However, once a graph has been loaded into Ventura it will print at a full 300 dpi. Simply draw a frame on a blank page, load the Lotus graph, and then stretch the edges of the frame to make it any size you want. If you're not satisfied with the chart labels and titles imported from Lotus, create your own with Ventura's Box Text tool, format them using tags or Set Font, choose an opaque white background, and drag them into place to cover up Lotus's labels.

**Tip: Cropping a Graphic**

There are two ways to crop a graphic. One is to create an eraser box to mask part of the graphic, as described in the tips above. The other is to move the graphic so that part of it is hidden by the

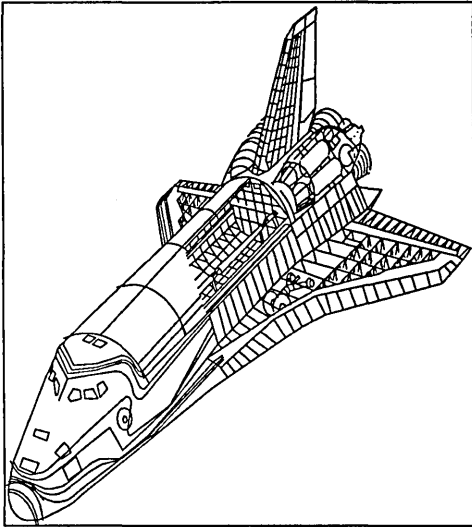


Figure 10: Margins 0, fit in frame, distorted.

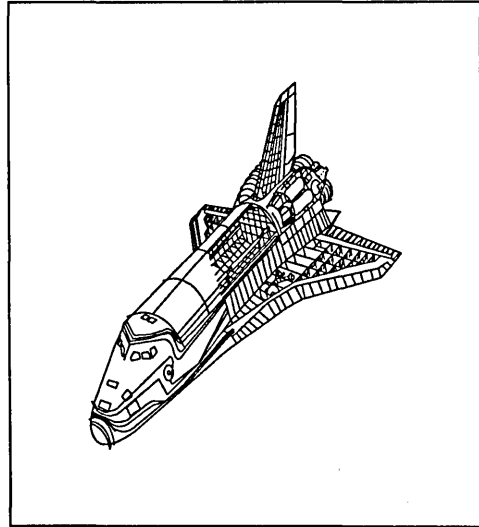


Figure 11: All margins 3 picas, fit in frame, distorted.

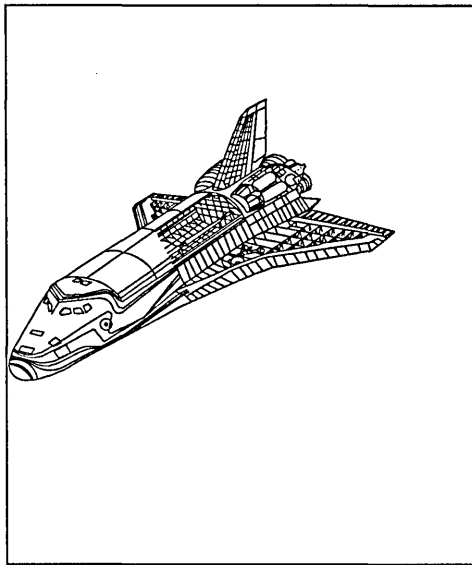


Figure 12: Margins 0, by scale factors, aspect ratio maintained, width 15 picas, no crop.

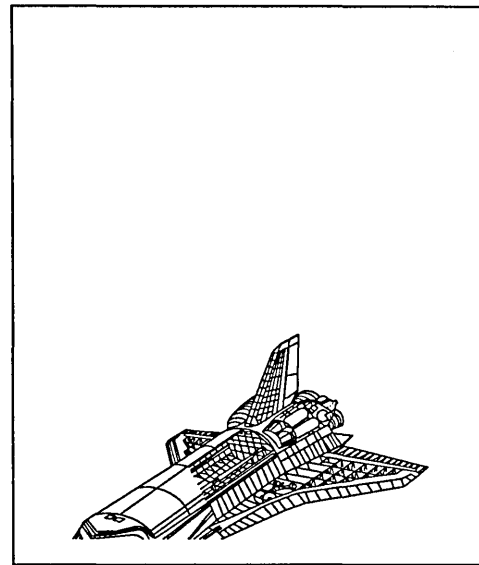


Figure 13: All margins 1 pica, by scale factors, aspect ratio maintained, width 15 picas, Y crop -8 picas.

boundary of the frame or by the frame margin. Figures 10-13 show the shuttle image with six different settings for margins, crop offsets, picture scaling settings, and aspect ratio settings.

**Tip: Speed up Ventura By Hiding Pictures**

After loading a picture on a page, you should activate the “Hide Pictures” option in the Options menu. This allows Ventura to perform scrolling and other operations more quickly. You can even keep the pictures hidden while drawing labeling arrows and working on captions.

**Tip: Graphic Groups**

If you want to create a group of graphics that you can select and move as a group, “tie” the group to a frame. They don’t actually have to be placed within that frame, and the frame can be very small. In fact, you can place the actual frame off to the side and then draw the graphics directly on the page. Unlike other graphics drawn directly on the page, they will not be repeated on subsequent pages because they are not attached to the base page. To select the group as a whole, you can activate the frame, then select the Graphics icon, and type Ctrl-Q to select the group as a whole.

**Tip: Erasers**

You can use opaque white boxes as erasers to cover up small portions of text or graphics. Select the Graphics icon, and select the box tool. Draw a box. From the Graphics menu select Line Attributes and set Thickness to None. From the Graphics menu select Fill Attributes and

set Color to White, Pattern to Solid, and Result to White.

**Tip: Placing and Removing Graphics**

After you load a picture, it may not immediately appear on the screen. You’ll notice that its name is shown in the Assignment List, however. To make the picture appear, select the Frame icon, select the frame into which it is to be loaded, and select the name from the Assignment List.

To remove a picture from a frame, select the Frame icon, select the Frame containing the picture, select Remove Text/File from the Edit menu, and indicate List of Files or Frame. If you choose List of Files, the image will be entirely removed from Ventura. If you choose Frame, the image will still be listed in the Assignment List and you can reload it by selecting its name.

**Tip: The Ballot Box**

A small empty box, known as a “ballot box,” is frequently needed for creating check-off boxes on forms. However, it is not included in the fonts provided by Ventura. To create such a box, type an Em space (Ctrl-Shift-M) followed by Enter to make the Em space the only character in its own paragraph. Select the Tagging icon and tag the Em space. Select Add New Tag and name it Ballot Box. From the Paragraph menu, select Ruling Box Around and select Text, with the Height of Line 1 equal to half a point. To make the ballot box be on the same line as the following text, set its Breaks at before and the Breaks for the following paragraph at After. To make the Ballot

Box the right size you may need to adjust the size of the font. Use the Set Font option to do that as well as to shift the box down slightly, if necessary, to make it align properly.

A quicker way to create a ballot box, whose size cannot be adjusted, is to select the Graphics icon, select the Graphic menu, select Grid Settings, select Off, select the Box Text tool, point the cursor at the location of the desired ballot box, and click the mouse button once without dragging the mouse. The result will be a square box, 1 pica tall and one pica wide.

#### **Tip: Moving Graphics Between Documents**

You can copy any frame and its contents from one document to another. Select the Frame icon, select the frame to be copied, press Shift-Delete, load the new chapter, and press Ins.

#### **Tip: Drawing a Perfect Circle**

With many monitors the pixels are not square and hence the aspect ratio is not 1:1. That means a circle that looks perfectly round on the screen will actually print as an oval. To create a circle that will print round, first activate the ruler. Next, from the Options menu select Set Ruler and make sure the horizontal and vertical units of measurement are the same. Select the Graphics icon, select the Circle tool, and move the cursor onto the page, and note the position of the vertical and horizontal hairlines on the rulers. Now press the button and pull the mouse down and to the right. Move it until the distance you have moved on the vertical

and horizontal rulers is equivalent. Then release the button.

#### **Tip: Centering a Graphic.**

Normally, when you first load a graphic into a frame, it will run up against the edges of the frame. To center the graphic within the frame you could select the Sizing & Scaling option from the Frame menu and adjust the X and Y Crop Offset settings; however, a better method is to select Margins & Columns from the Frame menu and enter equivalent values for top, bottom, left, and right margins. Ventura will then automatically resize the graphic to fit within those margins.

## **Questions**

*Q: I'm making a crossword puzzle and want to create numerous boxes identical in size. How do you make multiple copies of a graphic such as this?*

A: The method for making copies of frames and of graphics is exactly the same. Select the frame or the graphic. Press Shift-Del. Now drag the frame or graphic to the location you want to copy it to. Press Ins. The frame or graphic will reappear at its old location and you'll now have two copies.

*Q: I'm using a PC AT and am having trouble using Shift-Del to copy a graphic. I hold down the Shift key and then press Del, and when I do so the graphic simply disappears.*

A: On the AT keyboard there are two Del keys. The one that works for copying

graphics is on the numeric pad; the other Del key does not work properly.

*Q: I'm having trouble selecting graphics. When I point at them and click, nothing happens.*

A: The problem is probably that the frame to which the graphics are attached is not selected. Even if you have selected the frame, it can become de-selected when you print a page or when you select the Text icon (to edit the contents of a Box Text, for instance). To re-select the frame, select the Frame icon, and then select your frame again. Then select the Graphics icon and select the graphic.

*Q: What's the difference between line snap and grid snap?*

A: Turn Line Snap On is an option in the Options menu. Grid Settings is an option in the Graphic menu. Line snap applies to text and frames placed on a page, which will automatically be aligned to the nearest text baseline, based on the leading set in the Body Text tag. The Grid Settings option sets up an invisible grid that applies only to graphics. It is especially useful in creating tables. For example, to create a form that will be filled out by people using typewriters, set the vertical portion of Grid Snap to 1 pica.

*Q: I created a graphic, labeled it with arrows, then moved it. The arrows stayed behind. How can I get the arrows to move with the graphic?*

A: Make sure that when you are creating them, the same frame is selected at all times. If they are all attached to the same

frame, they will all move together when you reposition the frame.

*Q: I need vertical dashes to indicate a cutout page in a book. How can I make them?*

A: The usual method for generating vertical lines is with the Vertical Rules... option of the Frame menu. However, it does not allow dashed lines to be specified. The way to create a vertical dashed line is by creating a Frame with no width and surrounding it with a dashed boundary. Draw a thin, tall frame. Then in the Sizing & Scaling dialog box in the Frame menu, select 0 as the Frame Width. In the Ruling Box Around dialog box, select the Ruling Box Around option in the Frame menu. Select Width: Frame and Pattern: Dashes On. To select the frame "holding" the dashed line, select the Frame icon, hold down the Ctrl key while pointing close to the frame, and keep clicking until that frame has been selected.

*Q: I created a very small box and now want to move it. However, every time I point at it and click I see the pointing finger symbol on screen (for stretching boxes) rather than the four-way arrow symbol (for moving boxes). How can I move the small box?*

A: Create a larger box near the small box. Then hold down the Shift key while you select both. Now, when you move the larger box, the small box will move with it. You can use this technique to move the small box into the exact location you want.



***Q: When I print a Lotus graphic, the type is tiny.***

**A:** Ventura substitutes its own fonts to match those of Lotus 1-2-3. When a graph is imported into the program, the font it picks is a 2-point Helvetica (Swiss). You cannot tag this text. The only way to make it larger is to cover it up with larger type that you create using Box Text.

***Q: I drew a frame, selected the File menu, selected the Load Text/Picture option, and selected a graphics file to load. However, the picture did not load into the frame and the frame remained blank. How do I get the picture to load into the frame?***

**A:** After you select the graphics file to load using the Load Text/Picture option, its name should appear in the Assignment List on the left side of the screen. Select the frame you want to load the picture into. When you point at its name in that menu and click with the mouse, it will appear in that frame.

***Q: Some of the graphics options recognized by Ventura are for MacPaint and MacDraw. How can I transfer graphics from a Macintosh to a PC?***

**A:** One way is to use TOPS, a networking program from Centram Systems West. With this product, you can easily shuttle files back and forth from the Macintosh to the PC. Another way is to transfer the file containing the image with a telecommunications program.

***Q: Is it possible to place padding around captions?***

**A:** Yes. Select the Frame icon. Select the caption frame (not the picture frame), select the Sizing & Scaling option of the Frame menu and specify padding settings.

***Q: I want two pictures to overlap, but I can't load them into the same frame.***

**A:** You can't load two pictures into one frame, but you can draw two overlapping frames and load a picture into each.

***Q: When I loaded the graphic into the document I couldn't see it any more.***

**A:** Select the Frame icon, select the frame where the graphic is supposed to be located, select the name of the graphic from the Selection List. If the graphic still doesn't appear in the frame, select the Sizing & Scaling option of the Frame menu and check the settings for X and Y crop offset. If these settings are too large, the picture will have been pushed out of the frame.

***Q: What's the largest graphic I can print with a LaserJet Plus?***

**A:** In the best possible case, where no fonts have been loaded into the printer, the largest graphic you can print is 32 square inches. However, if you select the 150 dpi LaserJet Plus option you can print a full page of graphics. From the Options menu, select Set Printer Info, and from the dialog box choose HP LJ+, 150 dpi.

*Q: I use a PostScript printer and am finding it takes much too long to print pages containing graphics. What are my options for speeding things up?*

A: Since PostScript printers use a serial connection to the printer, they are the slowest at printing graphics. To speed things up, you can buy a LaserMaster or a J Laser board. Both provide a high speed interface that bypasses the PostScript controller and can print graphics extremely quickly. Unfortunately, on pages that you print via the LaserMaster or J Laser board, you won't be able to use PostScript fonts.

*Q: I set margins for the frame but the graphic didn't fit within them.*

A: From the Frame menu, select Sizing & Scaling. Set Picture Scaling to Fit in Frame.

*Q: I selected the Graphics icon and then selected the arrow tool, but was unable to draw arrows.*

A: There is no arrow tool per se. The tool that looks like an arrow is actually the selection tool, which is used for stretching or moving graphics. To draw arrows, select the line icon, then use the Line Attributes option of the Graphic menu to specify an arrow line end.

*Q: Often, when I select a left pointing arrow in Line Attributes dialog box, I end up with an arrow that points to the right. Is this a bug?*

A: Ventura always considers "left" to be the starting point of the line you drew and "right" to be the ending point. If you're

arrow is pointing in the wrong direction, draw it over again, this time starting at the other end.



## CHAPTER TWELVE



# *Document Layout Strategies*

YOU CAN USE Ventura to produce virtually any type of document: forms, business reports, books, technical manuals, business letters, brochures, catalogs, newsletters—the list is endless. Fortunately, you don't have to master a completely different set of techniques for each document.

There are three basic layout strategies that apply to almost all documents. Each strategy is appropriate for certain types of materials but not for other types. A large part of mastering Ventura is in knowing how to classify a job, and then bringing the right set of techniques to the task.

This chapter starts by describing the three layout strategies that are available with Ventura. It then reviews the procedure to follow in laying out several types of documents, and finally includes some layout tips.

### **Layout Strategies**

Although one might devise other terms, we'll refer to the three layout strategies as base page, newspaper style, and free form. The three tutorial chapters at the beginning of this book provide an examples of each strategy. The business report uses a base page layout, the newsletter uses the a newspaper-style layout, and the form uses a free-form layout.

### **Base Page Strategy**

The most common type of documents are those in which you use a word processor to create text, then load the text directly onto the base page in Ventura. Ventura then automatically creates as many pages as are needed to hold the entire text file. Any settings you specify for number of columns, margins, headings, and so forth are automatically reflected throughout the document.

The base page layout method is appropriate for books, technical manuals, catalogs, and other lengthy documents that can be divided into chapters and in which each chapter contains a single long text file. To see an example of how to set up such a document, see Chapter 1, "Business Report." Additional notes on books, manuals, and catalogs are provided below.

## Newspaper-Style Strategy

Some documents differ from base page documents in that they require text from several different files to be joined up on the same page. You could do this by merging the word processed files together before importing them into Ventura, but that would not solve the problem of articles that leapfrog each other, for example starting on page 1 and jumping to page 7.

This need for stories to temporarily pause on one page with a "continued on..." and then resume on a different page calls for a different strategy. The method used to format newspaper-style documents is to draw frames, using the column boundaries on the base page as guidelines. You then load text into these frames rather than directly onto the base page.

When asked to load text into a frame, Ventura loads as much of the text file as will fit and then stops. To continue the file into a new frame you select that frame and then select the name of the file from the Assignment List. Ventura starts where it left off and continues loading

text onto the second frame until it again runs out of space.

The newspaper-style layout strategy is appropriate for newspapers, newsletters, and magazines, and sometimes for books and brochures.

## Free-Form Strategy

While the newspaper-style strategy provides more layout flexibility than the base page method, some documents require even more flexibility. For example, in forms and flyers, small blocks of text and even individual words are arranged freely on the page. Sometimes the text is surrounded by boxes, as in tax forms; other times it accompanies graphics, as in the typical flyer.

For such documents it would be too impractical to create each piece of text as a separate file and import each into its own frame. Instead, the free-form strategy calls for the use of Ventura's Box Text tool, which allows text to be entered in boxes and then moved freely around the page.

Of course, you could do roughly the same thing by drawing small frames on the page and entering text in these, but entering text in boxes has several advantages over entering it in frames. First, you can use the Grid Snap feature when drawing boxes, which makes it easy to lay out boxes of uniform height when creating forms. Second, when you type text into boxes you don't have to set up a new text file each time, which is the case when you type text into frames. Third, with the Select All option of the Graphics

menu, you can select groups of boxes and move them together, a process that is more difficult in the case of multiple frames. Finally, with the Box Text feature you can store the line and fill attributes of a box and use them to make numerous boxes with the same attributes.

## Designing Documents

The three strategies outlined above all beg the more fundamental question of document design. Although a full-blown discussion of that topic is obviously outside the scope of this book, before proceeding we'll now take a summary look

at it and list to some reference materials on the subject.

In traditional publishing, the job of designing a document is kept rigidly separated from the jobs of typesetting and pasteup. The organization of labor is this: first the designer creates a set of specifications for all the elements of the document, based on his or her own sketches and mockups. Next, the typesetter creates galleys according to the specifications, and the pasteup artist—also following the directions of the designer—cuts and pastes these onto boards along with illustrations.

Those new to publishing often tend to minimize the importance of having a

## Books About Graphic Design

*Layout* by Allen Hurlburt, (1977)  
Watson-Guptill Publications  
1 Astor Plaza, 1515 Broadway  
New York, NY 10036  
800/526-3641, 212/764-7518  
List price: \$22.95

*Do-It-Yourself Graphic Design* by John Laing (1985)  
Macmillan Publishing  
Front and Brown Streets  
Riverside, NJ 08370  
800/257-5755, 212/702-2000  
List price: \$9.95

*Editing by Design* by Jan V. White (1986)  
R.R. Bowker  
245 W. 17th St.

New York, NY 10011  
800/521-8110, 212/916-1600  
List price: \$29.95

*The Graphic Designer's Handbook* by Alastair Campbell (ed.), (1983)  
Running Press  
125 S. 22nd St.  
Philadelphia, PA 19103  
800/428-1111, 215/567-5080  
List price: \$14.95

*Macintosh Desktop Design* by John Baxter (1987)  
The Baxter Group  
Box 61672  
Sunnyvale, CA 94086  
408/248-8308  
List price: \$15.95.

Table 1

formal design for a document. Frequently, the attitude is: "I'll feel my way through, designing as I go along."

A compromise between ad lib designing and the formal design approach is to use Ventura itself to design your document, creating mockups of each different kind of page that the document will contain.

As the designer, there are two kinds of consistency that you must enforce: first, consistency within pages; second, consistency from one type of page to the next. For example, even though the index pages are quite different from chapter title pages, the margins and the placement of headers and page numbers must be exactly the same in both.

If you've never designed documents before, the best way to learn the basics is simply to copy the designs of existing documents. In addition, there are a number of excellent books on the subject, some of which are listed in Table 1.

## Universal Procedure

Assuming you have at least a preliminary design for your document and have determined which of the three layout strategies to use, the next step is to get to the work of setting up the appropriate file structure, style sheets, frames, etc.—in short, laying out the document. The procedure is basically the same no matter what type of document you are creating.

- Prepare text and graphics, as described in Chapter 7, "Preparing, Loading, and Tagging Text," and Chapter 11, "Graphics."

- Prepare a directory structure to hold Ventura's own files and the text and graphics files. This is covered in Chapter 6, "Managing Files."
- Design the document. Some documents are laid out according to precise specifications created by a designer. For others no formal design is ever done. With most documents, some sort of design is done in advance and then adjusted and fine-tuned as the document is tagged and draft copies are printed.
- Load Ventura.
- Establish a new style sheet. You can do this either by creating your own style sheet from scratch or by modifying one of Ventura's style sheets. To start from scratch, load the DEFAULT style sheet from the Typeset subdirectory and then save it under a new name in a different subdirectory. Then begin creating tags. Alternatively, you can load one of the style sheets provided with Ventura (located in the Typeset subdirectory and designated with & as the first character), and save it under a new name in a different subdirectory. Always work with the style under its new name to preserve Ventura's original style.
- Select the desired defaults under the Options menu, particularly the Set Preferences selection of that menu.
- Select a paper size, using the Page Layout option of the Page menu. Note: this is the size of the paper you are using in your laser printer, not

the final size of the pages of your document. For now, ignore the other selections from the Page menu.

- Select reduced view so that you can view the entire page as you prepare the grid.
- Remove any ruling lines or boxes from the base page. This is done from the Frame menu.
- If necessary, use the Sizing & Scaling option of the Frame menu to change the size of the base page frame to match the trim size of your final document. Use the Set Ruler selection of the Options menu to change the 0,0 point of the ruler so that it begins at the corner of the base page frame.
- Draw crop marks, if needed, to mark the corners of your base page frame.
- Establish a grid, i.e., the margins, columns, alleys between columns, and gutters for the page (see “Notes on the Grid” below).
- If working with a newspaper-style layout, draw a frame to cover each column.
- Load text onto the base page (in a base page layout) or into each separate frame (in a newspaper-style layout).
- Tag text and use the Add New Tag as needed to create new tags. Use the options from the Page and Paragraph menus to change the formats stored in each tag.
- Add headers and footers (Page menu).
- Draw frames to hold pictures or special text such as tables.
- Add captions to frames (Frame menu).
- Use Ventura’s internal graphics tools to add arrows, labels, and other enhancements to imported graphics. Make sure that the correct frame is selected when you create these added graphics, so that if you have to move the frame the arrows and labels will maintain their positions relative to the graphics.
- Print a draft of the chapter.
- If this is the first of a multi-chapter document, save it as CHAPTER1.CHP, then convert it into a template for other chapters. To do that, remove the text and graphics files from the chapter using the Remove Text/File option of the Edit menu, and save the chapter as TEMPLATE.CHP.
- Load the text for the next chapter into the template chapter. Save it as CHAPTER2.CHP.

## Notes on the Grid

The grid is the invisible set of lines that guide the layout process, allowing different types of pages to fall within standard boundaries. In setting up your grid, you’ll find it easier to work in picas than in other measurement units, since you can usually do everything in single picas and avoid the need for working with frac-



tions. For example, an 8 1/2- by 11-inch page comes to 51 by 66 picas.

**TRIM SIZE:** The trim size is the final size of the pages after they are printed, bound, and then trimmed. With technical manuals, the base page is frequently the standard 8 1/2- by 11-inch sheet. When you print a book, you have to indicate the corners of this trimmed page, preferably by placing cross marks at each corner.

**CROP MARKS:** When you take the camera-ready pages to a printer, they must each have four crop marks indicating the corners of the trimmed page. At the printer, a film negative will be made of each page, and the crop marks will provide a reference point for the camera.

There are two ways to place crop marks on your printed pages. One is to have Ventura automatically generate the crop marks by selecting the Print option from the File menu and then selecting the Crop Marks option in the dialog box. When you select this option you won't actually see the crop marks on the screen, but they will appear on the printed page.

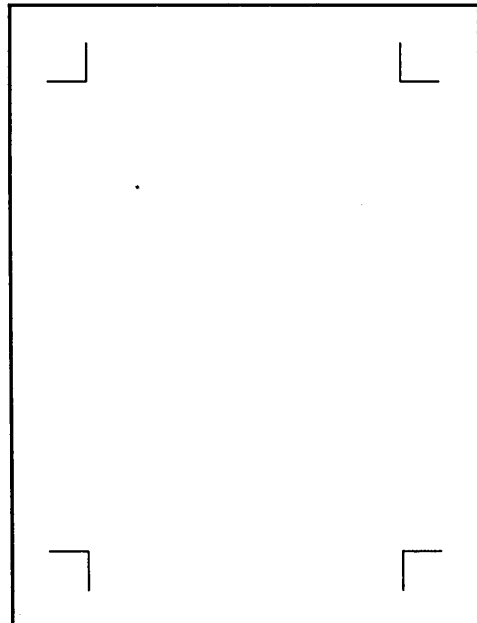
Unfortunately, automatic crop marks are placed outside the base page frame, and they won't appear when your base page frame is the same size as your paper. In particular, when you are printing on 8.5- by 11-inch paper and not altering the size of the base page frame, you won't be able to use the automatic crop mark feature.

Incidentally, here's how to change the size of the base page frame. Select the Frame icon and then select the base page. Select the Sizing & Scaling option of the Frame menu. Enter values larger

than 0 for the Upper Left X and Upper Left Y, settings and values smaller than 8.5 inches for the frame width and smaller than 11 inches for the frame length.

The other way to create crop marks is to draw them using Ventura's graphics tools. Before you draw the crop marks on the page, remove any ruling lines on the page. For example, if you are adapting the &Book-P1 style or the &Book-P2 style, you will need to remove the ruling box around the frame by selecting the Ruling Box Around option of the Frame menu and selecting Width: None.

To draw the crop marks, select the Graphics icon, then select Graphics Settings from the Graphics menu. Set Grid Snap On and set horizontal and vertical spacing to approximately .250 inches.



Draw a horizontal line at one of the corners. Select Line Attributes from the Graphics menu and choose settings for the line. Then select Defaults: Save To to make these settings apply to the remainder of the crop marks you draw. Draw crop marks at all four corners of your trim.

Fortunately, you only have to draw the crop marks once—on the first page. Ventura automatically copies any graphics placed on the base page onto all subsequent pages.

### **Gutter**

The gutter is a thin margin that is added to the spine edge of each page to compensate for the portion of the page hidden by the binding. On left-hand (usually even-numbered) pages the gutter is added to the right; on right-hand (usually odd-numbered) pages the gutter is added to the left. For bound materials, an extra 2 or 3 picas is a suitable gutter.

According to publishing convention, documents start on a right page and all right pages have an odd number. From the Frame menu select Margins and Columns. Set the Right Margin equal to the desired margin and the Left Margin equal to the right margin plus the gutter. Select Copy To Facing Page and press Enter. Now the dotted lines that indicate the column or margin also indicate the active area.

### **Margins**

In traditional book design, margins are sized so that the bottom margin is the largest, the outside margin the next largest, the top margin the next largest,

and the inside margin the smallest. (These days, of course, those guidelines are routinely ignored by designers.) The top margin normally marks the top of text, and the header is placed within this margin. Likewise, the bottom margin marks the bottom of text, and the footer is placed within this margin. No matter what type of publication you are working with, the top margin should be fixed, with text columns hanging from it like curtains. The bottom margin is much more open to adjustment. Many magazines and newsletters run “ragged bottom.”

Margins are set in the Margins and Columns selection of the Frame menu. Because we have already adjusted the edge of the frame to be the edge of the trim, the margins are measured from the edge of the trim rather than from the edge of the paper.

### **Active Area**

The active area is the area within the margins. The active area is the portion of the page on which text and graphics are normally placed (on occasion something may be placed outside this active area, but normally the active area is not exceeded). Headers, footers, and page numbers, however, do fall outside the active area.

### **Alley**

The alley is the space between the columns, which is set using the Margins and Columns option of the Frame menu. Somewhat confusingly, Ventura refers to the alley as the “Gutter.” One pica is

normally a sufficient measure for the alley.

**Columns**

The width of the columns is set in the Margins and Columns selection of the Frame menu. The maximum and minimum desirable width for text columns depends on the size and typeface of the font. For multicolumn documents, designers recommend a minimum line length of 20 characters, an optimum of 40 or 50 characters, and a maximum length of around 60 characters. Lines longer than 60 characters are occasionally used in book designs; however, text set in long lines can be difficult to read because of the tendency of the eyes to lose their place when they complete one line and scan back to the left for the next.

<b>Helvetica (Swiss)</b>	
<i>Point Size</i>	<i>Characters/Pica</i>
10 point.....	2.68
11 point .....	2.46
12 point .....	2.24
<b>Times Roman (Dutch)</b>	
<i>Point Size</i>	<i>Characters/Pica</i>
10 point.....	2.86
11 point.....	2.62
12 point.....	2.38

*Table 2: Average character counts per pica for Helvetica and Times Roman*

If you do need to set wide lines, use a wide font that has a small number of characters per pica. Typefaces whose designs make them suitable for wide columns include Schoolbook, Goudy, and Korinna. Faces with more narrow characters include Times and Galliard. Table 2 shows the average character counts per pica (including uppercase and lowercase letters), for the two typefaces provided with Ventura.

## Books and Manuals

### Overview

The procedure for laying out books and manuals is the same, except that with manuals there is more use of Ventura's automatic numbering feature. As described above under "Universal Procedure," the basic strategy is to work on the first chapter until you are satisfied with the appearance, then remove the text and graphics from the chapter and save it as a template for the rest of the manual or book. Once you have created the initial style sheet and template chapter, laying out additional chapters is merely a matter of loading them into the template, tagging text from the style sheet, and adding graphics.

At first you may wonder why it is necessary to create a template chapter in addition to a new style sheet. After all, doesn't the style sheet contain all the formatting information necessary to make

every chapter look the same? Not quite. What's lacking from the style sheet are the margins and contents for headers and footers (although the tags for the headers and footers are saved in the style sheet). Also, if your document contains a number of illustrations all the same size, the template file is a useful place to store properly-sized and captioned master frames.

## Preliminaries

As described above under "Universal Procedure," the first thing you need to do after creating the text and graphics for your document is to organize your directories. You should create a new subdirectory to contain your book or manual. We'll call it BOOK. Within this directory you should create three subdirectories, BOOK/DOCS (for text files), BOOK/ILLUS (for graphics files), and BOOK/VEN (for chapter files, style sheet files, and other files generated by Ventura). By copying all your text and graphics files from their original locations into the appropriate directories, you'll have duplicate copies of each, including copies of your text files that don't include any tags.

## Starting a New Style Sheet

Load Ventura and start a new chapter. From the File menu, load either Ventura's one-column or two column style sheet (&BOOK-P1.STY or &BOOK-P2.STY). Save the style sheet under a new name, let's say MyBook.

You can now change the size of the base page frame, if desired, using the Sizing & Scaling option of the Frame menu and entering new values for Upper Left X and Y and for the page length and width. A word of warning, however: when you work with a format other than a full-page base page frame, Ventura does not automatically move the header and footer to align with the new, smaller base page frame. That's not a serious problem for the header, since you can simply increase the top and left margins. But if your design calls for a footer you'll find that you may not be able to position it at the bottom of your page.

Another option is to produce the master pages of your book at an enlarged size. This method, which was used in producing this book, is described in Chapter 18, "Two-Up, Saddle-Stitch, and Other Formats."

## Establishing the Grid

Assuming you don't alter the size of the base page frame, the next series of steps is to place crop marks on the base page frame, and select margins for your columns and alleys between the columns. Note that the top and bottom margins are measured from the edge of the page to the top and bottom of your text. Headers and footers have separate margins and are positioned within the overall margins. Left and right margins will normally be different to allow a gutter on the spine side of the page. By selecting Copy To Facing Page from the Margins & Columns menu, you can have your set-

tings for right pages mirrored in left pages, and vice versa.

## Headers and Footers

Once you have set up your margins and columns, use the Headers & Footers option of the Page menu to select the content of your headers and footers. Ventura will create frames to hold these elements, and to specify margins for those frames you need to select the frames themselves and then use the Margins & Columns option of the Frames menu.

## Using the Template

Having created the headers and footers, the next step is to load the text for your first chapter and tag the text, experimenting with the various options for indents, fonts, ruling lines, leading, etc. When text is formatted to your satisfaction, draw and size frames to hold the graphics, using the line snap and column snap options to align these frames with the text columns.

Graphics should be added quite late in the process, after the text is tagged to your satisfaction. One reason is that you need to know the position of references to illustrations in order to position them correctly. If you place the pictures too early and then make more revisions in your text, you'll find that you need to move the picture frames. Often in technical manuals, there is a standard-size graphic that is used over and over again. Rather than draw and size the frame to hold this standard size over and over

again, you can create it once and then cut and paste it as needed.

When the chapter is completely formatted and proofed, save it, then use the Remove Text/File option of the Edit menu to remove all the graphic and text files. The headers and footers will remain, as will the frames that contained graphics. You can now save this skeleton chapter as a template. For the next chapter, load the text file into the template, then copy the frames for graphics wherever needed (or delete them if not needed). Save this chapter under a new name and start the third chapter, again, from the template.

## Numbering Chapters

A common misconception is that Ventura's Multi-Chapter option can be used to automatically number the chapters in a manual or book. This is not the case: you'll need to add those numbers manually. Nor does Multi-Chapter take care of page numbering: when you print a multiple-chapter document you'll also have to use the Page Counter option of the Page menu to manually set the page number at the beginning of each chapter; otherwise it will revert to 1 every time it begins a chapter.

## Ancillary Sections

Although most of the work that goes into designing laying out a book or a manual is in creating the chapters, such a document is actually a set of designs: cover, copyright and permissions page, acknow-

ledgements, preface, table of contents, section division pages, index pages, appendix pages, and other front and back matter. Each separate ancillary section requires its own design and style sheet.

For the table of contents, you can use Ventura's Multi-Chapter option to create the text, then load the file created by Ventura (using the Generated File option in the Load Text/Picture dialog box) and format it with a style sheet.

## Newsletters

Unlike books, most newsletters use standard letter-size paper, making it unnecessary to change the size of the base page frame from 8.5 by 11, and also making it unnecessary to draw crop marks. What makes newsletter layouts different from books and manuals is that various text files must be merged within a single chapter.

The basic procedure for setting up a newsletter is described in the first tutorial. The steps are as follows:

- Follow the universal procedure described at the beginning of this chapter to set up a file structure, establish a style sheet, remove any ruling borders or vertical lines from the page, and select a page size.
- Select the base page frame and indicate the number of columns that the newsletter will contain. Enter the desired widths for these columns, the alley (gutter) between them, and the top, bottom, left, and right margins for the page. Make sure that the calculated width—the sum of the widths and gutters—equals the actual frame width.
- Select Show Column Guides, Turn Column Snap On, and Turn Line Snap On in the Options menu.
- Select Add New Frame and draw a horizontal frame to hold the newsletter headline. Then draw two vertical frames to hold articles.
- Select Insert/Remove Page from the Page menu to create the second page of the newsletter (still blank). Create more pages, if desired. You may have to remove vertical lines again. Draw frames on these columns.
- Press PgUp to return to the first page.
- Select the first frame and load a text file into it. Ventura will load as much of the file as it can into that frame.
- Press PgDn to go to the jump page. Select a frame and select the text file name from the assignment list to continue the article. Ventura will continue placing text, starting where it left off. You can keep on going in this manner for as many frames as you want.
- Add a headline by using a large font (with PostScript printers) or a scanned graphic of a typeset headline (if your printer lacks large type).

- Add a thin horizontal frame to contain the date, issue number, etc. Type this directly into the frame.
- Add headers and footers.
- After printing an issue, use the Remove Text/File option of the Edit menu to save the layout as a template for the next issue. Next time you format the newsletter, you merely insert new text files into frames and adjust the lengths of the frames.

### **Continued On ..., Continued From...**

When a newsletter story jumps to a new page, you have to insert the phrase “continued on” at the bottom of one frame and “continued from” at the top of another. It’s possible, but rather nerve-racking, to attempt to embed the phrase directly in the text at the end of the column. The problem is that if you adjust the text in any way you’ll find that the phrase will have moved and you have to repeat the process. A better way is to create a caption for the frame and type Continued On... as the caption. Select Below for the caption’s position. Then tag the caption and create a new tag to substitute for the automatically generated caption tag. Call your substitute tag Continued On. Follow the same procedure for the Continued From... but position the caption above the frame this time and create a new tag called Continue From.

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## **Forms**

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The best way to create most forms is with the Free-Form method. Set up the base page frame with no ruling boxes or lines, one column, and column guides not showing. If the form consists of a single clump of continuous boxes, such as the example in the tutorial chapter, you can use the Box and Box Text tools from the graphics palette to draw the boxes you need directly onto the base page. In most forms, however, there are groups of boxes clumped here and there on the page. In that case, the best way to work is to create a frame for each group of boxes and then draw your boxes within that frame.

The advantage of this way of setting up the page is that if you have to reposition a group of boxes you can do so easily by dragging the frame they belong to. The drawback is that you have to make sure that you keep the correct frame selected while you draw its contents. Every time you print the document or switch from graphics mode for one of the other modes the selection switches back to the base page and you have to once again select the frame you’re working with.

The basic procedure is as follows:

- Create a frame for each group of boxes.
- Create the boxes with the Box or Box Text tools.
- Add text to the boxes.

- Specify shading and borders for the boxes.
- Create tags for the text in the boxes and tag the text.

Using this method, you can create extremely complex forms, moving into enlarged mode when necessary for detail work.

## Drawing Boxes

To draw the boxes that make up your form you can draw either plain boxes or Box Text boxes. The difference is that you can type directly into Box Text boxes using Ventura's editing commands. Simply place the cursor at the end of the words Box Text that Ventura has generated, backspace across them, and substitute your own text.

## Tagging Box Text

Ventura will automatically generate a tag called Box\_Text. However, you can tag the text within a box with any other tag. The best way to work is to create a special Box Text style sheet, complete with an array of tags for different sorts of alignments and fonts.

## Box Text Style Sheet

None of the style sheets provided with Ventura really lends itself to the special requirements of tagging forms created with the box and box text commands. You'll need to create your own Box Text style sheet. To do so, load the DE-

FAULT.STY style sheet from the TYPESET subdirectory. Save it under the new name: BOXTEXT.STY.

In a typical form, you'll have some text right aligned within boxes, some left aligned, and some centered. Various fonts may be used, but Helvetica and other sans serif faces are the most common. What you need in your style sheet is a tag for each kind of alignment and typeface, as shown in Figure 1.

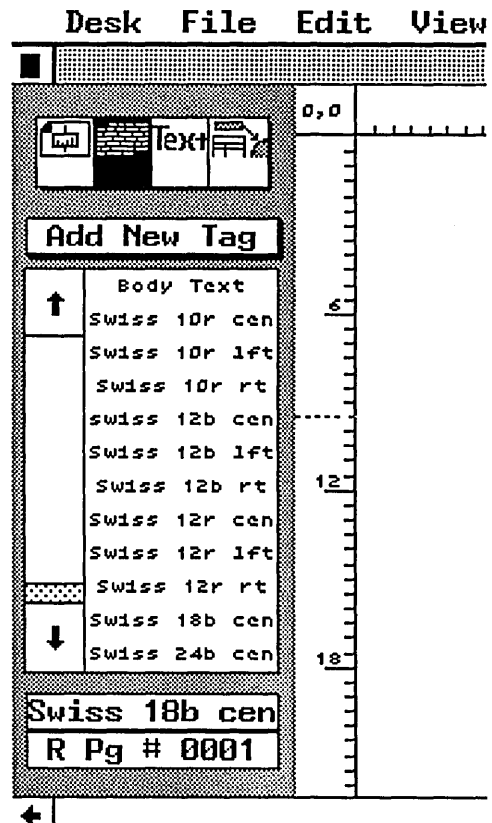


Figure 1: In formatting forms, it helps to have a tag for each kind of alignment and typeface.



To create the first tag, use the Box Text tool to draw a box containing text. Select the Tagging icon and tag the box. Select Add New Tag. Name the tag Swiss 10b lft (or Helv 10b bft). Set the font to 10-point bold Swiss (or Helvetica) and choose Left and Frame-Wide for Alignment. Set In From Left and Above spacing at one pica (more or less depending on your taste) so that the text does not run into the edges of the box.

## Line and Fill Attributes

Typically, you'll be drawing a number of boxes with the same line and fill increments. To make this easy, select the Save To option from the Line Attributes and Fill Attributes menu after drawing the first box. Remember that boxes don't have to have any lines, making the Box Text tool useful as well when you simply want to place a piece of text at an arbitrary location on the page.

## Multiple Frames

Once you've saved your line and fill attributes, you can speed up the process even more by holding down the Shift key while you draw multiple frames. That way you won't have to reselect the graphics tool each time.

## Grid Settings

When creating forms, it's a good idea to set the vertical grid setting to 1 pica. That way, the boxes you create will be on an invisible grid with 6 lines per inch, which

just happens to match the line spacing used by typewriters, thus making it easy for anyone filling out the form with a typewriter to stay in alignment.

## Merging Data into Forms

There are several ways to merge data from a database program into a form created with Ventura. One way is to use the mail merge feature of your word processor to place the data at the location on the page that aligns with the boxes. Use Ventura to print as many copies of the form as you need, then place them back in the paper tray. Then print the data into the boxes by running the same pages twice through the laser printer.

A more sophisticated method is to take advantage of the fact that when you type text into a blank frame, Ventura stores that text in the Caption file (CAP). Caption files are simply ASCII files containing text divided by carriage returns. You can set up your form so that each box that is to hold merged data is actually a separate frame. Create as many blank pages as you need, then make all the frames in your form repeating frames so that they occur on every page. Set up the report generator of your database so that each record is separated by two hard carriage returns and so that the tags you want to use are automatically inserted at the beginning of each one. Then print the database to a file and give the file the same name as the Chapter file containing your form (except for the CAP extension). Finally, copy this new Caption file

into the subdirectory containing the Chapter file.

## Document Layout Tips

### Tip: Headers, Footers, and Footnotes

Headers and footers are not automatically stored with the style sheet. So when you are doing a book and create the master page and the style sheet, you still have to create the headers and footers independently for each chapter.

On the other hand, when you create headers and footers, Ventura automatically creates the tags `Z_Header` and `Z_Footer`. These tags, as well as any adjustments you make to them, are stored with the style sheet.

### Tip: Form Letters

Although Ventura lacks a mail merge feature, you can achieve the same effect. Use the mail merge feature of your word processor and print to disk. Then load the file into Ventura for formatting.

### Tip: Ventura's Default style sheet.

Often it's easier to start from a scratch style sheet (i.e., one containing no tags) than to adapt one of the style sheets provided with Ventura. In that case use the `DEFAULT.STY` style sheet, located in the `TYPSESET` directory. Don't forget to rename it to preserve the original.

## Questions

*Q: I have created the first page of my newsletter and am now ready to create the second page. However, when I press*

*PgDn, Ventura won't go to the second page. Why not?*

A: PgDn will only take you to the next page if one exists. If not, you can create a new page using the Insert/Remove Page option of the Page menu.

*Q: I am creating a form using the Box Text feature of graphics mode. I want text in one box to be 12-point bold and centered, and text in another box to be 10-point normal and left-aligned. How can text in one box be made different from text in another? Both have been automatically tagged with the Z\_BOXTEXT tag.*

A: `Z_BOXTEXT` is the tag that is automatically assigned to any text type with the Box Text operation. However, it is perfectly all right to assign a different tag to text typed into a Box Text box. Switch to tagging mode, select the text, select Add New Tag, name the new tag, and format it as you wish using the selections in the Paragraph menu.

*Q: How can I create a page that is entirely blank?*

A: You can create a new page using the Insert/Remove Page option of the Page menu. Make it blank by turning off headers and footers and removing any ruling boxes.

*Q: How do I change the order of frames?*

A: This might be desirable in order to change the way text flows from one frame to the next in a newspaper-style

layout. You change the order by selecting a frame, pressing Delete, and then immediately pressing Insert. The frame most recently inserted becomes the last frame. Note: you can't use this technique to flow text to an earlier page.

***Q: In a multiple-column layout, how can I make a headline that goes across several columns?***

A: Select the Tagging icon. Tag the headline. Select the Paragraph menu. Select the Alignment option. Select Overall Width: Frame-Wide.

***Q: What do "1st Match" and "Last Match" mean in the Headers & Footers dialog box of the Page menu?***

A: When you select 1st Match, the first occurrence of text tagged with the tag name you specify will be shown in the header or footer. This is useful for dictionary or phone book printing.

IV

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# Special Topics



## CHAPTER THIRTEEN



# *Adding New Fonts*

FOR THOSE PRINTERS that lack their own Times Roman and Helvetica fonts, Ventura provides a basic platform of 6, 8, 10, 12, 14, 18, and 24-point Swiss (similar to Helvetica), 8, 10, 12, 14, 18, and 24-point Dutch (similar to Times Roman), and 12-point Symbol. For many documents that set of fonts will suffice; however, at some point you may want to add fonts to your system.

Fortunately, the variety of fonts available for laser printers is surging and prices for those fonts are falling. One of Ventura's strongest features is that it lets you add fonts above and beyond the basic platform. What's more, you can use the utility programs supplied with Ventura to convert fonts from one printer format to another.

### **Font Vendors**

An increasing number of companies are providing fonts for laser printers, and each company in the business is rapidly adding to its font library. A list of such companies, as well as notes on the fonts

they provide, is included in the Product Information appendix.

### **PostScript**

Currently, the best designs for PostScript printers are from Adobe Systems, which licenses typefaces from commercial font vendors, notably Allied. Besides using proven font designs, Adobe's own PostScript fonts have an advantage over those of other vendors due to proprietary algorithms—sometimes referred to as “Adobe's font magic”—built into PostScript. Other font vendors, however, are competing against Adobe by supplying less expensive fonts as well as designs not found in the Adobe font library. In many cases, these vendors have not yet converted their fonts from Macintosh to PC disks; however, if you have access to a Macintosh you can make the conversion yourself. Specific vendors are listed in the “Product Notes” appendix.

## LaserJet Plus and Series II

The best LaserJet fonts are those designed by Bitstream, the company that created the fonts bundled with Ventura. These fonts are marketed through Hewlett-Packard rather than directly by Bitstream. A number of other vendors are also producing LaserJet fonts, including VS Software, The Font Factory, Soft-Craft, Weaver Graphics, and Conographics; these fonts vary in quality but are generally quite inexpensive. Note that with the LaserJet Plus there is a size limit on fonts of 30 points; with the Series II there is no limit on font size.

## AST TurboLaser, J Laser, and Cordata

With the AST and Cordata printers, and with printers retrofitted with the J Laser board, Ventura bypasses the font format used by the vendors themselves and instead uses its own format. In fact, you can't use the fonts provided by either AST or Cordata with Ventura. Instead, you have to use Ventura's conversion programs to convert fonts from LaserJet format. With the AST, fonts converted from LaserJet format may have somewhat lower quality, since they are designed for the write-black technology used by the Canon engine, rather than the white-white technology used by the TurboLaser. Some font vendors, such as The Font Factory (see "Product Notes" appendix), are beginning to offer fonts tuned for write-white printers. Note that the maximum size type that can be

printed on the J Laser is 48 points. On the AST and the Cordata the limit is 30 points.

## Xerox 4045

There are two sources of fonts for the 4045. One is Xerox itself. The other is the vendors who sell fonts in HP LaserJet format, since you can convert these fonts to 4045 format using the HPTOXR and HPTOXRXL utilities on Ventura's Utility Disk (#11). As is the case with the AST TurboLaser, the Xerox 4045 is a write-white printer, so fonts converted from LaserJet format (which uses write-black technology) may be slightly lower in quality.

## InterPress

Currently the only source of InterPress fonts is Xerox itself.

## Font Generating Software

Currently, most vendors of fonts in HP LaserJet format sell bit-mapped fonts, which means that you have to buy a separate font file for each size of a typeface you wish to use. New tools are emerging, however, that let you create any size type you want from a master file, a method that is similar to the way PostScript and InterPress handle fonts.

## A Low-End Font Generator: Glyphix

An early example of such a program is Glyphix from SWFTE International.

With Glyphix, you use a menu to select the typeface, size, fill pattern, orientation, degree of slanting, and other parameters of the font you wish to create. The program then automatically produces a test sample of the font and, if you wish, stores the font as a separate file on your hard disk. This program and others like it make using printers like the LaserJet vastly more convenient, because of the potential of being able to generate new fonts on the fly.

As described at the end of this chapter, a new font can be created with Glyphix, tested, and incorporated into Ventura in about eight minutes. That's no match for the convenience of PostScript and InterPress's flexible font scaling, nor is the quality of the fonts as good; however, it does represent a potential way of working with fonts that will no doubt be refined further over time.

Since HP LaserJet fonts can be converted into other formats such as the J Laser, Cordata, AST TurboLaser, and Xerox 4045, Glyphix can be used to generate type for those printers as well.

## High-End Font Generators: Fontware and LM-Fonts

While Glyphix provides an inexpensive and convenient way of generating an occasional large font on the fly, a much more sophisticated font generating sys-

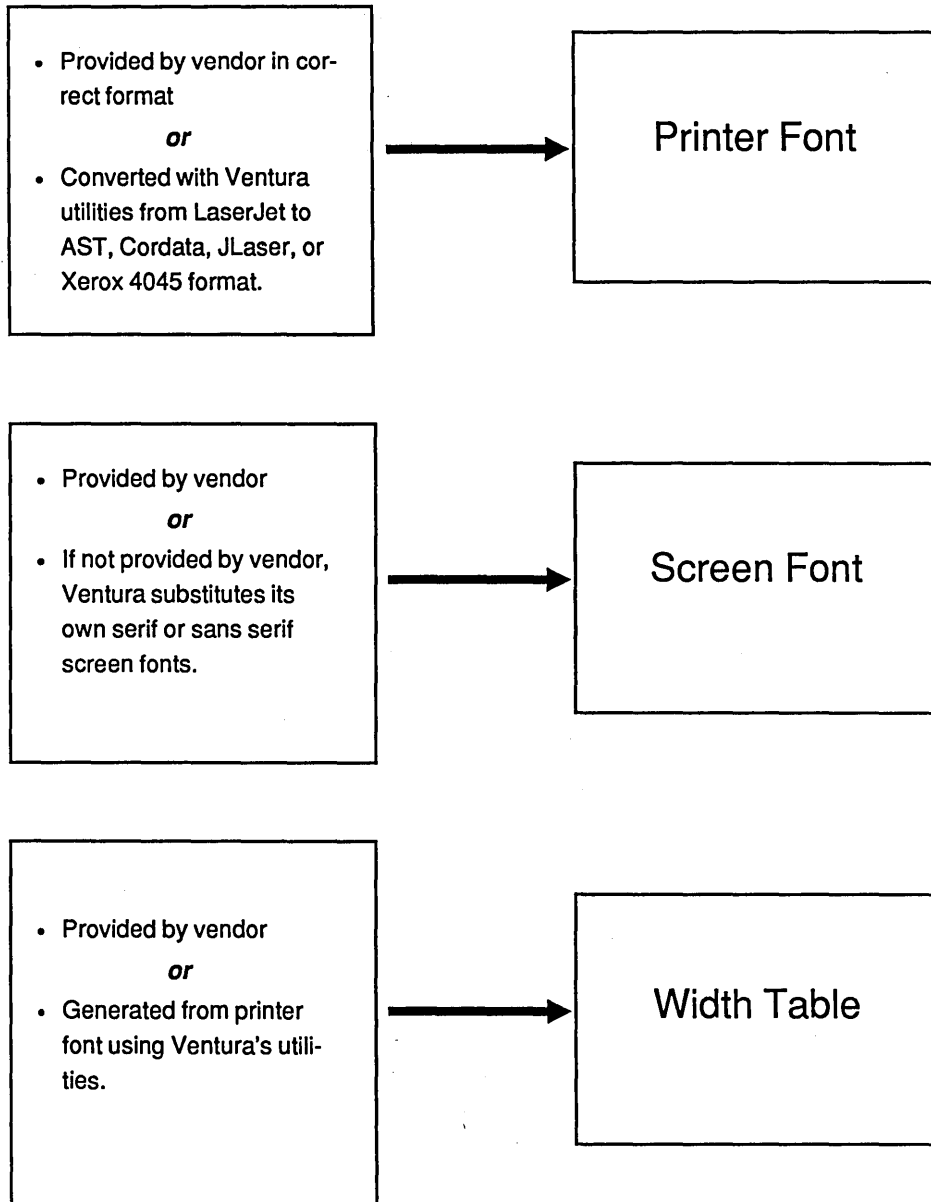
tem has been created by Bitstream, the company that created the Dutch and Swiss typefaces provided with Ventura for the LaserJet and other printers that use bit-mapped fonts. The system is sold by LaserMaster Corporation along with its raster image processor under the name LM-Fonts. Bitstream itself will be selling the system under the name Fontware beginning in the fall of 1987.

Like Glyphix, Fontware generates bit-mapped fonts from master outlines. But the patented technology used by the system produces much better quality from those outlines, making it possible to produce quality type even at small point sizes (down to 3 points for a sans serif face like Swiss). Upon introduction of Fontware, 80 typeface outlines will be available, including roman, bold, italic, and bold italic variations for most type families. You can use these outlines not only to generate printer fonts but matching screen fonts as well. Finally, the system gives you the option of choosing the character set you wish to use--including Ventura's own International character set (which has more typographic characters than other character sets such as HP's Roman-8 set).

Among the type families initially available are Bitstream's versions of Helvetica and Times Roman, Century Schoolbook, ITC Galliard, and a variety of headline typefaces. New typeface families will be added in future releases until most of the extensive Bitstream library of typefaces is available in Fontware form.



## Sources of Font Information



To use Fontware you buy two things: the Fontware Installation Kit for Ventura and the specific typefaces you wish to use. When you install Fontware for Ventura, you tell the program what screen display and printer you are using, and which typefaces, type sizes and character sets you would like. You can create any type size the printer can produce (from 3 to 120 points) and can choose from the ASCII, Windows/ANSI, IBM PC, Ventura International, and HP Roman-8 character sets. Based on your specifications, Fontware will create the appropriate set of fonts for their screen and printer. The program will also support PostScript printers.

Xerox has announced that it will send registered Ventura owners an invitation to purchase a Fontware sampler from Bitstream for \$24.95, a substantial savings over the off-the-shelf price. The sampler includes a Fontware Installation Kit for Ventura and the roman (regular) weight of a new typeface family, Bitstream Charter. During the introductory period, scheduled to run from September 1st through December 31, 1987, the purchase price of a Fontware sampler can be credited toward the purchase of a Fontware typeface package from Bitstream. Bitstream will provide telephone support for Fontware free of charge to Xerox Ventura Publisher users for a warranty period of 45 days.

For reference information on Glyphix, Fontware, and LM-Fonts, see the "Product Notes" appendix.

## How Ventura Handles Fonts

To understand how to add fonts to Ventura, you need to understand something about Ventura's font management system. Ventura stores font information in three types of files: printer font files, screen font files, and width tables.

**PRINTER FONT FILES:** Each such file holds the information needed by the printer to print one font. All printer font files are stored in the \VENTURA sub-directory, except in the case of fonts that are already resident in the printer itself. At print time, Ventura automatically takes care of downloading the relevant printer font files needed for a particular document. In the case of PostScript and InterPress printers, which use outline fonts, only one file needs to be loaded into the printer and the printer generates various sizes from that master. With other printers, a separate font file must be downloaded for each size used.

**SCREEN FONT FILES:** Because the resolution of the computer display is much lower than that of the laser printer, Ventura needs a separate screen font file for each printer font so that you can see what you're printing. If you install other fonts in your system, you'll also want to install matching screen fonts if these have been provided by the vendor who supplied you with the fonts. Ideally, every font that you purchase would come with a matching screen font. In reality, however, many font vendors supply printer fonts only. In that case, Ventura will use the most similar screen font already installed.

If the vendor does not supply such fonts, you can go ahead and install a new printer font without installing a matching screen font. Ventura will simply substitute its own generic serif or sans serif screen fonts. Line breaks shown on the screen will match those of the printed output even the screen fonts do not match, since Ventura takes the font width information it needs for the screen from a single width table. What you lose by not having a screen font to match your printer font is the ability to see symbols in the high-bit range. Instead, you'll see Ventura's own symbols in that range.

Since most third-party LaserJet fonts are only 7-bit fonts (see "Character Sets" on page 204), they do not include any high-bit symbols; hence, there is no particular need for screen fonts and many vendors do not supply them. In the case of PostScript fonts, screen fonts are available but you may have to convert them from Macintosh format, as described below.

**WIDTH TABLES:** In order to properly justify text on the screen and on the printed page, Ventura must know the width needed by every character of every font is installed for a particular printer. That information is all contained in the width table file. Both the printer font and the screen rely on the width table file, guaranteeing that the screen will really have a WYSIWYG relation to the printed page. When you initially install Ventura, the program generates a width table for each printer that you opt to use with the program. Later, when you decide to add more fonts to your system, you can need

to revise that width table to incorporate the necessary information on the new fonts. The procedure for doing so is described below.

## Procedure for Installing Fonts: Overview

The steps you need to take to add a set of new fonts to your system are as follows:

- Use Ventura's utilities to convert the printer fonts to your printer's format. You can skip this step if the fonts are already in the proper format. The process of converting fonts is described later in this chapter.
- Copy the printer font files to the \VENTURA subdirectory.
- Rename the printer font files, if necessary. J Laser and Cordata fonts must be given the extension B30, and AST TurboLaser fonts must be given the extension W30. PostScript fonts must be renamed according to the instructions in Appendix K of the Ventura manual. They must be given the extension F1B (if not in ASCII format) or F1A (if in ASCII format).
- Use Ventura's utilities to convert the screen fonts to EGA format. You can skip this step if the fonts are already in that format.
- Copy the screen font files (if available) to the \VENTURA subdirectory.
- Use Ventura's utilities to create a width table. You can skip this step if a width table has been provided by the font vendor. The process of

creating a width table is explained later in this chapter.

- Copy the width table to the \VENTURA subdirectory.
- Load Ventura.
- From the Options menu select Set Printer Info. If using screen fonts with extensions other than EGA, backspace across the letters EGA in the dialog box and type the new extension. Select the desired printer and the width table that you wish to expand.
- From the Options menu select Add/Remove Fonts. Select Merge Width Tables.
- In the Item Selector dialog box, select the width table you wish to merge with the current width table.

## Converting Printer Fonts

You can convert any fonts from HP LaserJet format to J Laser, Cordata, AST TurboLaser, or Xerox 4045 format. Copy the HPLTOFNT.EXE utility (for J Laser, Cordata, and AST) or the HPTOXR.XEXE and the HPTOXR.XLE.XE (for Xerox 4045 portrait and landscape fonts) from the Utilities Disk (#11) to the \VENTURA directory.

To convert a font, the command from the DOS prompt is

```
HPLTOFNT fontname.SFP [switches]
```

The information needed for the switches is provided in Appendix F of the manual and is also shown if you type

```
HPLTOFNT
```

without naming a font. You'll also need

to provide an ID number from a chart of typefaces in Appendix F.

If you are adding a number of fonts to your system at once, which is generally the case, it's a good idea to create a batch file rather than attempting to enter the lengthy conversion syntax over and over directly from the DOS prompt. However, before you attempt to set up such a batch file, you should go through the entire process of adding just one font to the system. Once you've sorted through the process with a single font, you have a much greater chance of running a batch file successfully. In other words, start simple before you get ambitious.

## Converting Macintosh Screen Fonts

You can convert screen fonts from Macintosh format to Ventura format. To do so, follow these steps:

- Copy the ABFTOFNT.EXE utility from the Utilities Disk (#11) to the Ventura directory.
- Transfer the Macintosh screen fonts on PC disks, using a connection such as TOPS or a telecommunications hookup.
- Rename the Macintosh screen fonts so that they have the extension ABF.
- Type  

```
ABFTOFNT *.ABF
```

Ventura will convert the files and give them the extension PSF.
- Load Ventura

## Character Sets

In deciding which fonts to purchase and add to your system, the most important factors are obviously the design of the typeface and the point sizes available in that typeface. But don't overlook the matter of what character set is included in the font. Unless the font includes characters such as the cent sign ¢ or true quotation marks (" and "), there is no way that you'll be able to print those characters in the desired typeface.

### ASCII

The most basic character set is the ASCII set (American Standard Code for Information Interchange). Numbers 0 to 31 of the ASCII set are reserved for unprintable control characters. Numbers 33 through 127 include the standard upper- and lowercase letters of the English alphabet as well as the punctuation marks and symbols found on a standard computer keyboard—92 characters in all. All other character sets (except those made up entirely of special characters, like Ventura's Symbol font) are supersets of the ASCII set. They fill out the ASCII set with characters in the range above 127. Because numbers up to 127 can be represented by 7 binary bits, the ASCII set is referred to as a 7-bit character set. To represent numbers above 128 you need 8 binary bits; hence, such sets are referred to as 8-bit sets and the characters numbered above 127 are called "high-bit" or "extended ASCII" characters.

Many fonts, especially in large point sizes, include only the ASCII character set. This applies to many third-party fonts for the HP LaserJet as well as to Hewlett-Packard's own soft fonts numbered 33412AC (TmsRmn/Helv), 33412AE (TmsRmn/Helv), 33412RA (ITC Garamond), 33412SA (Century Schoolbook), 33412TA (Zapf Humanist 601), and 33412UA (Headline Typefaces).

Conspicuously absent from the ASCII set are any typographic characters not found on the keyboard. These include true right and left quotation marks (" and "), the em dash (—), copyright and trademark symbols (©, ®, and ™), European characters (such as ä, à, and â), commercial symbols (such as ¢, £, and ¥), and typographic symbols (such as ‡ and ¶).

### The International Set

The character set used by the printer and screen fonts provided with the Ventura package is referred to in the Ventura manual as the International set and by others

as either the International or the Ventura character set. It is an 8-bit character set that includes a full complement of typographic symbols missing from the standard computer keyboard as well as characters needed by some European languages: Spanish, French, Italian, and German. The full set is shown in Appendix E of the Ventura manual.

### **The Roman-8 Set**

The Roman-8 set is an 8-bit character set used by Hewlett-Packard for many of its cartridge and soft fonts. Since Roman-8 is the character set provided on the F cartridge, it is the only character set available to you if you use Ventura with a plain HP LaserJet. It is also the character set used on Hewlett-Packard's soft fonts numbered 33412AD (TmsRmn/Helv), 33412AF (TmsRmn/Helv), 33412DA (Letter Gothic), and 33412EA (Prestige Elite).

The high-bit characters of the Roman-8 set are mainly European and currency symbols. Missing are a number of important typographic and commercial symbols, including ", (170, §, ‡, †, ¶, ©, ®, and ™. Finally, the set lacks a satisfactory bullet character.

### **The Symbol Font Character Set**

The Symbol font is also an 8-bit font. It includes a number of scientific and mathematical symbols, the Greek alphabet (uppercase and lowercase), and a variety of miscellaneous symbols. The set matches Adobe's Symbol character set through character 207, at which point it diverges slightly.

### **Font Generators**

Fortunately, new font generators such as Bitstream's Fontware and LaserMaster's LM-Fonts promise to sweep away some of the hassles created by the differences among character sets. For example, with LM-Fonts, you can select any character set you wish for your font from a list that includes the Roman-8 set, Ventura's International set, the IBM Screen set (which assigns graphics symbols used for drawing lines and borders to its high-bit characters), and the Ventura screen character set.

- From the Options menu select Set Printer Info. Backspace across the letters EGA in the dialog box and type  
**PSF**

## Creating a Width Table

In the unfortunate event that the font vendor has not supplied width tables for its fonts, you'll need to use several Ventura utilities to build these tables. The procedure is as follows:

- Generate a VFM file for each font. To do this, copy the HPLTOVFM.EXE utility from the HPLJPLUS subdirectory of the Utilities Disk (#11) to the VENTURA subdirectory. The syntax used by this directory is shown in Appendix K of the manual; however, if you type  
**HPLTOVFM**  
without specifying a file to convert the utility will provide a more detailed set of instructions than the manual, including a number of optional override switches.
- Using a word processor, create a list of the VFM files. Save it as an ASCII file. Give this file the same name as the width table you plan to create, except that the extension should be LST.
- Type  
**VFMTOCID filename.LST**  
to convert the LST file to a new width table.

## VP/Fonts

If you'd rather avoid the work of creating width tables for LaserJet fonts, you can automate the process with VP/Fonts, a utility developed by The Laser Edge, a desktop publishing service bureau in Oakland, California. The utility prompts you for the names and sizes of the fonts you wish to convert for use with Ventura, and produces the Ventura WID tables automatically. Currently, VP-/Fonts works only with fonts sold by Hewlett-Packard. If you're using LaserJet fonts from other vendors, check with the Laser Edge to see if the program has been updated to handle other formats.

*The Laser Edge  
360 - 17th Street  
Oakland, CA 94612  
415/835-1581*

## Example: Adding a LaserJet Plus Font

The first time you attempt to add a new font to Ventura, you may be somewhat put off by a process that seems intimidating and complex. Don't worry—it's not that hard. Probably the easiest way to master the procedure is to start by adding a single font. Once you've succeeded in doing that, you can then try using batch files to add multiple fonts.

The following example of adding a new font is not intended to replace the instructions in Appendix K of the Ventura manual, which cover all possible printers. Instead, it is provided to show a simple illustration with just one font.

The first series of steps is to copy the necessary font conversion utilities from Ventura's Utility Disk (#11) to the \VENTURA subdirectory on your hard disk.

- Place the Utility Disk in drive A.

- Type  
**COPY A:\HPLJPLUS  
 \HPLTOVFM.EXE C:\VENTURA**

- Type  
**COPY A:\HPLJPLUS  
 \VFMTOWID.EXE C:\VENTURA**

The next set of steps is to copy the 30-point bold Garamond font into the same directory and rename it to meet Ventura's specifications.

- Put the disk the font (disk three of the Garamond font set) in drive A.

- From DOS, type  
**A:GA300BPN.USP C:\VENTURA**

- Type  
**RENAME GA300BPN.SFP  
 HPLJG30B.SFP**

This is not documented in the manual, but it is necessary. The HPLJ must be the first four characters of the font, the G stands for Garamond (the initials for other characters are on p. K-10), 30 stands for the point size and b for bold. For additional instructions on renaming fonts, type **HPLTOVFM**

without naming a font. Ventura will

produce a screen describing the correct naming conventions.

Now, we can run the conversion utilities to create a VFM file.

- Type  
**HPLTOVFM**  
 This produces a screen explaining what switches to add to the line to convert the font.

- Type  
**HPLTOVFM HPLJG30B.SFP  
 /F=GARAMOND/N=22/T**

The N=22 is the typeface identification number for Garamond, derived from a table in Appendix K of the manual. The T means that since there is no screen font for Garamond, Ventura is to use Times (i.e. Dutch) to represent it on screen. The result of this conversion is a file called HPLJG30B.VFM

Next, convert the VFM file to a WID file (a width table).

- Type  
**COPY CON HPLJG30B.LST**

- Type  
**HPLJG30B.VFM**

- Type  
**Ctrl-Z**

- Type  
**VFMTOWID HPLJG30B.LST**

Now you can load Ventura, try out the new HPLG30B width table, and then merge it with the existing LaserJet Plus width table.

- Type  
**VP**



- From the options menu select Set Printer Info. Next, select Load Different Width Table and select HPLJG30B.WID.
- Type a word or two and print it out to check that the width table was working.
- Select Load Different Width Table and select HPLJPLUS.WID
- From the Options menu selected Add/Remove Fonts
- Select Merge Width Tables
- Select HPLJG30B.WID
- Select Save As New Width Table.

You now will find that 30-point Garamond Bold is one of the regular selections for fonts with your LaserJet Plus driver.

## CHAPTER FOURTEEN



# Screen Shots

IN PREPARING TECHNICAL documentation, training materials, and books about software (such as this one), a common task is to take snapshots of the computer screen—also known as screen shots—and insert them in documents. Fortunately, this proves to be relatively easy with Ventura.

Let's start with an overview of the entire process of importing a screen shot into Ventura. This process is as follows:

- Load a screen shot utility into the computer's memory. Such utilities are small programs devoted specifically to the task of capturing a screen; several are discussed below.
- Load the program you want to take a screen shot of, prepare the screen, and activate the screen shot utility. With some utilities a menu will be shown on screen; with others the key combination that activates the utility also automatically creates a file containing the screen shot on your hard disk.
- In most cases, the screen shot utility will save the file with a PCX (PC Paintbrush) extension. In that case proceed to step 4. Otherwise, the screen shot program should provide a utility that you can now use to convert the file to PCX.
- (Optional) Load PC Paintbrush Plus or Publisher's Paintbrush and edit the screen shot. The editing that can be done includes cropping (although that can also be done in Ventura itself), alterations using Paintbrush's graphics tools, and using Zoom mode to edit individual pixels. Note that if you edit an image in PC Paintbrush, its extension may be changed to PCC.
- Load Ventura. Open the document into which you want to load the screen shot. Create a new frame of approximately the right size for your screen shot. From the File menu select Load Text/Picture. Select the PC Paintbrush file containing the screen shot. The file name containing the screen shot will now appear in the Assignment List. Select the name; the screen shot will now load

onto the page. From the Frame menu, select Sizing and Scaling. In the Sizing and Scaling dialog box select By Scale Factors and Maintained.

- Adjust the size of the screen shot, following the instructions below.
- Adjust the frame margins and padding, using the Sizing and Scaling dialog box. Crop the screen shot if desired, either by entering values in the Sizing and Scaling dialog box or by holding down the Alt key while moving the image with the mouse.
- Add enhancements such as borders, captions, arrows, background shades, and boxed text.

## Choosing a Screen Shot Utility

In order to select a screen shot utility, you need to identify the mode of your system's display board—the circuit board in the computer that controls the monitor. The method employed for printing an image depends on how your screen displays graphics and text. There are four major display standards: the IBM Monochrome Display Adapter (MDA), the Hercules Graphics Card (HGC), the IBM Color/Graphics Adapter (CGA), and the IBM Enhanced Graphics Adapter (EGA).

Many video boards emulate two or more of these display standards. For example, IBM's EGA mimics the IBM MDA and CGA; some EGA clones also emulate the Hercules, Plantronics, and other standards. Because some boards

offer a number of modes, you must match the utility to the correct mode.

## MDA Text Screens: Hotshot

If you are taking shots of MDA screens, a utility for translating such screen shots into PCX format is Hotshot (available from Symsoft, P.O. Box 4477, Mountain View, CA 94040, phone: 415/962-9500).

Once you install HotShot in memory, the program's menu can be shown at any time by pressing Alt-H (this key combination can be redefined if necessary). At that point you can immediately store the screen shot to disk by pressing F3, F4, Enter, filename, and Enter.

HotShot saves files in its own graphics format, which uses the extension SCR. To convert these files to PCX format, type

**CVRT**

from the DOS prompt, enter the name of the file to be converted, and press F1. HotShot will now create a new file with the PCX extension.

You can also use HotShot to modify and annotate screen shots. Instead of immediately saving the screen shot to disk, experiment with adding text, arrows, boxes, and shaded areas to screen shots using HotShot's graphics tools (or wait and add these effects using Ventura's graphics tools). You can also erase portions of the screen or "paint" inverse video onto the screen to highlight particular passages. The program gives you the option of printing or hiding the cursor.

For quickly previewing your screen, Hotshot lets you send a screen shot

directly to your laser printer. Printing takes about 20 seconds on a LaserJet Plus or LaserJet series II (parallel interface).

### Sidekick and Ventura's utility

Provided on Ventura's Utility disk (#11) is a program called TXTTOPCX.EXE, which can be used to convert text files captured with Sidekick into PC Paintbrush (PCX) files. One limitation of the program is that it does not work in conjunction with the Hercules Graphics Board.

To capture a screen, first pop up the Sidekick menu, then open Notepad with Alt-N. Press F4 and the original screen appears again. Press Ctrl-KB before moving the cursor away from the upper left corner, then cursor down to the lower right corner and press Ctrl-KK. Now you're back in Notepad with the image. Save it as a file and leave Sidekick. Type

**TXTTOPCX filename**

to convert the file into PC Paintbrush (PCX extension) format. Before loading Ventura, you should de-install Sidekick. To load the screenshot into a frame, use the PC Paintbrush option in the Load Text/Pictures dialog box.

### Graphics Screens: Frieze, Hotshot, Univation

Recently, an alternative program called Grab was added to the Hotshot package, specifically for capturing graphics screens including CGA, EGA, HGC, ATT 6300, and Vega Deluxe (Video-7) formats.

For graphics screens, use In addition, Hotshot is also capable of making screen shots within Microsoft Windows. When you make screen shots of graphic screens, however, you won't have access to HotShot's popup menu and hence can't use the editing functions that utility provides for enhancing MDA screens.

For screen shots of graphics screens, another option is the Frieze utility, a built-in option of PC Paintbrush Plus and Publisher's Paintbrush.

To use Frieze, you load PC Paintbrush Plus or Publishers Paintbrush and press Shift-PrtSc. A menu then appears at the top of the screen indicating your setup options. At this point Frieze is loaded into the computer's RAM. You can exit Paintbrush and load the program you wish to make the screen shots from; Frieze will remain loaded in RAM. When you have prepared the screen you wish to take a screen shot of, press Shift-PrtSc to see the Frieze menu again. Among your options will be to draw a border around the portion of the screen you want to capture using the cursor keys. To speed this process up, hold down the Shift key while you move the cursor keys. After you have adjusted one border, press the Spacebar to adjust another, then push the Spacebar again, etc.

Yet another utility for capturing screen shots in PCX format has been developed by Univation, which bundles the program with its Turbo board but does not sell it separately. The program doesn't provide any frills, but works simply and easily with the CGA, EGA, and HGC standards. Unlike Hotshot, it

converts screen shots directly into PCX format, thus saving a step. (Maybe Univation can be persuaded to market it as a separate utility.)

## Keeping Track of Screen Shots

Generally, it's convenient to create a set of screen shots in the program you are documenting, rather than creating only one. Most screen shot utilities, including Hotshot and Frieze, will automatically create sequentially numbered files, one for each shot. With Hotshot or Frieze, you can specify the subdirectory you want to store these in.

A good way of working is to use one subdirectory as a staging ground to temporarily hold newly created screen shots and another subdirectory as a permanent storage location for keeping screen shots you intend to use later. If you use just one subdirectory both for initially creating and for storing screen shots, you may find that in making your second set of screen shots you have inadvertently copied over your first set (since the screen shot utility will restart its numbering at 1 each time you use it).

## Scaling Screen Shots

After you load a screen shot into a frame, you should use the Sizing and Scaling option of the Frame menu to set the picture scaling to By Scale Factors and aspect ratio to Maintained. That way, the screen shot will be at its "true pixel count." True pixel count means that every pixel in the image as it appeared on

the screen will be translated into one printed pixel by the laser printer. Since laser printer pixels are smaller than screen pixels (about 1/4 as wide+), this means the printed version of the screen shot, if shown at true pixel count, will be quite small.

The best way to scale up the picture is to multiply the pixels by integer amounts. Otherwise, you'll notice stripes and moire patterns in the printout caused by the program's attempt to scale the picture to fractional specifications. Scale the picture by entering new values for Scale Width and Scale Height, after first noting the original values. Since some screens will appear too wide and flat when printed, you may want to scale the height by a greater factor than the width. You don't need to keep the aspect ratio constant as long as you work in integral amounts. For example, when originally loaded into frames, the screen shots in this book were 2.41 inches wide by 1.16 inches tall. They were then doubled in width and tripled the height: 4.82 inches for width and 3.48 inches for height.

## CHAPTER FIFTEEN



# Encapsulated PostScript

FOR THOSE WITH PostScript printers, the ability of Ventura Version 1.1 to import Encapsulated PostScript (EPS) files pro-

vides dramatic new capabilities. Encapsulated PostScript merely means that a PostScript program is in a format that allows it to be embedded within another program.

For creating special effects with both graphics and text, the capabilities of PostScript are virtually unlimited. Currently, there are only a few PC programs that can produce files in EPS format, but even so there are several ways to take advantage of Ventura's EPS capability. They are as follows: (1) convert EPS files from Macintosh format, (2) use Ventura print files, and (3) create your own EPS files from scratch.

Once you have created an EPS file using any of these methods, you can load it into Ventura. Draw a frame, select Load Text/Picture from the File menu, select Line Art and PostScript format, and select OK. The file will not be shown on the screen, but will be indicated with a large X; it will appear when printed.

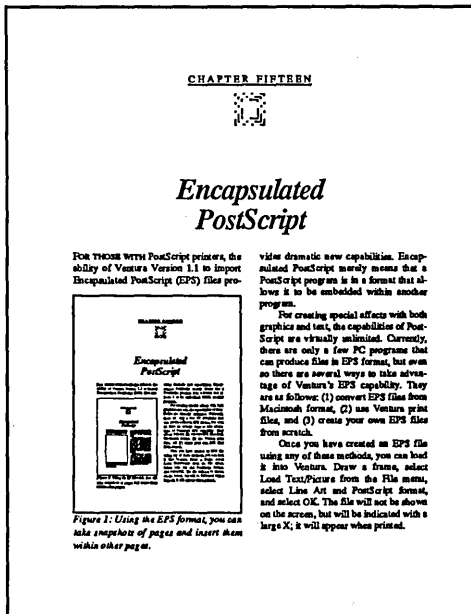


Figure 1: Using the EPS format, you can take snapshots of pages and insert them within other pages.

Just like other graphics, EPS pictures can be scaled, cropped, and distorted by selecting the Sizing & Scaling option from the Frame menu. The only difference is that you won't be able to check the appearance of the picture on screen.

## Converting Macintosh EPS Files

Certain Macintosh programs, including Adobe Illustrator and Cricket Draw, produce EPS files. You can import such files into the PC using a link such as TOPS. After porting them to the PC, change the extension of the file to EPS.

## Using Ventura Print Files

In this book, the illustrations of finished pages were all incorporated onto pages using Ventura's EPS capability and the program's ability to print to disk.

This method can only be used for taking a snapshot of a single page. To print the page to disk, select Set Printer Info in the Options menu and then in the dialog box select Output To: Filename. (You don't name the print file yet; that is done later.)

From the File Menu, select Print. Choose Selected rather than all pages, so that a single page will be printed to a file. Select OK. Ventura will prompt you to name the print file. Name it and type EPS as the extension. A typical page containing no graphics takes up 20K when printed to disk as an EPS file. You can reduce that amount by following the tip described below of removing the PS2.PRE

file. Having created the print file on disk, you can load the EPS picture into a Ventura frame.

Note that EPS files created through Ventura's print to disk option are not actually true EPS files and hence cannot be loaded into other programs that handle EPS format.

Figure 1 shows the result of performing the print to file and merge procedure and then repeating the procedure.

## The EPS Format

You can write your own PostScript programs to create special effects using a word processor or text editor, saving these effects in ASCII (i.e. nondocument) format and giving them the extension EPS. For diagnostic assistance while working with PostScript, the Ventura Utilities disk contains a helpful file called Erhandlr.PS, located in the POSTSCPT subdirectory. Once you have copied that file to the printer, the printer will provide feedback on program errors.

```

%!PS-Adobe-2.0 EPSF-1.2
%%BoundingBox: 210 300 420
420
%%EndComments
newpath
250 320 moveto
300 400 lineto

```

Figure 2: This EPS file creates a diagonal line.

When you create EPS files on your own, such as those shown in Figures 2 and 4, you must make sure that the PostScript program abides by the rules set forth for EPS files.

The rules are explained in "Encapsulated PostScript File Format," a six-page document available from Adobe Systems. Call Adobe Technical Support at 415/852-0271 or write to:

Technical Support  
 Adobe Systems  
 1870 Embarcadero Rd.  
 Palo Alto, CA 94303

Basically, EPS files are normal PostScript files, with these minor differences.

- First, every EPS file is required to include the following two lines in its header:

```
%!PS-Adobe-2.0 EPSF-1.2
```

```
%%BoundingBox: x1 y1 x2 y2
```

where x1 and y1 are replaced by the lower left coordinates of the bounding box of the EPS file, and x2 and y2 are the upper right coordinates.

- Second, every EPS file must end with a return or linefeed character.
- If fonts are included in the EPS file, the following command may be necessary:

```
%%DocumentFonts: font1 font2
```

```
...
```

```
%!PS-Adobe-2.0 EPSF-1.2
%%BoundingBox: 180 300 350 520
200 350 translate
/Roman /Times-Italic findfont 6 scalefont def
/Bold /Times-Bold findfont 200 scalefont def
/strg (XEROX VENTURA PUBLISHER XEROX VENTURA PUBLISHER
XEROX VENTURA PUBLISHER XEROX VENTURA PUBLISHER) def
/crlf
{ currentpoint 6 sub
  exch pop 0 exch moveto } def
/prtstring { strg show crlf } def
/Background
{ 25 { prtstring } repeat } def
gsave
newpath 0 0 moveto
8 setflat
Bold setfont (V) true charpath clip
0 133 moveto
Roman setfont Background
grestore
```

Figure 3: This is the EPS file used to generate the graphic shown on the following page.



EROX VENTURA PUBLISF	X VENTURA PUI
OX VENTURA PU"	"TURA "
VENTURA P.	TUR
VENTURA PL	TUJ
'ENTURA PU.	NTU
ENTURA PUB	NT'
NTURA PUBL	ENT
TURA PUBL.	/EN
TURA PUBLI	VEI
URA PUBLIS.	{VF
URA PUBLISH.	XV
RA PUBLISH.	OX
A PUBLISHE	ROY
\ PUBLISHE	ERO
PUBLISHER	ER(
PUBLISHER	XER
'BLISHER XE	
BLISHER XI	
LISHER X	
ISHER	
SHER	
'HEJ	
'F	

where font1 is replaced by a name such as Times-Roman or Helvetica.

- Finally, the following PostScript operators should not be included in EPS files: grestoreall, initgraphics, initmatrix, initclip, erasepage, copypage, banddevice, framedevice, nulldevice, renderbands, setpageparams, note, and exitserver.

**Tip: Editing EPS Files Within Ventura**

Because EPS files are not WYSIWYG—all you see on the screen is a large X—you'll find it necessary in most instances to modify your program a few times before you have it completely to your liking. Unfortunately, exiting Ventura and loading your word processor merely to edit a line or two of the EPS file is a cumbersome procedure. An alternative is to load the EPS file as a PostScript graphic in Frame A and as a text file in Frame B. Although the file is in plain ASCII format, you should load it as a XyWrite file rather than as ASCII file, since Ventura strips carriage returns out of ASCII files but not out of XyWrite files, though the latter also use ASCII format. To change the appearance of the EPS graphic, you can make changes in the EPS listing with Ventura's text editing controls and save the chapter. The changes you make in the EPS listing in Frame B will then be reflected in the picture itself in Frame A.

**Tip: Removing the PS2.PRE File**

If you are creating print files, you can reduce the amount of storage they require by temporarily renaming or deleting the

PS2.PRE file from the \VENTURA directory. Renaming or deleting this file also allows your regular printing to go faster, since Ventura will no longer have to download PS2.PRE prior to printing a chapter. To provide your laser printer with the necessary preparatory information, you'll need to copy the file PERMVP.PS from the \POSTSCRIPT directory of the Utilities disk (#11) to the \VENTURA directory on your hard disk. Then, each time you turn the laser printer on, copy the file to the printer by typing

```
COPY C:\VENTURA\PERMVP.PS COM1:
```

**Tip: PostScript Resources**

An increasing number of books, journals, and classes are available for those seeking to learn elementary and advanced PostScript.

**CLASSES:** Adobe Systems (415/852-0271) offers classes as well as courses on video tape. The introductory video is \$100 (\$150 including downloading software, a workbook, and PostScript reference materials. Others offering classes include Electronic Directions in New York, New York (212/533-9651); Graph-Tech in Yuma, Arizona (602/726-4671); Notable Systems in Madison, Wisconsin (608/238-6220); and MasterPlan in Haslett, Michigan (517/339-2478).

**BOOKS:** *PostScript Language Reference Manual* by Adobe Systems (Addison-Wesley, Reading, Massachusetts), 1985; *PostScript Language Tutorial and Cookbook* by Adobe Systems (Addison-Wesley, Reading, Massachusetts), 1985; and *How to Run PostScript from DOS* by

Gary Glover (LaserSoft Press, Cleveland, Tennessee), 1987.

**PUBLICATIONS:** *Colophon*, published by Adobe Systems and free upon request (415/852-0271); *PostScript Language Journal*, published by Pipeline Associates four times per year (201/334-0772); *The Computer Shopper*, which contains a regular column on PostScript (305/269-3211).

**ELECTRONIC BULLETIN BOARDS:** CompuServe has an extensive PostScript forum run under the auspices of Adobe Systems (800/848-8199). Other bulletin boards include the Byte Information Exchange or BIX (603/924-9281), and the National Independent PostScript Support Board (409/224-4075).

## CHAPTER SIXTEEN



# *Lotus Worksheets and Graphics*

THE PURPOSE OF this chapter is to summarize a variety of techniques for importing Lotus worksheets and charts into Ventura. Many of these techniques, especially those pertaining to charts, are applicable to other graphics programs as well.

### **Importing Lotus Charts**

Use 1-2-3's Graph command to choose the type of chart and the title, legend, and labels. Use the Graph View command to preview the chart and the Graph Save command to save the chart as a PIC file. There's no need to go through the Print-Graph module.

### **Importing Charts Via PC Paintbrush**

PC Paintbrush Plus and Publisher's Paintbrush both include a command called Merge Pic (accessed through the Page menu). You can use this option to

load a Lotus PIC file and then edit it with PC Paintbrush's variety of graphics tools. The chart will then be saved as a PCX or PCC file, and you can load it into Ventura by selecting PC Paintbrush format (not Lotus PIC format).

### **Placing a White Background Behind a Chart**

For added emphasis, you can place a chart with a white background in the middle of a shaded frame. First, draw a frame exactly covering the frame containing the imported chart. Apply a patterned background to this frame. Draw another frame over this frame, covering only the chart itself. Apply a solid white background to the frame you just drew. Now, hold down the Ctrl key while you click with the mouse until the frame holding the graphic is selected. Press Del and then Ins to bring this frame to the front.

## Centering a Chart Within a Frame

When you load a chart into a frame it will run up against the edge of the frame and may not be properly proportioned. To correct the proportions of the frame, select the Sizing and Scaling option from the Frame menu and select Fit in Frame and Distorted. To center the chart within the frame, select Margins and Columns from the Frame menu and enter equal values for top, bottom, left, and right margins.

## Adding Labels with Box Text

If you're not satisfied with the quality and letter spacing of the fonts that Ventura automatically applies to an imported Lotus chart, you can cover these with your own labels. Use box text for that purpose, specifying None for Line Attributes and opaque white for Fill Attributes. Use the Save To option to avoid re-specifying these attributes each time you draw a labeling box. Use grid snap to make sure that all your labels line up with each other. (Note that the small square next to the words in the box actually marks the edge of the text.)

## Saving a Chart Without Labels

If you're not satisfied with the quality of the labels and titles automatically generated for charts by Ventura, you may want to import a chart devoid of any titles, legends, and labels, and do all the labeling in Ventura with the Box Text

tool. That way you'll be able to use any of Ventura's fonts, rather than the Helvetica font automatically used by Ventura when it translates 1-2-3's labels. The steps to follow in preparing a Lotus graphic are as follows: First, set up the bar, line, or pie chart. Don't give it a title. 1-2-3 will automatically label the X and Y axes of a graph. You need to remove these labels so that you can add better labels once you've imported the chart into Ventura. To remove the Y-axis labels, select Graph Options Scale Yscale Format Hidden. To remove the X-axis labels, select Graph Reset X. For legends, you may want to preserve 1-2-3's legend boxes and leave room to for placing the labels of these boxes using Ventura. Select Options Legend A and insert enough blank spaces (a dozen or so should do) to allow you room to add your own labels using Ventura's box text feature. Select Options Legend B and again insert blank spaces.

## Screen Shots of Worksheets

To generate screen shots of Lotus screens, use the HotShot utility described in Chapter 14, "Screen Shots." before importing the screen shots into Ventura, convert them to PCX format using HotShot's CVRT utility. If desired, you can enhance them using HotShot's editing tools or with PC Paintbrush.

## Importing Worksheets

You can't load Lotus WKS files directly into Ventura. To load a worksheet, first

print it to a disk file, setting the margins to 0, then load that file into Ventura, selecting XyWrite as the type of file. Since the columns in this imported file are separated by spaces rather than tabs, they won't align properly if formatted with a proportional font. Note: Helvetica and Swiss are proportional fonts—Courier is not.

A more sophisticated solution is to use a utility that can convert the spaces between the columns to tabs. One such utility is the CONVERTD program on the Microsoft Word utilities disk. To prepare a file for CONVERTD, first print your spreadsheet to disk. To use CONVERTD, you must enter the name of an input file, an output file, a list of the column widths of the spreadsheet, and a delimiter character (Tab). CONVERTD also lets you indicate a list of rows you wish to convert, and this can be any combination of rows and columns, for example: rows 5, 8, and 16-22. When the program prompts you for the type of file, select the second option (Delimited text file).

Oakland, CA 94612, phone: 415/835-1581.

## **VP/Tabs**

A more sophisticated utility than CONVERTD for importing spreadsheets is VP/Tabs from the Laser Edge. To use the program, you first create a print file in Lotus, then process the print file with VP/Tabs. The program automatically converts spaces into tabs. It also aligns dollar signs and parentheses around numbers according to accounting conventions. VP/Tabs is available from The Laser Edge, 360 17th Street, Suite 203,

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes the need for transparency and accountability in financial reporting.

2. The second part of the document outlines the various methods and techniques used to collect and analyze data. It includes a detailed description of the experimental procedures and the tools used for data collection.

3. The third part of the document presents the results of the study, including a comparison of the different methods and techniques used. It discusses the strengths and weaknesses of each method and provides a summary of the findings.

4. The fourth part of the document discusses the implications of the study and provides recommendations for future research. It highlights the need for further investigation into the effectiveness of the different methods and techniques used.



## CHAPTER SEVENTEEN



# *Hyphenation*

WITH VENTURA, YOU can have two hyphenation algorithms installed at once. One of these can be for English and the other for a foreign language. Or you can have the two English algorithms installed at the same time. This is not recommended, however, since it uses up RAM that otherwise would be allocated to documents and pictures.

You should therefore decide whether you want to use the faster algorithm (prone to missing many hyphenation opportunities and sometimes guilty of incorrect breaks) or the slower algorithm (much more complete, but requiring about four times as much time every time you load a chapter). When you first install Ventura, the faster algorithm is automatically installed in the \VENTURA directory. Its name is USEGLISH.HY1.

To replace the faster algorithm with the slower one, copy the file USENGLS2.HY2 from the Utilities disk (#11) into the \VENTURA directory and rename it USENGLS2.HY1. Delete USEGLISH.HY1 (if you need it again, a copy is stored on the Utilities disk. If you want to have both algorithms available, make

sure that one has the extension HY1 and the other HY2.

Hyphenation is set on a tag by tag basis (using the Alignment option of the Paragraph menu), which means that you might have an English algorithm running in one column and a French algorithm running side by side in the adjacent column. It also means that you can have hyphenation running for some tags and not for others.

Many professional typographers eschew hyphenation algorithms altogether, preferring dictionary-based hyphenation routines, which are inherently more accurate than algorithms. If you prefer this additional margin of accuracy, you can turn off automatic hyphenation

Electric Webster  
Cornucopia Software, Inc.  
PO Box 6111  
Albany, CA 94706  
415/524-8098



and instead use the dictionary method with Ventura.

Basically, the technique to follow is to use a utility that automatically inserts a discretionary hyphen at every possible hyphenation point in every word of a text file. When you then load the text file into Ventura, only those discretionary hyphens that fall at the ends of lines will be printed. For English, a useful utility is Electric Webster from Cornucopia Software. The program provides a 50,000-word dictionary derived by researchers at the University of California.

To use Electric Webster, first save your text file in ASCII or WordStar format. Create a subdirectory, for instance HYPHEN, and copy all the files on the Electric Webster disk to the subdirectory.

To set up Electric Webster, type

**EWCONFIG**

This starts the configuration program, which will ask you to specify a character to use to represent hyphens in the document. A good choice is the tilde (~), since that is not likely to appear in your document. Electric Webster will expect you to enter a three-digit ASCII code for the character. The ASCII code for ~ is 126.

Save the configuration, then type **EW** to run Electric Webster. Assuming you're just using the program's hyphenation features, you can skip the proofing and spelling options and go directly to hyphenation. Electric Webster will insert the character you have chosen for the discretionary hyphen at every possible location.

When Electric Webster is finished inserting hyphens, exit the program and go back to your word processor. Load the

document and use the Search & Replace option to change all your ~ signs to Ventura's mark for discretionary hyphens, which is a hyphen surrounded by angle brackets (<->). Now you can load the document into Ventura and the hyphenation will be more complete.

## CHAPTER EIGHTEEN



# *Two-Up, Saddle-Stitch, and Other Formats*

Among the utilities that have been developed by The Laser Edge for enhancing Ventura is VP/Saddle, which provides the printing enhancements described below. Note that the techniques described below all require that you have a PostScript printer.

### **Two-Up Format**

Many manuals use a “two-up” format, in which pages that are half of letter size or half of legal size paper are 3-hole drilled for use in ring binders. Because the method allows placing two pages on one sheet of standard paper, it is an economical format that lends itself to photocopying or quick printing. To have the same page printed side by side on a single sheet of paper, you create your document as usual in either landscape or portrait mode, print to a file, and process the file

with VP/Saddle. The utility makes an exact copy of the original and prints the two side by side, ready for two-up printing.

### **Saddle-Stitch Format**

A saddle-stitch booklet is one in which pages are folded in half and then stapled in the middle. If you simply run off pages in order, the numbering will not be correct once you assemble the booklet and staple it. VP/Saddle corrects this problem

VP/Saddle  
The Laser Edge  
360 - 17th St.  
Oakland, CA 94612  
415/835-1581

by pairing up the pages so that after they are assembled and stapled the pages will be in the right order.

## **Enlarged Format**

One way to enhance the quality of laser printing is to create oversized masters and then have your printer reduce the image when shooting the negative. VP-Saddle can enlarge either half-page (5.5 by 8.5 inches) or trade-paperback-size (6 by 9 inches) pages by 122 percent, so that they fill a letter-size sheet of paper. The printer would then shoot the page at 82 percent (the inverse of 122 percent). The effect of reducing the page is to sharpen the characters, since it increases the number of dots per inch. This book is an example of a reduction to 82 percent of the original size (although VP-Saddle was not used).

## CHAPTER NINETEEN



# *Speed Tips*

ALTHOUGH VENTURA IS a fast program to start with, you may want to make it even faster. This chapter is intended as a miscellany of tips for getting better speed performance out of the program.

### **Use a Disk Caching Utility.**

Try this experiment. Load Ventura so that you have a blank chapter on the screen. Now switch to a different mode from whatever mode you happen to be in by clicking on that mode's icon. As you do so, notice that your hard disk light flashes momentarily. Now select any option from any menu and notice that the same thing occurs—the light goes on. What's happening is that all the program information Ventura needs cannot fit in RAM and still leave room for documents, so the program stores some of that information on the hard disk and accesses it frequently. Disk reads are even more frequent in Ventura 1.1 than in Ventura 1.0, and such reads are many times slower than accessing information from RAM. For this

reason, a disk caching utility is a perfect complement to Ventura.

Here's how disk caching works. The disk caching program intercepts blocks of data that are frequently read from the hard disk or written to the hard disk and stores them in a RAM buffer. At the

### **Disk Caching Utilities**

Flash

Software Masters

6223 Carrollton Ave.

Indianapolis, IN 46220

317/253-8088

Lightning

Personal Computer Support Group  
Inc.

11035 Harry Hines Blvd.

Suite 207

Dallas, TX 75229

214/351-0564

beginning of your computer session, there is no speedup since the first blocks of data must be accessed, as usual, from the hard disk. However, after your computer session has gone on for a while the improvement caused by the disk caching program will become quite noticeable. The advantage of a disk caching program over a RAM disk is that with a caching program you don't have to decide which files to store in RAM—the caching program does this automatically. Two popular disk caching programs are Lightning

and Flash (see the reference box on the previous page).

I used Flash to set up a 1024K buffer in extended memory. To activate the utility only required typing the following line:

```
c:\flash\flash 512/m=a
```

Once the disk cache was created, I found that within a minute or two of the time I loaded Ventura, hard disk accessing by the program was much less frequent. The speed of scrolling, moving between reduced and expanded mode, paging through a document, and other functions was increased by 50 percent or more. Loading Ventura itself took only 4 seconds, compared to 9 seconds prior to using the disk cache. Other Ventura users report similar performance gains with Lightning.

When you install a disk caching program, you usually have to specify on the command line the amount of memory you want devoted to the cache. This memory can be in the lower 640K of memory accessible to DOS. However, since that diminishes the amount available for documents, it's recommended that you use such programs in conjunction with extended or expanded memory.

As you might guess, an additional benefit of using a disk caching utility is that it increases the life of your hard disk.

### Defragmenting Utilities

The Norton Utilities, version 4.0  
and Advanced Edition  
Peter Norton Computing, Inc.  
2210 Wilshire Blvd.  
Santa Monica, CA 90403  
213/453-2361

Mace Utilities  
Paul Mace Software, Inc.  
123 First St.  
Ashland, OR 97520  
800/523-0258

Disk Optimizer  
SoftLogic Solutions  
520 Chestnut Street  
Manchester, NH 03101  
Phone: 800/272-9900

### Consolidate Files on Your Hard Disk

A class of programs called defragmenting utilities is available for the special pur-

pose of reorganizing the files on a hard disk so that files that have been fragmented over time into numerous storage locations on the disk can be consolidated. One way to tell if defragmenting is in order is if your hard disk light turns on and off rapidly while loading files; each time the light turns on, DOS is accessing a new portion of the disk.

Defragmenting programs include CONDENSE from the Mace Utilities, Disk Optimizer from Softlogic Solutions, Disk OrGanizer (DOG) in the public domain, and Speed Disk from the Norton Utilities Advanced Edition (see reference box below). Running a defragmenting utility is easy. For example, to run Speed Disk from the Norton Utilities, you merely type SD n: where n: is the drive that you want to defragment. The program takes 20 minutes or so to rearrange the drive, and as it works it provides you as it works with a graphic report on your progress. Not only does consolidating a disk speed up program operations, but it also extends the life of the disk.

### Use a RAM Disk for Running Ventura or for Holding Spill Files

When you are working with pictures or text files that exceed the RAM available to Ventura for holding such files, the program "swaps them out" to the hard disk. When this happens, you notice that performance slows down considerably, as Ventura continually reads and writes data to the hard disk.

If you have installed a RAM disk, you can use it to catch the spill files that would otherwise be written to the hard disk. You can use any RAM disk program to set up the RAM disk, such as DOS's VDISK. You'll also need to add /O=D at the end of your VP.BAT file (assuming your RAM drive has been set up as drive D). For example,

```
DRVVRMRGR VP %1
```

```
/S=SD_HERC5.EGA/M=11/O=D:
```

Another use for a RAM disk is to hold Ventura itself. In theory this should speed things up as dramatically as a disk caching utility. My own experience is that loading Ventura onto a RAM disk does not reduce hard disk reads and so I hesitate to recommend this option. However, in the interest of completeness, the steps to take are described in Chapter 20, "Memory Limitations and Diagnostics."

### Speed Up Your Mouse

In most mice, the speed at which you can move the cursor across the screen is set in the factory but can easily be adjusted with software commands. On a normal graphics monitor, the default setting should be about right; obviously you don't want your mouse to be too fast since then it will be difficult to position it precisely. On a large screen monitor, however, you may find that it takes too long to drag the cursor over to the sidebar or up to the top of the screen to make menu selections. In that case, you may want to experiment with different speed, or "sensitivity" settings. Normally this is

easily done by typing a few characters in the `config.sys` file.

## Use a Parallel Printer Interface

With many printers, including the HP LaserJet Plus and Series II, you have the option of connecting it to your computer via a serial or a parallel interface. If you currently are making the connection with a serial interface, you'll find that performance improves greatly once you switch to a parallel interface. The difference in speed is especially noticeable for pages that include multiple fonts or graphics.

## Install a JLaser or LaserMaster Board.

While PostScript printers have the best selection of fonts among laser printers, they also are the slowest because of the overhead of the PostScript language and because they use a serial cable. A good way to have the best of both worlds—speed and quality—is to install a JLaser or LaserMaster board in your computer and use it in conjunction with your PostScript printer. These boards provide their own cables that connect through the back of the laser printer directly into the laser engine's video interface. You can install Ventura both for PostScript and for the JLaser or LaserMaster boards (LaserMaster provides its own Ventura driver). That way, when you want to print quick drafts, you can use the faster option; for final copies you can select PostScript as the printer.

## Download Fonts Prior to Using Ventura

With the LaserJet Plus or Series II, you can download all the fonts you need for the day and then turn off Ventura's automatic downloading. The method is described among the tips in Chapter 9, "Using Fonts."

## Text to Greek

Greeking refers to the technique of representing areas of text on the screen with horizontal lines, a method that reduces the time it takes for the program to draw the screen. Under the Set Preferences selection of the Options menu, the settings range from None to All. Note that the numbers 2, 4, 6, 8, 10 don't refer to the point sizes of the text that is to be greeked, but rather the pixel height of characters as shown on the screen. For example, if you select 10, then all characters 10 pixels in height or smaller are greeked. Greeking only applies to the Reduced or Facing Pages views.

## Don't Save Backup Files

Another option in the Set Preferences dialog box is "Keep Backup Files." You can speed up operations slightly by selecting No. This means that Ventura will only save a single copy of each chapter, style sheet, and any other generated file. Caution: not keeping backup files means you'll probably have to create your chapter from scratch if your chapter files are lost or are become

unusable, so use this option only if you're willing to take that chance.

## Select a Fast Double Click Speed

Interestingly enough, increasing the double click speed not only makes mouse operations faster but also speeds up operations when you use keyboard alternatives to the mouse, such as pressing the Enter key instead of pressing OK. The reason is that even if you don't use the mouse itself, Ventura still waits the duration of the two clicks before it executes a command.

## Don't Use On-Screen Kerning

The effect of on-screen kerning is to give you some feedback on the appearance of lines of text when automatic kerning is in effect. You needn't pay attention to this option at all unless the fonts you are using include kerning information. Adobe's PostScript fonts do provide such information, the fonts supplied with Ventura for other laser printers do not. Unless you are using a high-resolution monitor, on-screen kerning is not sufficiently precise to be depended on anyway, so you'll still need to check the printed copy. Therefore, you're best off selecting only the largest point sizes for on-screen kerning, or simply specifying no on-screen kerning. Even when you do turn off automatic on-screen kerning in the Preferences dialog box, you'll still be able to view the results of any manual kerning you do with the Set Font option.

## Use Keyboard Shortcuts

A table of keyboard shortcuts is provided in Chapter 7, "Preparing, Loading, and Tagging Text." Some of the most useful of these are:

- Pressing Enter instead of selecting OK with the mouse.
- Saving with Ctrl-S.
- Using Ins, Del, and Shift-Insert to insert, delete, and copy.
- Using Ctrl-F and Ctrl-L for fill and line attributes.
- Using Ctrl-Shift-[ for left quotation marks and Ctrl-shift-] for right quotation marks.
- Using Ctrl-Shift-M for Em spaces and Ctrl-Shift-N for En spaces.

## Use Ctrl-X

This is probably the most useful shortcut of all. It causes the most recent dialog box you accessed to appear again. If you're trying out different settings for a particular specification, such as the cropping of a graphic or the amount of spacing between two paragraphs, you'll find work goes faster if you press Ctrl-X rather than pull down the menu and select the option.

## Use the Backup Box

To change the filter on the Directory line, it's quicker and more accurate to use the Backup Box than to erase the line and then type a new one. The use of the



Backup Box is explained in Chapter 6, "Managing Files."

## Double-Clicking

When you selecting file names from lists, it's much quicker to double-click on a name than to click once to highlight the name and then select OK.

## Pretag Text

It's faster to tag your text files with a keyboard macro program such as Super-Key than to use Ventura's Tagging mode. The pretagging method is described in Chapter 7, "Preparing, Loading, and Tagging Text."

## Use the Esc Key to Clear Lines

In dialog boxes, rather than backspacing across a line you wish to erase, you can place the cursor anywhere on the line and press Esc.

## Hide Pictures

Redrawing pictures when the page is scrolled or frames are moved is one of the biggest slowdowns in Ventura. To avoid this bottleneck, select Hide Pictures from the Options menu.

## Avoid Swapping to the Hard Disk

When your documents include graphics or text files that are too large for Ventura

to store in RAM all at once, it "swaps out" the excess to the hard disk. When this happens, all operations take significantly longer. You can avoid swapping out by freeing up additional RAM or by reducing the size of the files. For more information, see Chapter 20, "Memory Limitations and Diagnostics."

## Use the Shift Key

When using a graphic tool several times, hold down the Shift key to avoid having to reselect the tool each time you use it. Holding down the Shift key while selecting paragraphs in Tagging mode also allows you to select multiple paragraphs to tag at once.

## Store Graphic Defaults

Generally it is the case that when you are using the graphic tools you will be creating more than one object with the same characteristics. Rather than going through the process of selecting Line and Fill attributes each time you create a graphic, use the Save To option to create default settings that you can use over and over.

## Faster Hyphenation

If you've been using the faster of the two hyphenation algorithms and then switch to the slower but more accurate one, you'll notice immediately how much longer it takes to load a chapter. I timed how long it took to load one of the longer chapters in this book (Chapter 5, "Hard-

ware”) with no hyphenation installed, with the fast algorithm, and with the slow algorithm. The results were:

No hyphenation: 18 seconds  
 USENGLSH algorithm: 22 seconds  
 USENGLS2 algorithm: 96 seconds

As you can see, USENGLS2 is over four times slower than USENGLSH, though also significantly better in finding hyphenation points and avoiding incorrect breaks.

I recommend that you keep both the USENGLSH and the USENGLS2 algorithm in your \VENTURA directory. To keep track of which is which, rename them both so that USENGLSH is called FAST and USENGLS2 is called SLOW. One of them should be given the extension HY1 and the other the extension BAK. This will cause Ventura to use the one with HY1 and ignore the other. Unless you’re producing multilingual documents and really must have two hyphenation algorithms installed at the same time, it’s never a good idea to keep two hyphenation algorithms active as HY1 and HY2, since Ventura will load them both into RAM and you will have less memory available for holding text and pictures.

Probably the best way to work is to have the FAST algorithm active as FAST.HY1 while you’re first setting up a document, then rename it to FAST.BAK and rename SLOW.BAK to SLOW.HY1 when you get into the late stages with a document. Changing tag names like this is better than trying to turn off hyphenation on a tag-by-tag basis.

## 8087 Coprocessor?

Since Ventura does not use floating point arithmetic, it has no need for the 8087 coprocessor. Having that chip installed in your computer will not enhance the program’s performance.

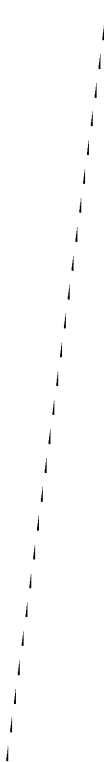
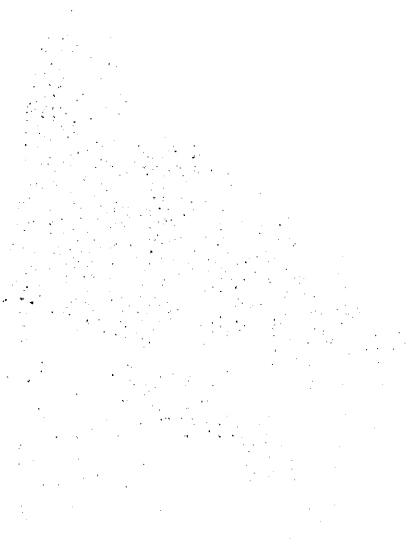
## Loading a Chapter Directly from DOS

You can speed up the getting-started process by typing the path and name of the chapter you are working on at the command line, like this:

```
VP C:\BOOKDOCS\CHAPTER1.CHP
```

## Pre-loading the PostScript Prologue

Each time it prints a file on a PostScript printer, Ventura transmits a prologue, PS2.PRE, containing various PostScript definitions. You can save time by downloading the file PERMV.PS each time you turn on the printer and deleting or renaming PS2.PRE from the \VENTURA directory. The location of PERMV.PS is on the \POSTSCRIPT directory of the Utility disk (#11). Eliminating the need for Ventura to transmit the PS2.PRE prologue shaves about 10 seconds off the time required to print a chapter. Remember to restore PS2.PRE to the \VENTURA directory before you create print files for printing on other printers or typesetters.



## CHAPTER TWENTY



# *Memory Limitations and Diagnostics*

ALTHOUGH VENTURA IS designed to handle very long documents, there are times when you will run up against memory limits caused by a document that is too long or a page that is too complex. Although there do exist certain absolute limits on document size and complexity, by understanding how Ventura handles computer memory and storage you can usually manage to produce almost any document.

### **What Are the Limits?**

The following limits are imposed by Ventura:

- Size of text files: With Version 1.0 the limit on such files was 150K. Now it is 500K. Ventura handles a long text file by holding as much as possible in RAM and “swapping out” the overflow to temporary files on the hard disk. Even if the file you are working with is well within the 500K limit, you’ll probably want to
- keep it small enough to avoid disk swapping, which slows operations down considerably.
- Number of tags: In Version 1.1 you can have 128 tags in a style sheet. In Version 1.0 the limit was 64.
- Number of chapters: In Version 1.1 the limit is 128 per publication. In Version 1.0 it was 64.
- Number of text and picture files: In Version 1.1 the limit is 128 per publication; previously it was 64.
- Number of paragraphs per chapter: In Version 1.1 the limit is 8,000, up from 3,000 in Version 1.0.
- Number of line elements per frame: 725. Line elements are explained below.
- Maximum size of a paragraph: 8,000 bytes.

Figure 1: To access the Diagnostics report, select Publisher Information from the Desk menu, then point the mouse at the word Ventura and click.

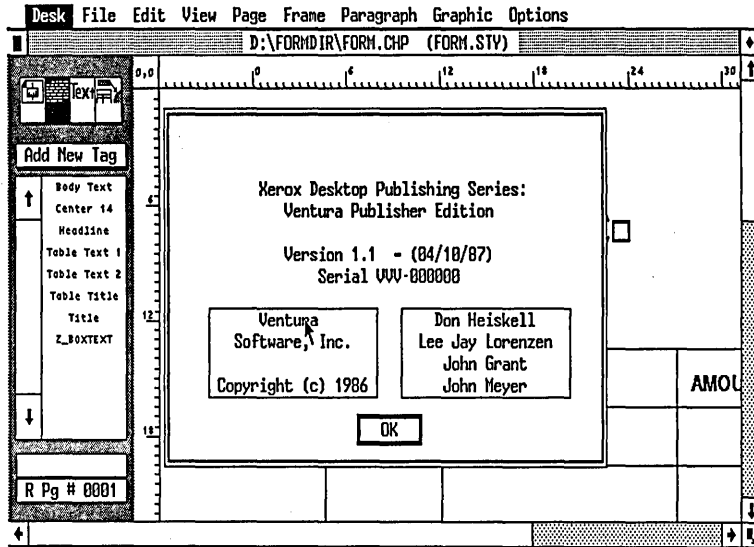
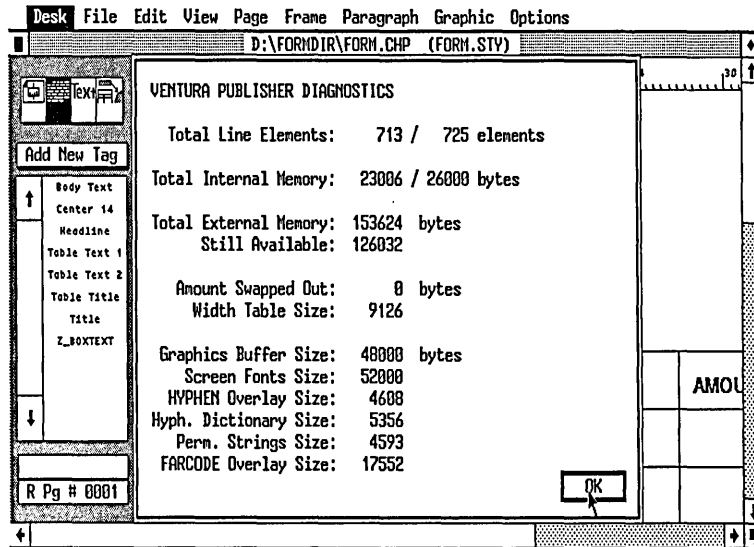


Figure 2: The Ventura Publisher Diagnostics report.



## Diagnostics Status Box

The first step in understanding Ventura's memory limits is to look at the diagnostics status box. To do so, select Publisher Info in the Desk menu and then click directly on the word Ventura in the box. (See Figures 1 and 2.)

## Total Line Elements

There are two numbers separated by a slash. The number to the right of the slash (normally 725) is the maximum number of line elements that are allowed in the current frame. The number to the left of the slash is the number that are remaining. (Subtracting the two numbers tells you how many line elements have been used up in the current frame.) Every line of text counts as two line elements, and additional line elements are used up by changes in type, tabs, and especially leader tabs (a line containing a leader tab counts as six line elements). Note, however, that the number of paragraph breaks does not affect the number of line elements. If you have too many line elements in a frame, you'll get the error message "This frame is too complex to completely format." Steps to take to simplify a frame are described below.

## Total Internal Memory

The number on the right side of the slash is the amount of RAM reserved for internal program functions; the number on the left is the amount actually used. These numbers can't be changed by the user.

## Total External Memory

On a machine with 640K of RAM and no RAM resident utilities or device drivers installed, this number should be about 170K. It represents the maximum amount of document information that Ventura can work with in RAM. Exceeding this amount will not prevent you from loading or working with a document, but it will slow operations down considerably because Ventura will resort to disk swapping.

## Still Available

This is the amount of RAM still unused and available for storing document information without resorting to disk swapping. The following steps can be taken to increase the amount of still available memory:

- De-install RAM-resident utilities such as SideKick or disk caching programs that reserve caching buffers in lower 640K territory.
- Remove unnecessary device drivers from your Config.sys file.
- When you load Ventura, type

`VP /A=16`

(or any integer between 1 and 32 in place of 16). Note that this reduces the amount of memory available for printing and for the graphics buffer. Thus, it will slow down cropping and moving by forcing disk swapping, and may interfere with the operation of printer drivers. However, it will allow you to work

with larger text files without disk swapping.

- If you have two hyphenation algorithms installed in the \VENTURA directory as HY1 and HY2, remove one of them or change its extension to BAK.

### **Amount Swapped Out**

This is the amount of document information that exceeds the available RAM and therefore has been written to the hard disk. Swapping out significantly reduces Ventura's performance.

### **Width Table Size**

This is the amount of RAM taken up by the portion of the font width table used by the screen display. It can be as little as 1K and as much as 35K, depending on how many fonts are installed.

### **Graphics Buffer Size**

This is the size of the picture file that Ventura can handle without swapping out to a hard disk. The limitation applies most frequently to images, i.e. bit-mapped graphics such as files with the IMG extension. Cropping and moving bit-mapped pictures will go much faster if you keep the size of files smaller than the graphics buffer.

### **Screen Fonts Size**

This is the amount of RAM reserved for storing the bit maps used by Ventura to display fonts on screen.

### **HYPHEN Overlay Size**

This is the sum of the hyphenation algorithms currently installed. You can have two such algorithms installed at any time. The term "overlay" is somewhat misleading here, since this is actually a program file that must remain in RAM rather than being kept on disk like traditional overlays.

### **Hyph. Dictionary Size**

This is the size of the hyphenation dictionary for the algorithms currently installed. (Is this the sum of the two dictionaries?)

### **Perm. Strings Size**

This is RAM that must remain allocated at all times to certain essential information such as error messages.

### **FARCODE Overlay Size**

The C compiler used in the development of Ventura allows program segments of up to 64K. FARCODE is program information outside that limit, which Ventura needs speedy access to and therefore maintains in RAM.

## Tips on Memory

### Tip: Overcoming Line Element Limits

The limit of 725 line elements per frame is most likely to cause problems if you are creating a multi-column document in a small point size such as a phone directory. Let's assume you are creating a three-column directory. To place more than 725 line elements on a page, draw two frames over the second and third columns. Load the document into the base page as normal, then select the second frame and click on the name of the text file in the sidebar. Text will now flow into the third column. Repeat the procedure to flow text into the third frame. Now mark the two frames as repeating frames. Ventura will automatically repeat the format for as many pages

as necessary to contain the whole document.

### Tip: Loading Ventura Onto a RAM Disk (Note: Approach With Caution)

There are two ways you can use a RAM disk with Ventura. One way is to store the entire program on the RAM disk. The other way, using the RAM disk for spill files, is described below. Loading Ventura onto a RAM disk will only work if you have 1.3Mb or more of RAM in your computer and have already used a program such as DOS's VDISK utility to set up the RAM disk. In theory, loading the program onto a RAM disk will speed up operations by reducing the need for Ventura to frequently look on the hard disk for overlay files.

**CAUTIONARY NOTE:** In my own experiments with using Ventura on a RAM

```
MD D:\VENTURA
COPY \VENTURA\VP*.* D:\VENTURA
COPY \VENTURA\OUTPUT.WID D:\VENTURA
PATH=D:\VENTURA
COPY C:\VENTURA\*.INF D:\VENTURA
COPY C:\VENTURA\*.HY? D:\VENTURA
COPY C:\VENTURA\screendriver D:\VENTURA
CD \VENTURA
DRVMRGR D:\VENTURA\VP etcetera
COPY D:\VENTURA\*.INF C:\VENTURA
```

*Table 1: The commands for starting Ventura from a RAM disk. The word **screendriver** should be replaced by the name of your screen driver, such as **SD\_HERC5.EGA** (Hercules monitor) or **SD\_EGAH5.EGA** (EGA board and monitor) and **etcetera** is replaced by your particular screen and mouse settings, which can be copied from **VP.BAT**.*



disk, I was unable to confirm that there are any performance improvements to be gained from this method. Besides that, the method is more complicated than using a disk caching utility such as Flash or Lightning (see Chapter 19, "Speed Tips.") I'm including this tip in the interest of completeness—perhaps you'll have better luck.

Assuming that your RAM disk is D and that Ventura 1.1 is installed in C:\VENTURA, the commands listed in Table 1 will install the program on the RAM disk and boot it up.

**Tip: Using a RAM Disk for Spill Files**

One of the biggest performance degradations with Ventura occurs when a document exceeds available memory and must be swapped out to the hard disk. If you have a RAM disk, you can have the RAM disk used for the spill files. Simply add /O=D: at the end of your VP.BAT line, where D: is replaced by the designation of your RAM drive. For example:

```
DRVMRGR VP %1 /S=SD_VIK01.EGA  
/M=11/O=D:
```

**Tip: Minimizing the Size of Database Output**

Every paragraph, no matter how long, consumes at least 64 bytes of RAM. So a one-word will take up 64 bytes, the same as a paragraph with nine words. You can reduce the amount of RAM consumed by a document by setting up your database program to generate two consecutive line breaks rather paragraph breaks to start each new line. (You need two consecutive line breaks because Ventura will ignore single line breaks). To generate a

line break, set up your database program to emit an R surrounded by angle brackets (<R>). Of course, you still have to insert a paragraph mark occasionally, to avoid violating the 8,000 byte limit for paragraphs.

## CHAPTER TWENTY-ONE



# *Using Ventura Without a Mouse*

THE PREMISE OF this chapter—that anyone would even consider using Ventura without a mouse—may strike you as silly. Frequently, however, people want to start using the program before they have had time to purchase a mouse, or they're having some difficulty configuring Ventura for use with a particular mouse and want to get started anyway. This chapter is intended for anyone who finds themselves sans mouse, for whatever reason.

### **General Operations**

- To get around the screen without a mouse, use the up and down cursor keys. The cursor will move in discrete jumps. To get more precise positioning, hold down the Shift key while you move the cursor keys. The cursor will move much more slowly and in smaller increments.
- In situations where you'd need to click the button on the mouse, press the Home key.

- In situations where you'd need to hold down the button on the mouse, such as dragging a frame or a graphic, press End. Then to "release"

Select Frame function.....	Ctrl-U
Select Tagging function.....	Ctrl-I
Select Text function.....	Ctrl-O
Select Graphics function .....	Ctrl-P
Select Reduced view .....	Ctrl-R
Select Normal view.....	Ctrl-N
Select Enlarge view .....	Ctrl-E
Save chapter.....	Ctrl-S
Assign function keys.....	Ctrl-K
Call up most recent menu.....	Ctrl-X
Selection button .....	Ctrl-2
Go to page.....	Ctrl-G

*Table 1: Keyboard equivalents for mouse operations.*

the button on the mouse, press Home.

- Use keyboard equivalents shown in Table 1 to avoid continually traveling to the menu line.

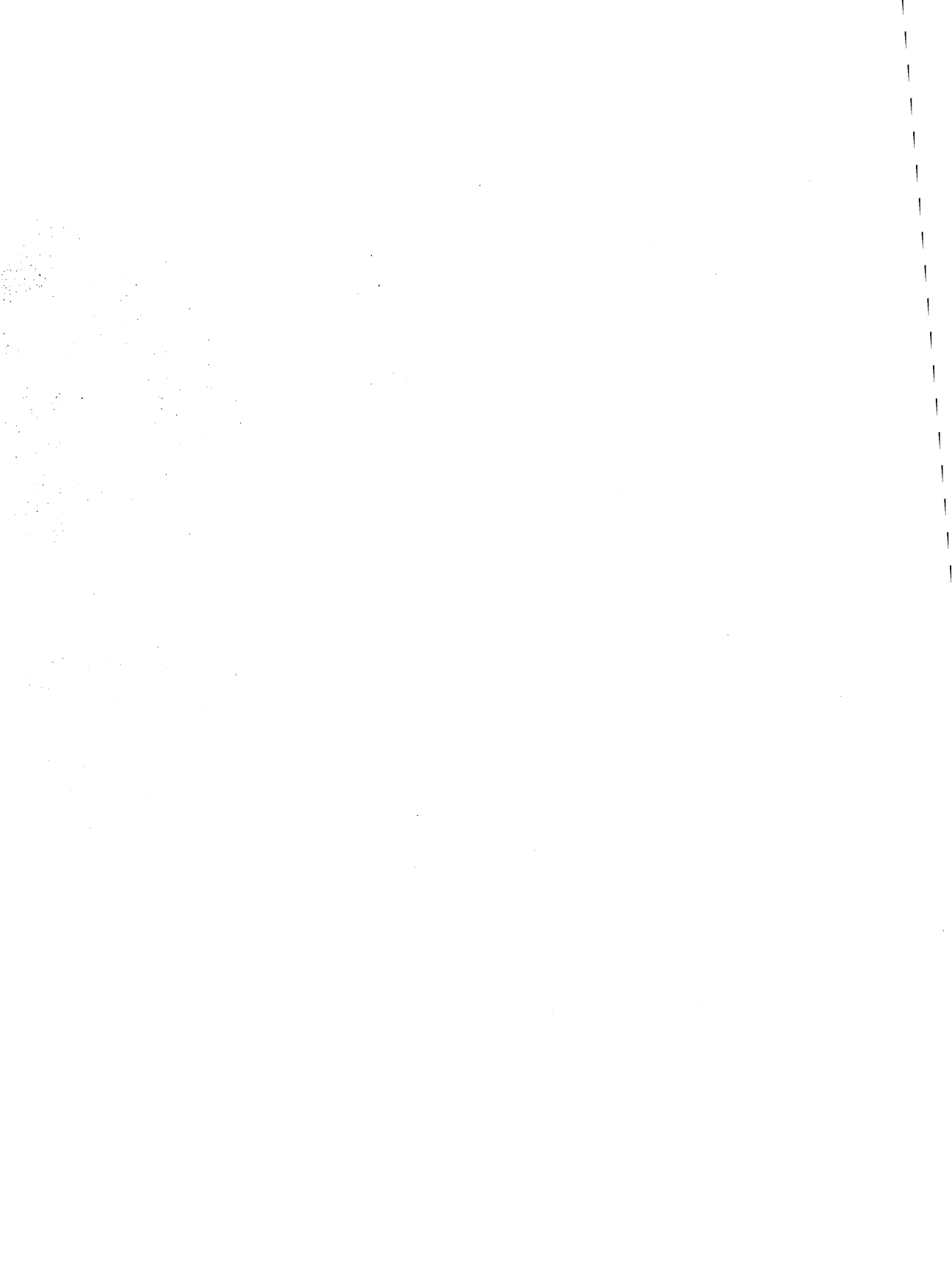
## Special Techniques

- When you first boot up the program, you should be able to move the cursor around the screen using the cursor keys instead of the mouse. If not, hold down the Shift key on the right side of the keyboard while pressing Ctrl.
- To create a new tag, press Ctrl-I to select the Tagging function. Move the cursor on top of a paragraph and press Home to select the paragraph. Then press Ctrl-2 to select Add New Tag.
- To get rid of a menu you have pulled down, move the cursor outside the menu and press Home.
- To draw a frame, select the Frame function with Ctrl-U, press Ctrl-2 to select Add New Frame, move the cursor to the upper left corner of the new frame, press End, cursor to the lower right corner, press Home again.
- To move a frame, move the cursor inside it and press End, move it to its new location and press Home.
- To stretch a frame, place the cursor over one of the small black squares that function as grabber marks. Press End--the cursor should change to a pointing finger, allowing you to stretch the edge of the frame by moving the cursor keys. If it does not, hold down the Shift key while you move the cursor more carefully on top of the grabber mark. Incidentally, it is easier to select the corner grabber marks than the side marks. When you've finished stretching the frame, press Home.
- In text editing mode, you need to use the cursor keys to move the special text editing cursor, which is different from the normal cursor. The text editing cursor holds your place in the text while the other cursor is used to select operations from menus. To change the cursor keys so that they move the text editing cursor rather than the regular cursor, hold down the Shift key on the right side of the keyboard while pressing Ctrl.
- To activate Set Font in text editing mode, press Ctrl-2.

v

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# Appendices



## APPENDIX A



# *Product Notes*

## **Graphics Software**

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### **1-2-3, Freelance, Symphony, Graphwriter**

*Lotus Development Corporation  
55 Cambridge Parkway  
Cambridge, MA 02142  
617/577-8500*

There are various ways to import graphics generated by these programs into Ventura. From 1-2-3, you can save graphics with the PIC extension, and then load them into Ventura as line art (i.e. object graphics). Freelance and Graphwriter also produce files in VideoShow format, and Freelance also can produce files in CGM format; both the VideoShow and CGM formats have been added as line art graphic options in Ventura 1.1. For details on preparing charts with 1-2-3, see Chapter 16, "Lotus Worksheets and Graphics."

---

### **AutoCAD**

*Autodesk, Inc.  
2320 Marinship Way  
Sausalito, CA 94965  
415/332-2344*

There are several ways to import AutoCAD files into Ventura. One is to create them in SLD (slide) format using the ADE-2 Package and the AutoCAD MSLIDE command. In this form they can be imported them directly into Ventura. A second method is to save them in AutoCAD in DXF format and then use Ventura's DXFTOGEM utility, located on the Utilities disk (#11), to convert them to GEM format. They can then be imported into Ventura, but will not include a number of attributes including shape entity, text mirroring, curve fitting, 3D rendering, and and tapering widths in polylines. A third avenue is via HPGL format. If you have created a picture in AutoCAD in landscape mode, make sure that you rotate it before importing it into Ventura.

---

**GEM Draw Plus***Digital Research, Inc.**60 Garden Court**Monterey, CA 93942**800/443-4200, 408/649-3896*

Graphics created with GEM Draw Plus are created with the GEM extension and imported into Ventura as line art (i.e. object graphics), hence they do not degrade in resolution when they are scaled and distorted. The program provides tools for creating geometric shapes such as rectangles and circles; it also includes an extensive library of images that can be cropped and adapted. A panning feature lets you define a portion of the screen to work with at various levels of magnification. Among the features of the program are several fonts for incorporating text into graphics; however, spacing seems to be somewhat unpredictable when GEM Draw text is imported into Ventura.

---

**GEM Paint***Digital Research, Inc.**60 Garden Court**Monterey, CA 93942**800/443-4200, 408/649-3896*

Not as powerful as PC Paintbrush Plus, GEM Paint offers a similar set of drawing tools and saves its files with the IMG extension in image (i.e. bit-mapped) format. It allows pixel editing, but at the resolution of the screen rather than at the 300-dpi resolution allowed by Paintbrush.

---

**Halo DPE***Media Cybernetics, Inc.**8484 Georgia Ave. #200**Silver Spring, MD 20910**301/495-3305*

Besides being sold as Halo DPE by Media Cybernetics, this program is also marketed

by its developer, IMSI, as the Desktop Publishers' Graphics program. It creates files in IMG format, which can be imported into Ventura as images (i.e. bit-mapped graphics). You can operate scanners directly from within Halo DPE, including the Canon IX-12, Ricoh IS-30, IBM 3117, CompuScan PCS 240, and the Microtek MS-300A. In addition to normal painting features such as circles and shading, the program works with extended memory, provides image rotation, and has a zoom feature for pixel editing.

---

**Illustrator***Adobe Systems, Inc.**1870 Embarcadero Rd.**Palo Alto, CA 94303**415/852-0271*

Although Illustrator is still available only on the Macintosh, it is nevertheless an important piece of graphics software to be considered in conjunction with Ventura. You can load scanned images into Illustrator to use as templates, and then use its powerful drawing tools to trace over them. Unlike other drawing programs, Illustrator lets you draw true curves, making whole new areas of graphic illustration accessible from a personal computer. Illustrator saves its images as resolution-independent object graphics; once transferred to a PC they can be imported into Ventura as Encapsulated PostScript files.

---

**PC Paintbrush Plus, Publisher's Paintbrush***ZSoft Corporation**1950 Spectrum Circle**Suite A - 495**Marietta, GA 30067**404/980-1950*

Perhaps the most popular graphics program on the PC, PC Paintbrush Plus is a close rela-

tive of Windows Paintbrush. Both create files with the PCX or PCC extension, which can be imported into Ventura as images (i.e. bit-mapped graphics). For drawing, PC Paintbrush Plus provides tools such as a paintbrush, a paint roller, boxes, circles, pattern fills, cutting and pasting, and an eraser. It provide controls for operating a variety of scanners from within the program, allowing you to store scanned images in PCX format. Among the scanners supported are Dest PC Scan Plus, the ShapeScan, the Datacopy 730, the Canon IX-12, and the HP ScanJet. Once saved in PCX format, a scanned image can be edited or cleaned up using PC Paintbrush Plus's editing tools, including two levels of zoom for pixel editing. The PC Paintbrush Plus package also includes the Frieze screen shot utility (see Chapter 14, "Screen Shots"). An excellent configuration is the inexpensive Canon IX-12 scanner and the JLasar board in conjunction with PC Paintbrush Plus.

Publisher's Paintbrush starts with the features of PC Paintbrush Plus and adds a few more. Tools can be used in any of four zoom modes—unlike PC Paintbrush, which limits use of the tools to a single mode. Another addition is a set of text features that allow characters to be slanted and the baseline to be placed at an angle. The program supports both expanded AT memory and Lotus/Intel/Microsoft EMS memory, making it possible to create large bit-mapped images. Like PC Paintbrush Plus, Publisher's Paintbrush includes the Frieze screen shot utility and provides controls for a variety of scanners.

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## Perspective

*Three D Software Inc.*

*860 Via de la Paz*

*Pacific Palisades, CA 90272*

*213/459-8525*

As its name implies, this increasingly popular program is used for creating three-dimensional charts. It lets you import WKS files from 1-2-3, convert them into three-dimensional format, and apply functions such as tilting, rotating, stretching, and compressing along any of the axes. You can import them into Ventura as image (i.e. bit-mapped) files in IMG format.

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## Clip Art

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### Digit-Art LaserGraphics

*Image Club*

*#206 - 2915 - 19th St. NE*

*Calgary, Alberta*

*Canada T2E 7A2*

*403/250-1969*

The Digit-Art collection is created in MacDraw rather than MacPaint format, allowing it to be scaled without any reduction in resolution. Image Club plans to also have a volume of clip art available soon in Encapsulated PostScript Format.

---

### DrawArt

*Desktop Graphics*

*800/541-0900, California 800/334-3030*

Unlike most clip art collections, which are in MacPaint format, this one is in MacDraw format. The difference is that MacDraw im-



ages are object graphics, which means that they can be scaled without any reduction in resolution. The DrawArt collection is in two volumes, the first containing 150 images, the second 300 images.

---

### LaserCraft Images

*Nikrom*

176 Fort Pond Rd.

Shirley, MA 01464

800/835-2246

This is a collection of PostScript routines for special text and graphics effects. Currently the collection is on Macintosh disks but can be transferred to PC disks and then converted into Encapsulated PostScript Format for importing into Ventura. Text routines include cylindrical, elliptical, rotated, shaded, and shadowed type. Graphics techniques include borders, brushed-metal effects, curves, and scroll designs.

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### Mac-Art Library

*CompuCraft*

P.O. Box 3155

Englewood, CO 80155

303/850-7472

This is a library of MacPaint clip art on Macintosh disks. Topics include animals, farm life, geography, kitchen, sports, tools, buildings, flowers, trees, plants, greeting cards, people, transportation, signs, symbols, and borders.

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### MacMemories

*ImageWorld*

P.O. Box 10415

Eugene, OR 97440

800/457-6633

This is a large clip art collection based on turn-of-the-century book, magazine, and

greeting card illustrations.

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### PC Quik-Art

*PC QUIK, Inc.*

394 S. Milledge Ave. #200

Athens, GA 30606

800/523-1796

PC Quick-Art is a very large library (over 50,000 images) of commercial clip art created by SCW Services, which has been translated into PC Paintbrush PCC format. It can be loaded into Ventura directly as a PC Paintbrush image, or loaded into PC Paintbrush Plus or Publishers Paintbrush for editing. Each disk provides approximately 50 images and is devoted to a particular topic including ad tools, maps, borders and mortises, activities and events, services and merchandise, holidays, recreation, food services, cartoons, dingbats, computers, drafting tools, math and science, emblems and logos, sports, and religion.

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## PostScript Printers (300 dpi)

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### LaserWriter, LaserWriter Plus

*Apple Computer Inc.*

20525 Mariani Ave.

Cupertino, CA 95014

408/996-1010

The LaserWriter was the first PostScript printer, and it and the LaserWriter Plus con-

tinue to be the most popular. Both use the Canon LBP-CX engine, which is reliable and has excellent type quality but in solid areas produces a mottled gray rather than black. The difference between the LaserWriter and the LaserWriter Plus is in the number of fonts built into the printer. The LaserWriter includes Helvetica, Times Roman, Courier, and Symbol. In addition to those fonts, the Plus includes Avant Garde Gothic, ITC Bookman, Helvetica Narrow, New Century Schoolbook, Palatino, ITC Zapf Chancery, and ITC Zapf Dingbats.

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### **LZR-2665**

Dataproducts Corp.  
6200 Canoga Ave.  
Woodland Hills, CA 91365  
818/887-8000

This is a 26 page-per-minute PostScript printer that uses the Toshiba engine. It can print on letter, legal, and 11- by 17-inch paper.

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### **OmniLaser 2000 Series**

*Texas Instruments*  
*Data Systems Group*  
*P.O. Box 809063*  
*H-860*  
*Dallas, TX 75080*  
*800/527-3500*

There are three laser printers in this series. The 2108 and the 2115 include the PostScript page description language. HP LaserJet emulation is also available. The OmniLaser printers use the 8 page-per-minute Ricoh 4080 engine (for more details on the Ricoh engine, see Chapter 5, "Hardware.")

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### **PS Jet and PS Jet Plus**

*The Laser Connection, Inc.*  
*P.O. Box 850296*  
*Mobile, AL 36689*  
*205/633-7223*

PS Jet and PS Jet Plus are kits that convert an HP LaserJet or other printer using the Canon LBP-CX engine into the equivalent of a PS 800 or PS 800 Plus PostScript printer. Newer versions of these kits also include an HP LaserJet emulation, allowing you to continue using software packages that lack PostScript drivers. Details on the installation process are provided in Chapter 5, "Hardware."

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### **PS 800, PS 800 Plus, PS 1200, PS 2400**

*QMS, Inc.*  
*P.O. Box 81250*  
*Mobile, AL 36689*

All these QMS printers offer 300-dpi resolution; the difference is speed. The PS 800 and PS 800 Plus are rated at 8 pages per minute, the PS 1200 at 12 pages per minute, and the PS 2400 at 24 pages per minute. The PS 800 and PS 800 Plus are quite similar to the LaserWriter and LaserWriter Plus, with the same Canon LBP-CX engine and providing the same internal fonts. However, both have an additional 512K of RAM.

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### **Qume Script Ten**

*ITT Qume*  
*2350 Qume Dr.*  
*San Jose, CA 95131-1893*  
*408/942-4144*

This is an 8 page-per-minute PostScript printer that uses the Genicom engine. Although bulky, the printer produces good print quality, with crisp type and black solid areas.

# PostScript Printers and Typesetters (Above 300 dpi)

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## **CG 400-PS**

*Compugraphic Corp.*  
200 Billardvale St.  
Wilmington, MA 01887  
800/822-5524

This is a 400-dpi printer capable of printing up to 18 original pages per minute. The additional 100 dots per horizontal and vertical inch actually increases the quality of output considerably (160,000 dots per square inch, in contrast to the 90,000 dots per square inch produced by most laser printers). The printer uses Adobe's Atlas controller, which uses the Motorola 68020 chip and is faster than the controllers used in most PostScript printers. One reason for the increased speed of the Atlas controller is that while one page is being printed, the next page is being prepared. The printer includes a 20 Mb hard disk for storing fonts, a 1 Mb font cache, and 2 Mb of bit map memory. The built-in typeface families are the same as in the LaserWriter: Times, Helvetica, Courier, and Symbol. The difference between the 300 dpi of most laser printers and the 400 dpi level marks a remarkable improvement in quality that may be more suitable for publications that require sharper type than most laser printers can produce.

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## **Linotronic 100, Linotronic 300**

*Allied Linotype Co.*  
425 Oser Ave.  
Hauppauge, NY 11788  
516/434-2016

The resolution of the Linotronic 100 is 1270 dpi, that of the Linotronic 300 is 2540 dpi. Both print on paper or film up to 12 inches wide. With bit-mapped and object graphics, the 300 is two to three times faster than the 100; with halftones the two are roughly comparable in speed. Both can be used with the full library of PostScript fonts. Typically, service bureaus provide access to Linotronic printers on a per hour and per page fee basis. In the past year, the sluggish performance of the Linotronic typesetters has been improved. The most dramatic improvement has been in the area of bit-mapped images: an image that used to take 27 minutes to print on the Linotronic 300 now takes just under 2 minutes.

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## **Printware 720 IQ**

*Printware*  
1385 Mendota Heights Rd.  
St. Paul, MN  
612/456-1400

Scheduled for introduction in September, 1987, the Printware 720 IQ is a 1200 dpi (horizontally) by 600 dpi (vertically) laser printer that uses Printscript, a PostScript-compatible page description language. It also emulates an HP LaserJet Plus. The printer is rated at a maximum of 8 pages per minute and accepts plain paper stock up to 8.5 by 11 inches, transparencies, and labels via a Toshiba paper transport mechanism. The 720 IQ contains allows on-line selection of black and one other color, such as red, brown, or blue. A Ventura driver is report being prepared by the manufacturer.

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**VT600***Varietyper**1 Mount Pleasant Ave.**East Hanover, NJ 07936**800/631-8134*

This is a 600-dpi PostScript printer, rated at a maximum of 10 pages per minute. Like the Agfa P400PS, it uses the fast Atlas controller. Built into the printer is a 20 Mb hard disk for storing typefaces. The VT600 uses plain paper (up to 10 by 14 inches) and provides serial and parallel ports. Resident fonts are Varietyper Times Roman, Varietyper Helvetica, and Adobe Courier and Symbol; more fonts can be loaded onto the printer's 20 Mb hard disk. The width tables for the Varietyper Times Roman and Helvetica do not match those of Adobe's Times Roman and Helvetica; thus, you will not be able to justify type set in these typefaces until Adobe provides those fonts on disks so that they can be downloaded into the printer.



## LaserJet Compatible Printers

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**Kyocera F-1010, F-2010***Kyocera Unison Inc.**3165 Adeline Ave.**Berkeley, CA 94703**415/848-6680*

The Kyocera printers can be operated in several modes, the most useful of which is LaserJet Plus emulation. The controller of

the Kyocera is similar to the Oasys design used in the Oasys LaserPro, and it is one of the best emulations of the LaserJet Plus. There are some slight incompatibilities, however: (1) slight streaking may show up in bit-mapped graphics, and (2) light shades of gray tend to be too faded. In general, however, these problems are inconsequential. The speed of the Kyocera is somewhat better than the LaserJet Plus, and the amount of RAM is 1 Mb rather than 512K. Print quality of the Kyocera FBP-01 engine is excellent. In addition to emulating the LaserJet Plus, the printer emulates the Diablo 630, Qume Sprint II, Epson FX-80, NEC Spinwriter, and IBM Graphics Printer.

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**LaserJet***Hewlett-Packard Co.**11000 Wolfe Rd.**Cupertino, CA 95014**800/367-4772*

The basic LaserJet can only use font cartridges, not downloadable fonts on floppy disks. Although more than a score of such cartridges are available, with Ventura you can only use the F cartridge, which provides one display font (14.4-point Helv), three text fonts (10-point TMS RMN in regular, italic, and bold) and one footnote font (8-point TMS RMN). Though limited, this range of sizes is suitable for letters, memoranda, simple business reports, and some technical documentation.

With the LaserJet, you cannot print text in landscape mode, and graphics are severely limited by the 59 Kb of printer memory available for storing graphics. If you select other fonts and try to print them on the LaserJet, Ventura will render them at a crude 75-dpi resolution. Despite its drawbacks, you can use the LaserJet as a draft printer in conjunction with a PostScript phototypesetter.

This is done by selecting the LaserJet as the printer and then specifying a PostScript width table. If you are using a LaserJet, you have several upgrade options: the J Laser or LaserMaster boards (see below), the PS Jet (see above), or an upgrade to a LaserJet Plus.

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### **LaserJet Plus, LaserJet 500 Plus, LaserJet Series II**

*Hewlett-Packard Co.  
11000 Wolfe Rd.  
Cupertino, CA 95014  
800/367-4772*

These printers differ from the basic LaserJet in that they include more memory (512K in the Plus and the 500 Plus, 512K to 4.5 Mb in the Series II). This memory allows larger graphic images to be printed, as well as allowing fonts to be downloaded into the printer. The Plus and the 500 Plus use the same Canon LBP-CX engine used by the basic LaserJet; the Series II uses the new Canon LBP-SX, which is lighter and provides blacker blacks. Other than the difference in the engine that they use and the new control panel on the Series II, operation of all these printers is basically the same. With the 500 Plus, you have access to two printer trays; with the other printers, only one tray is provided.

When setting up these printers, make sure you select a parallel interface rather than a serial one; with serial transmission, downloading of fonts and graphics is considerably slower.

Besides the Bitstream-designed Dutch (Roman) and Swiss (Helvetica) fonts provided by Ventura for the LaserJet, numerous other fonts are available from HP and third-party vendors (see below).

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### **LaserPro**

*Office Automation Systems, Inc.  
8352 Clairemont Mesa Blvd.  
San Diego, CA 92111  
619/576-9500*

The controller used in this printer is quite similar to that used in the Kyocera. Like the Kyocera, the LaserPro is highly compatible with the LaserJet Plus. It includes a full Mb of RAM. The printer is especially good at printing bit-mapped graphics. The LaserPro uses the Ricoh 4080 engine. Besides LaserJet Plus emulation, the LaserPro emulates the Diablo 630, Qume Sprint II, and NEC Spinwriter.

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### **MT-910**

*Mannesman Tally  
8301 S. 180th St.  
Kent, WA 98032  
206/251-5524 or 206/251-5500*

The MT-910 uses the same Kyocera FBP-01 laser printer engine as the Kyocera. It is capable of emulating an HP LaserJet Plus, and it is in this capacity that it can be used with Ventura. Among the LaserJet Plus compatibles, the MT-910 excels in featuring multiple paper trays, good quality graphics, and smooth, quiet operation. Its manual is one of the clearest and most complete of any laser printer on the market. A useful control panel assists in selecting printer defaults. An optional feature is a four-user port. The big drawback of the MT-910 is that it is slower than other LaserJet Plus compatibles. It took over three times as long to print a scanned image as a LaserJet Plus, a Kyocera F-1010, or an Oasys LaserPro. The standard memory configuration of the MT-910 is only 512K, the same as the minimum configuration of the LaserJet Plus or the LaserJet series II. However, a 2Mb expansion board is available for a very reasonable \$495. When not

being used with Ventura, the MT-910 can emulate the Epson FX printer, IBM Pro-Printer, Diablo 630, and Qume Sprint.

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## QuadLaser

*Quadram Corp.  
One Quad Way  
Norcross, GA 30093  
404/564-5566*

Recently, the QuadLaser was upgraded so that it emulates all the functions of the LaserJet Plus. However, whereas the Plus has only 512K of memory, the QuadLaser comes standard with 2 Mb, enough for storing plenty of fonts as well as printing large bit-mapped graphics without a hitch. The printer uses the Ricoh 4080 engine. Besides the LaserJet Plus, the QuadLaser can emulate the Qume Sprint 5 and the Epson FX-80.

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## Other Printers

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### Cordata laser printer

*Cordata  
275 E. Hillcrest Dr.  
Thousand Oaks, CA 91360  
805/495-5800*

Like the HP LaserJet and the Apple LaserWriter, the Cordata laser printer uses the Canon LBP-CX engine; however, it differs from those printers in that its controller is located on a board installed in the computer, rather than in the printer. The controller board assembles a bit map of the entire page and then sends this bit map over a high-speed interface to the printer. Ventura substi-

tutes its own raster image processor for that of the Cordata, writing the bit map of the final page directly to the Cordata's memory. Thus, Cordata's own fonts can not be used with Ventura. On the other hand, fonts in HP LaserJet format can be used after being converted with Ventura's font conversion utilities (see Chapter 13, "Adding Fonts"). The maximum font size that can be printed with Ventura on the Cordata is 30 points. When you use the Cordata with Ventura, you must place the following command in your Config.sys file:

```
DEVICE=LLD.SYS
```

In addition, you must run the RIM.EXE program before running Ventura.

---

### JLaser Plus

*Tall Tree Systems  
1120 San Antonio Rd.  
Palo Alto, CA 94303  
415/964-1980*

Like the LaserMaster CAPCard, the JLaser board is installed in the computer and connected via a cable connected through the back panel of the printer. It can be used with printers that have the Canon LBP-CX or the Ricoh 4080 engine. You can continue to operate your printer as usual through its normal cable, using your old word processing or other software. But if a software program is designed to be used with the JLaser board (as is Ventura), it will automatically bypass the old cable and instead make use of the JLaser board.

The board has several advantages. One is that it allows much faster printing of pages with bit-mapped graphics. Another is that the memory on the board can be used for other purposes, for example as a RAM disk, when not being used for printing. Finally, the JLaser board can be used to support very fast scanning in conjunction with a Canon IX-12

scanner. The operation of the Canon IX-12 is so fast in conjunction with the J Laser board that you can use the combination for routine photocopying, feeding pages into the scanner and having copies immediately emerge from the printer. In Version 1.1, Ventura's J Laser driver, which was already extremely fast, has been speeded up 30 percent.

In essence, the J Laser board is nothing but 1 to 2 megabytes of blank memory. Unlike the controllers of other laser printers, it lacks any microprocessor or page description language to process high level commands. Instead, that work must be done by the computer's own microprocessor under the direction of the software package, in this case Ventura. Unfortunately, most software packages lack drivers to J Laser, but Ventura's is excellent. It offers extremely fast printing, especially of scanned images.

The fonts for the J Laser are also provided by Ventura and are identical designs and selections to those provided by Ventura for the LaserJet Plus. Using utilities supplied by Ventura, you can convert any LaserJet font for use with the J Laser (see Chapter 13, "Adding Fonts"). Ventura's J Laser driver, however, is limited to printing fonts no larger than 48 points.

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## **KISS, Big KISS**

*QMS*

*P.O. Box 81250*

*Mobile, AL 36689*

*205/633-4300*

On their own, neither the KISS nor the Big KISS can be used with Ventura; however, there are several ways of upgrading these printers. The first is via a PS Jet retrofit (\$2995); the second is by adding a J Laser Plus or LaserMaster board (approximately \$1000).

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## **TurboLaser**

*AST Research, Inc.*

*2121 Alton Ave.*

*Irvine, CA 92714*

*714/863-1333*

This printer is one of the fastest laser printers for use with Ventura, especially in conjunction with AST's 10 Mhz, no-wait-state Premium 286 computer and its TurboScan scanner. The speed comes from the fact that the controller for the printer resides in the computer. The TurboLaser uses a Ricoh 4080 engine, the same as the Quadram QuadLaser and the Texas Instruments OmniLaser. For details on the Ricoh engine, see Chapter 5, "Hardware." AST's own fonts for the TurboLaser cannot be used with Ventura; however, Ventura does provide virtually identical Swiss (Helvetica), Dutch (Times Roman), and Symbol fonts. Additional fonts can be converted from HP LaserJet format using utilities supplied with Ventura, as described in Chapter 13, "Adding Fonts." Since the AST printer uses write-white technology, the quality of fonts converted from LaserJet format (tuned for black-white technology) is not as good as fonts tuned specifically for use on write-white devices.

The largest size type that can be printed with Ventura on the AST TurboLaser is 30 points.

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## **Xerox 4020 Color Inkjet**

*Xerox Corporation*

*800 Long Ridge Rd.*

*P.O. Box 1600*

*Stamford, CT 06904*

Although this printer cannot rival laser printers in speed, its color capabilities are excellent. With Ventura, you can assign color attributes to type, frame backgrounds, ruling lines, and graphic fills. Imported graphics, such as Lotus charts, are also automatically

assigned colors. With the 4020, both text and pictures print at in 240 by 120 dots per inch, and eight colors are available. Swiss (Helvetica) and Dutch (Times Roman) are available in sizes from 8 to 36 points; there is no Symbol font.

---

### **Xerox 4045 Laser CP**

*Xerox Corporation  
800 Long Ridge Rd.  
P.O. Box 1600  
Stamford, CT 06904*

This is a 10-ppm printer with 300-dpi output. It also includes an optional copier. It is rated for print volumes of 2,000 to 10,000 pages per month, significantly greater than the 3,000 page per month duty cycle listed for printers that use the Canon LBP-CX engine. Basic memory is 128K, but can be expanded to 512K to allow more typefaces per page and larger graphics. Ventura provides two drivers for the 4045, one for 300-dpi graphics and the other for 150-dpi graphics. The latter can be used to print a page that exceeds the memory of the 4045 if printed at 300 dpi. The 4045 cannot print white text on a black background. It is compatible with the Diablo 630 and the Xerox 2700 II laser printer. Fonts can be converted from LaserJet format using Ventura's font conversion utilities; however, since the 4045 uses write-white technology rather than the write-black technology used by the LaserJet, converted fonts may suffer in quality. Look for fonts specifically tuned for use with a write-white device.

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### **XT/CP CAPCard, XT/RP CAPCard**

*LaserMaster Corp.  
7156 Shady Oak Rd.  
Eden Prairie, MN 55344  
612/944-6069*

LaserMaster originally made a name for itself providing fast output for AutoCAD users, and now provides an extremely fast driver for Ventura. Like the JLASER board, the CAPCard is a laser printer controller that is installed as a board in the computer and connected to any laser printer that uses the Ricoh 4080 or 4081 engine or the Canon LBP-CX engine. The speed of the product is largely due to fast font downloading and bit-mapped graphics transfer. After you install the card, you can still use your retrofitted printer as before; however, the controller is also capable of emulating an HP LaserJet Plus. LaserMaster also sells a version of the Bitstream font compiler (see Font Generators below).

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## **Monitors**

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### **Amdek 1280 Graphics Subsystem**

*Amdek Corp.  
2201 Lively Blvd.  
Elk Grove Village, IL 60007  
312/364-1180*

This monitor is identical to the WY-700.



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**ConoVision 2800**

*Conographic Corporation*  
17841 Fitch  
Irvine, CA 92714  
714/474-1188

The board for the Conovision 2800 is theoretically capable of driving a display of up to 2880 by 1024 pixels. Currently, it is used with the Moniterm monitor, the same 14- by 11-inch monitor used by the Viking I and the LaserView (see Chapter 5, "Hardware," for more on the Moniterm monitor). In conjunction with that monitor, the full theoretical resolution of the Conovision is not yet available; the maximum available now is 1,440 by 720 pixels. The 2800 can display Hercules graphics and can function as a plain character display, although reviewers have complained that the emulation software for using it in Hercules or MDA mode is still somewhat problematic, and CGA emulation is not available. Some reviewers have criticized the image quality of the Conovision 2800 as "jittery" and somewhat prone to flicker.

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**Desktop 1280**

*Verticom, Inc.*  
545 Weddell Dr.  
Sunnyvale, CA 94089-2114  
408/747-1222

The Desktop 1280 uses the Intel 82786 graphics coprocessor, which offers extremely fast Bit Blit operations (cutting and pasting of arbitrary regions from one part of the screen to another).

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**Genius VHR**

*Micro Display Systems Inc.*  
1310 Vermillion Street  
P.O. Box 455  
Hastings, MN 55033  
612/437-2233

The most notable feature of the Genius is that it is taller than it is wide, with a screen size of 8 by 10.5 inches. Resolution is 736 by 1008 pixels (100 pixels per inch). Pixels are square, which makes the aspect ratio of the image the same as that of the printed page.

Like the WY-700, the Genius has been on the market long enough to have built up a solid base of drivers for a variety of software programs. Compatible programs include Microsoft Windows, Microsoft Word, GEM, and 1-2-3. In Ventura's Normal view, the Genius displays about half of a page horizontally and two thirds vertically. When used with a word processing program with the appropriate driver, the monitor can display 66 lines by 80 columns. With applications that do not have drivers, it uses the top half of the screen to display monochrome text and the bottom half to display CGA graphics. No Hercules or EGA emulation is provided.

This monitor was selected as the favorite display in an informal survey conducted by Desktop Publishing newsletter. It was also chosen by PC Magazine in its "Best of 1985" awards.

Users of the Genius are unanimously pleased by the crisp, flicker-free quality of its non-interlaced display. The only problem is at the edges of the screen, where some distortion occurs. Although the documentation is reportedly poor, the monitor is easy to install. One drawback is that the cables are so short that you have to put the monitor on top of your computer.

Some compatibility problems have been noted with the Genius for 8088 computers

with memory above 640K. Also, the Genius, which occupies two slots, is reported to draw a good deal of power and consequently to run quite hot.

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### **LaserView Display System**

*Sigma Designs*  
46901 Landing Parkway  
Fremont, CA 94538  
415/770-0100

To use the LaserView you must also have another monitor installed simultaneously with your system. In addition to Ventura, drivers are available for Windows, GEM, AutoCAD, 1-2-3, Symphony, Dr. Halo, and PC Paintbrush Plus. When using the LaserView with other software, you must use your regular monitor.

The LaserView adapter can be used with several different monitors, including Sigma Design's own 15-inch (diagonal) monitor, the 19-inch (diagonal) Moniterm monitor used by the Viking I and the Conovision 2800, and Princeton Graphics' monitors. At \$2395, the LaserView ranks with the Viking I as one of the most expensive display systems. With Ventura, the adapter provides 1664 pixels horizontally by 1200 pixels vertically, or 110 square pixels per inch. It has about twice as many dots on the screen as the Genius and the Wyse, but the density of dots is about 50 percent greater because the size of the screen is larger.

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### **Magna-4**

*DBM, Inc.*  
634 Georgia Avenue  
Palo Alto, CA 94306  
415/494-2094

This monitor is 14 by 11 inches in size and can display 1280 pixels horizontally by 980 vertically. It provides emulation of the CGA

and MDA.

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### **Viking I**

*Moniterm Corporation*  
5740 Green Circle Drive  
Minnetonka, MN 55343-9990  
612/935-4151

To run the Viking I, you must have a Hercules or EGA graphics board installed in your computer in addition to the Viking I board. You can have either the Viking I monitor installed alone and use it both for Ventura and for other applications, or you can have two monitors installed, using the Viking I for Ventura and the plain monitor for regular applications. A drawback of the Viking I setup is that you must always turn the monitor on before turning the computer on, or turn the two on simultaneously. The reason is that the Viking I board draws its power from the monitor (since its power requirements are too large to be handled by the computer).

Aside from its bizarre (and risky) power supply setup, the Viking I is an excellent monitor both for Ventura and for regular word processing. With Ventura you can see a whole page in Normal view except for a thin strip along the bottom of the page. Thus, you rarely have to use the scroll bars. With regular applications, you get a crisp emulation of a normal monochrome display or of EGA or Hercules graphics. When emulating other monitors, the Viking I only uses the central portion of the screen, however, the size of characters is quite legible and the overall result is a much more readable display than that of text on an EGA or Hercules monitor. With Ventura, type can be read in Normal view at any size, and you rarely need any other view.

Although some reviewers have complained about the Viking I's image quality,

difficulty of installation, and software compatibility, those problems all seem to have been taken care of in the latest revisions of the drivers.

At \$2395 and with a 14- by 11-inch monitor, the Viking I belongs—along with the LaserView and the Conovision 2800—to the higher tier of large screen displays. Resolution is 1280 by 960 pixels. The Moniterm monitor used by all these systems is discussed in Chapter 5, “Hardware.” In addition to drivers for Ventura, the Viking I includes drivers for AutoCAD and Microsoft Windows. The refresh rate of the monitor is 66 Hz, which is lower than the refresh rate of the IBM Monochrome monitor (50 Hz) and the IBM Color Graphics Adapter (60 Hz); however, the image quality of the Viking I is excellent and there is no flicker.

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### **Wyse WY-700 (same as Amdek 1280)**

*Wyse Technology*  
3571 N. First St.  
San Jose, CA 95134  
800/GET WYSE

The WY-700 which is identical to the Amdek 1280, is extremely popular due to its affordability (list price \$999) and its extensive software support, due to the fact that the monitor has been on the market longer than most other large-screen displays. It sports drivers for PC Paintbrush, 1-2-3, Symphony, Windows, GEM, and AutoCAD, among others.

The WY-700 is slightly larger than a standard display: 10 inches wide by 7.5 inches tall. Maximum resolution is 1280 by 800, which means that the density of pixels is more than four and a half times that of the EGA. The aspect ratio of pixels is 1.2, which means that they are slightly taller than they are wide. Hence the proportions of a document on the screen will be different than on

the printed page.

The image quality of the WY-700 is sharp and flicker-free: you can read 8-point type even in Ventura’s double-page mode. In Ventura’s Normal view you can see about 60 percent of the length of the page and 95 percent of its width. The monitor cannot be used with systems that have EGAs installed and it requires a full-length XT-height slot. Installation is simple: you merely copy a set of utilities onto your hard disk.

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### **Xerox 6068 Full Page Display**

*Xerox Corp.*  
*Xerox Square*  
Rochester, NY 14644  
716/423-5078

Like the Genius, the Xerox display is taller than it is wide: 8.5 by 10.5 inches. The resolution is 720 pixels horizontally by 992 vertically (90 by 100 pixels per inch). Its image quality is crisp and flicker-free, the price is low, and the documentation is excellent. The drawback of the Xerox display, beside the fact that the pixels are not quite square, is that few drivers are available for programs other than Ventura and Xerox Writer. You can run normal text-based DOS applications with the display, but they are shown in very small letters in the top half of the screen. Running Ventura, the Xerox display cuts off a small portion of the right side of the page.

# Scanners

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## Abaton Scan 300

*Abaton Technology*  
7901 Stoneridge Dr. #500  
Pleasanton, CA 94566  
415/463-8822

This scanner is the same as the MicroTek.

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## Canon IX-12

*Canon USA*  
Lake Success, NY 11042  
516/488-6700

At a list price of \$895, the Canon IX-12 sheet-fed scanner is about \$1000 less expensive than others on the market. It has the same Canon engine used by much more expensive scanners such as the Hewlett-Packard JetScan and the Princeton Graphics LS-300. To drive the scanner you need PC Paintbrush Plus or Publisher's Paintbrush. The IX-12 really shines in conjunction with the JLASER Plus board. Using utilities provided by Tall Tree Systems, you can use the scanner and the JLASER as a pseudo-photocopying machine, getting a laser printed copy of your document in about 30 seconds.

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## Datacopy Model 730

*Datacopy Corp.*  
1215 Terra Bella Ave.  
Mountain View, CA 94043  
415/965-7900

Datacopy is one of the most experienced companies in the scanner market. The company makes its own scanner engines, whereas most scanner manufacturers use an engine from another supplier, such as the Canon scanner engine. The flatbed feed

mechanism used by the Model 730 is superior to the roller-feed mechanism of the Jet Reader, since it can handle pictures in books or mounted on thick backing, and it also has fewer alignment problems.

Although Datacopy sells a package called WIPS (Word Image Processing Software) for driving the scanner (which is being modified to produce the PCX format needed for import into Ventura), you can also drive it using PC Paintbrush Plus or Publisher's Paintbrush. Another software package that drives this scanner is PC Image, which runs under Windows and produces Datacopy format, TIFF format, and PCX format.

As extras, Datacopy scanners can be outfitted with a Fax board and optical character recognition software is available. The OCR Plus software can actually learn to read a new typeface—the first time it encounters a new character it displays the character on the screen for your confirmation.

---

## Dest PC Scan Plus

*Dest Corporation*  
1202 Cadillac Court  
Milpitas, CA 95035  
408/946-7100

A sheet-fed scanner, the Dest forces sheets through a sharp U-turn, which may limit your ability to scan certain material, although photographs do feed through satisfactorily. Installation of the Dest is somewhat more complex than other scanners, requiring adjustment of DIP switches on the scanner and your computer's Config.sys file.

Included with the scanner is Publish Pac and PC Paintbrush Plus software. The Publish Pac software allows you to scan images and save them in PCX format. Unlike software for other scanners, the Publish Pac software provides only a single halftoning pat-

tern. You can then edit the PCX images produced by Publish Pac using PC Paintbrush or else load the PCX files directly into Ventura. Also included with Publish Pac is OCR software for automatically converting text on paper and into ASCII files.

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### MicroTek scanners

*MicroTek Lab, Inc.*  
16901 South Western Ave.  
Gardena, CA 90247  
213/321-2121

The MicroTek scanners include their own software, which can save files in either GEM or PC Paintbrush (PCX) format. You can then import these files into Ventura.

---

### ScanJet

*Hewlett-Packard*  
1820 Embarcadero Rd.  
Palo Alto, CA 94303  
800/367-4772

The ScanJet uses the same sheet-fed Canon engine as the Canon IX-12 (which happens to be a good deal less expensive). The difference between the two is HP's Scanning Gallery software. It saves images in TIFF (tagged image file format), but lets you convert images from that format into PC Paintbrush PCX files or GEM Paint IMG files. Files in either PCX or IMG form can in turn be imported into Ventura.

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### TurboScan

*AST Research, Inc.*  
2121 Alton Ave.  
Irvine, CA 92714  
714/863-1333

This is the same as the Microtek scanner.

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## Non-PostScript Fonts

---

### ConoFonts

*Conographic Corporation*  
17841 Fitch  
Irvine, CA 92714  
714/474-1188

ConoGraphic's ConoFonts for the HP LaserJet include CG Times, Triumvirate, ITC Souvenir, Triumvirate Condensed, Old English, Raphael, Uncial, Commercial Script, CG Palacio, Trade Bold Ultracondensed, Triumvirate Ultracompressed, ITC Zapf Chancery, ITC LSC Manhattan, ITC Benguiat Bold, Uncle Sam Open, Dom Casual, American Classic Bold, Globe Gothic Outline, Borders, and General Symbols.

---

### FontCenter fonts

*Jim Boemler*  
509 Marin St. #121  
Thousand Oaks, CA 91360  
805/373-1919

These fonts are designed for printer and screen use with the LaserJet printer. Also available from FontCenter is the Poems Font Editor.

---

### Font Factory fonts

*P.O. Box 5429*  
Kingwood, TX  
713/622-1930

The company markets 300 fonts, which have been fine tuned for use with write-white or write-black laser printers. It also provides screen fonts for use with Ventura.

---

## Hewlett-Packard Soft Fonts

*Hewlett Packard*

*P.O. Box 3640*

*Sunnyvale, CA 94088-3640*

*800/538-8787*

HP's high-quality fonts were developed by Bitstream. Some of the newer soft font disks include ITC Garamond, Century Schoolbook, Zapf Humanist 601 (all in 6, 7, 8, 9, 10, 11, 12, 14, 18, 24, and 30 point Medium, Bold, and Italic using the USASCII symbol set); Broadway, University Roman, Coronet Bold, Cooper Black, and Bodoni Black (14, 18, 24, and 30 point Bold using the USASCII symbol set); TmsRmn and Helv (6, 7, 8, 9, 10, 12, 14, 18, 24, and 30 point Medium, Bold, and Italic using either the USASCII or Roman8 symbol sets). Note that the USASCII symbol set only includes keyboard characters; the Roman-8 symbol is somewhat different than the International symbol set used by Ventura, lacking certain typographic symbols (see Chapter 13, "Adding Fonts").

---

## LaserFonts

*SoftCraft*

*222 State St. #400*

*Madison, WI 53703*

*800/351-0500, 608/257-3300*

SoftCraft has a large library of fonts in LaserJet format. Typefaces include Roman, Fixed Width, Classic, Sans Serif, Tall, Olde English, Formal, Script, Calligrapher, Twist, Shadow, Computer, Math Symbols, Copyright and Symbols, Chess, Accents and Ligatures, Cyrillic, French Roman, Spanish Roman, International Phonetic, German, Indic, Proto-IndoEuropean, Greek, Sans Serif Greek, Hebrew, Nouveau, Modern, LCD, Roman Shadow, Outline, Bard Code/OCR, Vertical Borders, Elegant Script, Orbit, Optical, Hershey Oriental, and Music. In the less common typefaces, point sizes are

quite limited.

---

## LJ Fonts

*Weaver Graphics*

*Fox Pavillion Box 1132*

*Jenkintown, PA 19046*

*215/884-9286*

Weaver's fonts in LaserJet downloadable format include sizes from 6 to 30 points.

---

## MagicFont collection

*CES*

*509 Cathedral Parkway #10-A*

*New York, NY 10025*

*800/251-2223, 212/222-8148*

The MagicFont collection of LaserJet fonts includes business logos, math symbols, border lines, decorative symbols, and jumbo fonts larger than 30 points.

---

## PrintR Fonts

*R.M.C.*

*12046 Willowood Dr.*

*Woodbridge, VA 22192*

*703/494-2633*

These are fonts in HP LaserJet format. They include character sets for French, German, and Spanish. Among the typefaces is an outline rendition of Helvetica.

---

## Vinh fonts

*Vinh Company*

*5 South 2nd St.*

*Alhambra, CA 91801*

*818/576-0488*

These are LaserJet fonts that include faces similar to Times and Helvetica in 6, 7, 8, 9, 10, 11, 12, 14, 18, and 24 points. The company also creates custom fonts, logos, and signatures.

---

## VS Library of Fonts

*VS Software*

*P.O. Box 6158*

*Little Rock, AR 72216*

*501/376-2083*

VS markets an extensive library of fonts in LaserJet downloadable format. These include VS Fonts, VS International Font Collection, Compugraphic Font Library, and ITC Font Library. VS also markets the Fontgen 4 font editor. Its VS Laser Word Processor Toolkit allows drivers to be generated for popular word processors.

---

# PostScript Fonts

---

## Adobe Type Library

*Adobe Systems, Inc.*

*1870 Embarcadero Rd.*

*Palo Alto, CA 94303*

*415/852-0271*

The Adobe Type Library is growing rapidly and is being converted to PC disks. Fonts are licensed from the Allied and ITC collections and include ITC American Typewriter, ITC Avant Garde, ITC Benguiat, ITC Bookman, Courier, ITC Fritz Quadrata, ITC Galliard, ITC Garamond, Glypha, Goudy Old Style, Helvetica, Helvetica Black, Helvetica Condensed, Helvetica Light, Helvetica Narrow, ITC Korinna, ITC Lubalin Graph, ITC Machine, Melior, ITC New Baskerville, New Century Schoolbook, Optima, Palatino, Sonata, ITC Souvenir, Symbol, Times, Trump Medieval, ITC Zapf Chancery, and ITC Dingbats. A complete catalog is available from Adobe for \$15.

---

## Allotype Typographics fonts

*1600 Packard Rd. #5*

*Ann Arbor, MI 48104*

*313/663-1989*

These are specialized PostScript fonts on Macintosh disks. Typefaces include classical Greek, chemical structures, Polish, and modern Greek.

---

## Altsys font library

*Altsys Corp.*

*720 Ave. F #108*

*Plano, TX 75074*

*214/424-4888*

Altsys, developers of the Fontographer font editing software for the Macintosh and authors of Encapsulated PostScript format, have a library of fonts on Macintosh disks.

---

## Fancy Fonts

*Genny Software Research and Development*

*P.O. Box 5909*

*Beaumont, TX 77706*

*409/860-5817*

Genny's Fancy Fonts are PostScript fonts on Macintosh disks. They include keyboard and international symbols.

---

## Fluent Fonts

*Casady Company*

*P.O. Box 223779*

*Carmel, CA 93922*

*800/331-4321, 800/851-1986*

Casady's Fluent Fonts are PostScript fonts on Macintosh disks. They include Cyrillic, Hebrew, Polish, Greek, circuit design, mathematical, and architectural symbols. Typefaces include Bodoni, Sans Serif Book, Right Bank, Ritz, Monterey, Regency Script, Calligraphy, Prelude Script, Coventry Script, Zephyr Script, Dorovar, Gregorian, Bodoni

Ultra, Sans Serif Bold, Sans Serif Extra Bold, Gatsby Light, Micro, and Micro Extended.

---

### Foreign Language Fonts

*Linguists' Software*

106R Highland St.

South Hamilton, MA 01982

617/468-3037

These are PostScript fonts on Macintosh disks. Included are Arabic, Hebrew, Greek, Hindi/Sanskrit, and Egyptian hieroglyphics.

---

### GreekKeys

SMK

5760 Blackstone Ave.

Chicago, IL 60637

312/947-9157

These are PostScript fonts on Macintosh disks for the Greek language.

---

### Hot Type

*Image Club Graphics Inc.*

#206 - 2915 - 19th St. NE

Calgary, Alberta

Canada T2E 7A2

800/661-9410, 403/250-1969

Image Club sells four sets of PostScript fonts on Macintosh disks. Most are highly unusual typefaces such as Brass, Surfstyle, Compacto, Scoreboard, Rubber Stamp, and Sofa.

---

### LaserFonts

*Century Software, Inc.*

2483 Hearst Ave. #175

Berkeley, CA 94709

415/549-1901

Century's fonts are for PostScript printers, which means that they can be printed at any size up to 255 points. At the time this was

written they were available on Macintosh disks only, but could be transferred into PC disk format and then downloaded into a PostScript printer from a PC. Over 125 typefaces are available from Century including five symbol fonts, Willamette, Thames, Congo, Hudson, Seine, Columbia, Colorado, Trent, Saratoga, Manistee, Styx, Spokane, Devoll, Cumberland, Rhine, Yukon, Potomac, and Neosho. Some of the faces were licensed from ITC, others were original designs by Century. In addition to new typefaces, LaserFonts also includes expanded, condensed, extra-small, and shadow versions of Times and Helvetica.

---

### MacBeLingual

*Ecological Linguistics*

P.O. Box 15156

Washington, DC 20003

202/546-5862

202/546-5862

These are PostScript fonts on Macintosh disks. Included are Armenian, Bengali, Cambodian, Georgian, Greek, Gujarati, Gurmukhi, Hindi/Sanskrit, Annada, Laotian, Cyrillic, sign language, Slavic Latin, Tamil, Teluga, and Thai.

---

### Neoscribe fonts

*Neoscribe International*

P.O. Box 633-MD

East Haven, CT 06512

203/467-9880

These are PostScript fonts on Macintosh disks. Typefaces include MacSlab (a square serif face), MacSans (sans serif), LaserHebrew, Devangari, Bembo, and OCR-A. The company also creates custom characters and fonts.



---

### Organic Fonts

*Modern Graphics*

*P.O. Box 21366*

*Indianapolis, IN 46221-0366*

*317/253-4316*

These are PostScript fonts on Macintosh disks. They include characters for chemical structures.

---

### SciFonts and ElectroFont

*Paragon Courseware*

*4954 Sun Valley Rd.*

*Del Mar, CA 92014*

*619/481-1477*

These are two collections of math and scientific fonts on Macintosh disks for PostScript printers.

---

### Software Complement fonts

*Software Complement*

*P.O. Box 1123*

*Milford, PA 18337*

*717/686-5592*

These are PostScript fonts on Macintosh disks. A variety of decorative border typefaces are available.

---

### UltraFonts

*Century Software*

*2483 Hearst Ave. #175*

*Berkeley, CA 94709*

*415/549-1901*

These are PostScript fonts on Macintosh disks. Typefaces include Greek, math and engineering, chess, astrology, Shadow Effects, Willamette, Thames, Congo, Hudson, Seine, Columbia, Colorado, Trent, Saratoga, Manistee, Styx, Spokane, Devoll, Cumberland, Rhine, Yukon, Potomac, Neosho, FatTimes, ThinTimes, FatCourier, FatHelvetica, ThinCourier, and ThinHelvetica.

# Font Generators and Editors

---

### Bitstream Fontware Installation Kit Fontware

*Bitstream*

*215 First St.*

*Cambridge, MA 02142*

*617/497-6222*

Fontware is a program that makes bit-map fonts on the IBM PC or compatibles in virtually any size and for most popular printers and monitors. The program creates fonts that are optimized for professional quality at all sizes and resolutions, so that what is seen on the screen matches printed output. Once created, the fonts are stored on hard disk and are accessible from the Xerox Ventura Publisher screen menu.

Initially, the Fontware Library will feature 80 professional quality typefaces in a variety of weights and styles. Each Fontware typeface package will contain four individual typefaces: some have four weights of one typeface family (roman, italic, bold, and bold italic), others have a combination of two or more faces in one or more weights. Each typeface package will retail for \$200. Eventually, most of the extensive Bitstream Library of typefaces will be available in Fontware form.

---

### **LaserMaster Font Compiler/Ventura Outline Font Kit**

*LaserMaster Corp.*  
7156 Shady Oak Rd.  
Eden Prairie, MN 55344  
612/944-6069

The LaserMaster Font Compiler uses Bitstream's patented technology for converting outlines into bit-mapped fonts for use by the LaserJet and other laser printers that use bit-mapped fonts. There are two versions of the compiler for use with Ventura. Ventura Outline Font Kit #1, priced at \$495, includes the font compiler and four typefaces (Century Schoolbook roman, italic, bold, and bold-italic). Ventura Outline Font Kit #2, priced at \$795, also includes Swiss and Dutch in roman, italic, bold, bold-italic; Swiss Condensed in roman, italic, and bold; Swiss Light; Swiss Black; and Swiss Black Condensed.

Bitstream's font technology produces better results than less expensive font compilers (such as Glyphix) by using sophisticated algorithms to smooth out the jaggies and even up the stroke weights of type at any size. The result is excellent type even at the difficult text sizes. With the Swiss typeface, even 4-point type is crisp and legible.

---

### **Fontgen IV**

*VS Software*  
P.O. Box 6158  
Little Rock, AR 72216  
501/376-2083

This is a font editing program that can be used to create fonts in LaserJet format. It provides a window in which you work with one character at a time, using various editing tools to generate and manipulate character bit maps—down to the level of a single pixel.

---

### **SoftCraft Font Editor**

*SoftCraft*  
16 N. Carroll St. 500  
Madison, WI 53703  
609/257-3300

This program can be used to edit any fonts in HP LaserJet format. It provides two windows, one showing the font at actual size and the other zoomed in for editing individual pixels. The program can draw lines, curves, circles, and rectangles, and can also automatically slant a character, enlarge or reduce it, rotate it, and make it bold.

---

### **Glyphix**

*SWFTE International*  
P.O. Box 219  
Rockland, DE 19732  
800/237-9383, 302/658-1123

Like the more sophisticated Fontware program from Bitstream, Glyphix is a program that generates LaserJet fonts from outlines. You create, test, and save fonts using a simple one-screen menu. On the right side of the menu you designate the parameters for the font you desire: typeface (Helvetica comes with the package; Times Roman, Schoolbook, and Optima are an additional \$25 each), point size (up to 60 points), orientation, fill pattern (vertical, horizontal, or diagonal stripes; five shades of gray, cross hatching), obliquing slant, amount of horizontal compression or expansion, and weight. Once you have picked your parameters, you can select Test Print to get an instant type sample. Alternatively, you can name the font and store it on your hard disk.

The quality of the fonts is not good enough for text fonts (smaller than 18 points). But for display faces, especially 30 to 60 point type, the results are only slightly less smooth than PostScript fonts of comparable size. Since fonts larger than 30 points

in LaserJet format are quite scarce, Glyphix fills a big hole quite inexpensively.

Helvetica is fine (the lack of serifs makes it easier for Glyphix to handle). Times Roman and Schoolbook are also acceptable. Avoid "Optimis," the name used by Glyphix for Optima.

---

## Typesetting Services

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### Alphagraphics

845 E. Broadway  
Tucson, AZ 85719  
602/822-4100

This company operates a Linotronic L100 and accepts Ventura files by modem or disk. Prices: \$7.50 to \$10 per page.

---

### Ampersand Typographers

176 Wicksteed Ave.  
Toronto, Ontario M4G 2B6  
416/422-1444

This company operates a Linotronic 300 and charges \$10 to \$30 (Canadian) per page, depending on the resolution.

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### DaVinci Business Services

6175 N.W. 57th St. #213  
Fort Lauderdale, FL 33319  
305/721-0216

This company can convert files from Macintosh to PC disks. Useful for getting clip art and PostScript fonts onto PC disks.

---

### Laser Printing Services

26058 W. 12-Mile Rd.  
Southfield, MI 48034  
313/356-1004 (MI), 800/722-3475

This company operates a Linotype 100 and accepts Ventura files by modem or on disk. Since they're also Ventura dealers, they may be in a better position to solve Ventura-specific technical problems than shops that specialize in Macintosh software. Prices: \$3.50 to \$5 per page.

---

### MacTypeNet

P.O. Box 52188  
Livonia, MI 48152-0188  
313/477-2733

This typesetting service can receive files either on disks or via modem. Output options include laser printer and Linotronic 300. Prices: \$6 to \$10 per page.

---

### Rapid Transmit

8007 Douglas Ave.  
Racine, WI 53402

This company operates a Linotronic 300 and accepts Ventura files by modem or disk.

---

### Typeline

170 State Street  
Teaneck, NJ 07666  
201/837-9839

This company operates several Linotronics and accepts Ventura files by modem or disk. Prices: \$6 to \$8 per page.

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## Miscellaneous

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### Inside Xerox Ventura Publisher

*Micro Publishing and New Riders Publishing*

21150 Hawthorne Blvd. #104  
Torrance, CA 90503

James Cavuoto and Jesse Berst, the authors of this book, are the editors of *microPublishing Report*, a newsletter reporting on the desktop publishing market. The two worked with Xerox during the development of Ventura Publisher and are responsible for some of the style sheets provided with the program. The book includes a thorough explication of the options in Ventura's dialog boxes and is particularly helpful on the subject of pretagging text files.

---

### Personal Publishing

P.O. Box 390  
Itasca, IL 60143  
312/250-8900

Published monthly, this is the oldest desktop publishing magazine, with consistently top-notch editorial content that covers both Macintosh and PC hardware and software. The magazine also runs the "Personal Publishing Bookshelf," a mail order service for hard-to-find books on desktop publishing and graphic arts. Magazine subscriptions: \$30/year.

---

### Publish!

501 Second St. #600  
San Francisco, CA 94107  
415/546-7722

Owned by PC World Communications, this magazine is a design and graphics showcase,

with somewhat more emphasis on the Macintosh than on the PC. Not to be missed is Charles Bigelow's monthly column on typefaces. Subscriptions: \$39.90/year.

---

### Ventura Publisher for the IBM PC

John Wiley & Sons  
605 Third Ave.  
New York, NY 10158  
212/850-6000

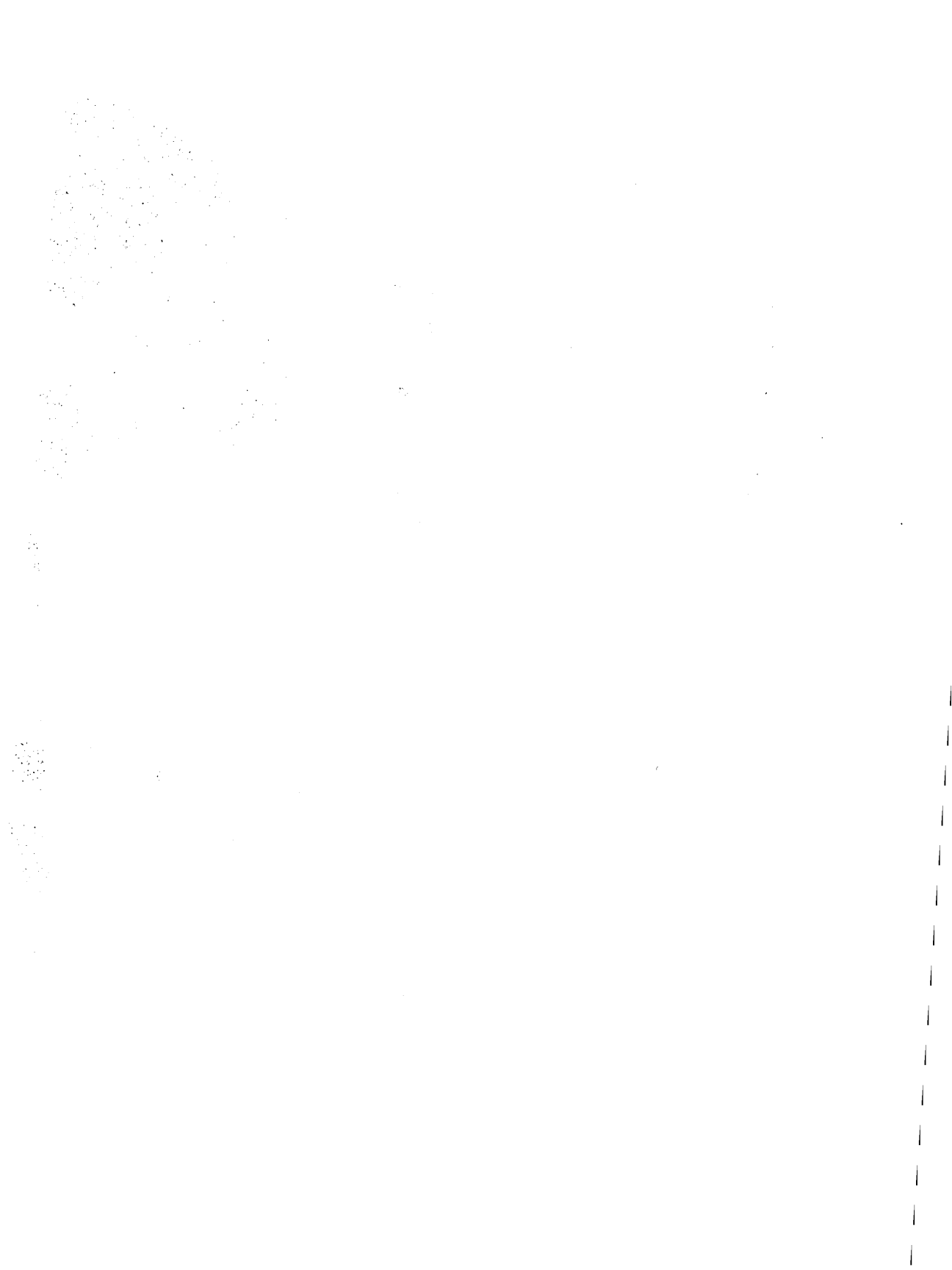
This book was not yet available at the time this was written. Author Richard Jantz has written numerous articles on desktop publishing and business graphics for PC World, Publish! and other magazines.

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### Ventura Publishes

*Ventura Publisher Users Group (VPUG)*  
675 Jarvis Dr.  
Morgan Hill, CA 95037  
408/778-1125

This is the newsletter of VPUG. Each issue is devoted to a special topic, such as fonts, databases, and newsletters. Regular features include Workshop, New Products, Q&A, and News. According to a rumor (published in the very same newsletter), some of the unsigned articles are penned by the reclusive Ventura Software programmers under pseudonyms like "Link."



## APPENDIX B



# *Chart of Operations*

## **General**

---

**CLEAR A MENU THAT HAS  
DROPPED DOWN**

*Drag the cursor outside the menu and click the left button.*

---

**CREATE A NEW FRAME**

*Activate Frame mode by pressing Ctrl-U or by clicking on the Frame icon, then select Add New Frame. Move to the upper left corner of the area you wish to enclose within the frame, hold down the mouse button, and pull the cursor to the lower right corner, then release the button.*

---

**ADD A NEW TAG**

*Activate Tagging mode by Pressing Ctrl-I or selecting the Tagging Icon, then click on Add New Tag.*

---

**CHANGE MEASUREMENT  
UNITS**

*Point at the unit of measurement and click with the mouse.*

---

**JUMP TO THE FIRST PAGE OF  
A CHAPTER**

*Press Home.*

---

**JUMP TO THE LAST PAGE OF  
A CHAPTER**

*Press End.*

---

**JUMP TO THE NEXT PAGE**

*Press PgDn.*

<b>JUMP TO THE PREVIOUS PAGE</b>	<i>Press PgUp.</i>
<b>CREATE A NEW PAGE</b>	<i>From the Page menu select Insert/Remove Page.</i>
<b>MOVE IMAGES WITHIN A FRAME</b>	<i>Hold down the Alt key while moving the mouse.</i>
<b>SELECT MULTIPLE PARAGRAPHS, FRAMES, OR GRAPHICS</b>	<i>Hold down the Shift key while selecting them with the mouse.</i>
<b>DRAW MULTIPLE LINES, BOXES, OR FRAMES</b>	<i>Hold down the Shift key while using the graphic tool or the Add New Frames option.</i>
<b>USING THE CURSOR KEYS INSTEAD OF THE MOUSE</b>	<i>Hold down the right Shift key and the Ctrl key simultaneously. You'll hear a beep. Now you can use the cursor keys instead of the mouse. Pressing Home substitutes for clicking with the mouse. Pressing the End key is like holding down the button on the mouse. To release the button press Home.</i>
<b>SELECT FRAMES THAT ARE HIDDEN</b>	<i>Select Frame Mode, then hold down the Ctrl key while selecting the frame.</i>
<b>COPY A FRAME TO THE CLIPBOARD</b>	<i>Select the frame or graphic and press Del.</i>
<b>PASTE A FRAME FROM THE CLIPBOARD ONTO A NEW PAGE</b>	<i>Press Ins. The frame or graphic will reappear in exactly the same position on the page. This command cannot be used to paste a graphic to a new position on the same page.</i>
<b>COPY A FRAME OR A GRAPHIC</b>	<i>Select the frame or graphic. Press Shift-Del (use the Del key that is on the numeric keypad and make sure that Numlock is turned off). Then drag the frame or graphic to a new location. When you press Ins it will reappear in the old location.</i>
<b>SAVE THE CHAPTER</b>	<i>Press Ctrl-S.</i>
<b>ACTIVATE THE SELECTION BUTTON</b>	<i>Press Ctrl-2.</i>

---

<b>CHANGE MODES</b>	<i>Press Ctrl-U for Frame mode, Ctrl-I for Tagging mode, Ctrl-O for Text mode, and Ctrl-P for Graphics mode. (These key combinations can be remembered because they're adjacent to each other in the same relative positions as the frame icons.)</i>
<b>CHANGE VIEWS</b>	<i>Press Ctrl-R for Reduced view, Ctrl-N for Normal view, Ctrl-E for Enlarged view (remember as R for Reduced, N for Normal, and E for Enlarged).</i>
<b>SEE (OR EDIT) THE LIST OF FUNCTION KEY TAG ASSIGNMENTS</b>	<i>Press Ctrl-K (remember as K for Key).</i>
<b>HIDE/SHOW THE SIDE BAR (TO SEE MORE OF THE PAGE)</b>	<i>Press Ctrl-W (remember as W for Wide view).</i>
<b>GO TO A NEW PAGE</b>	<i>Press Ctrl-G.</i>
<b>PLACE A FILE LISTED IN THE ASSIGNMENT LIST INTO A FRAME</b>	<i>Select Frame mode. Select the frame you want to place the file into. Select the name of the file from the assignment list.</i>
<b>PLACE TWO FILES IN A FRAME</b>	<i>You cannot place two files in a single frame. When you select the a new file from the assignment list, it replaces the old one.</i>
<b>STRETCH A FRAME</b>	<i>Place the cursor on the edge or on a corner (corners are more reliable). Hold down the mouse button (the cursor should change to a pointing finger). While holding down the mouse button, drag the edge of the frame to its new location. Alternatively, select the Sizing and Scaling option of the Frame menu and type new measurements for Upper Left X, Upper Left Y, Frame Width, and Frame Height.</i>
<b>MOVE A FRAME ON THE SAME PAGE</b>	<i>Place the cursor anywhere in the frame and hold down the mouse key. The cursor should take the shape of a cross. Pull the frame to its new location. Alternatively, select the Sizing and Scaling option of the Frame menu and type new measurements for Upper Left X and Upper Left Y.</i>
<b>MOVE A FRAME TO A DIFFERENT PAGE</b>	<i>Select the frame, press Del to copy it to the clipboard, move to the new page, and press Ins to copy it from the clipboard.</i>

---



## Dialog Boxes

---

**RECALL THE MOST RE-  
CENTLY USED DIALOG BOX**

*Press Ctrl-X.*

---

**CHANGE MEASUREMENT  
UNITS**

*Point at the unit of measurement and click with the mouse.*

---

**MOVE TO A HIGHER  
DIRECTORY LEVEL**

*Press the Backup Button (the square black box) at the top of the list of files.*

---

**LIST THE FILES IN A  
DIRECTORY THAT MATCH  
THE FILE FILTER ON THE  
DIRECTORY LINE**

*Select the directory name in the list of files.*

---

**CLEAR A LINE IN A DIALOG  
BOX**

*Place the cursor on the line and press Esc.*

---

**SELECT A FILE WITHOUT  
PRESSING OK**

*Highlight the file name and click twice rapidly with the mouse. Or highlight the file name and press Enter.*

## Text Mode

---

**SEE (OR EDIT) THE LIST OF  
FUNCTION KEY TAG ASSIGN-  
MENTS**

*Press Ctrl-K (remember as K for Key). This is a quick way to remember what the tag assignments were when you're tagging in text mode.*

---

**TYPE A SYMBOL THAT IS  
NOT ON THE KEYBOARD**

*Hold down the Alt key while typing the number corresponding to the symbol on the keyboard. To find out that number, see the chart in Appendix E of the manual.*

---

**SELECT MULTIPLE PARA-  
GRAPHS, FRAMES, OR  
GRAPHICS**

*Hold down the Shift key while selecting them with the mouse.*

---

<b>TAG PARAGRAPHS</b>	<i>Select Tag mode. Select the paragraph. Select the appropriate tag. Or select Text mode, place the cursor within the paragraph, and press the function key assigned to a tag (limited to use with 10 tags).</i>
<b>INSERT A NON-BREAKING SPACE IN TEXT</b>	<i>Press Ctrl-Spacebar.</i>
<b>INSERT A FIGURE SPACE (MEANING: THE WIDTH OF A NUMBER)</b>	<i>Press Ctrl-Shift-Spacebar.</i>
<b>INSERT A THIN SPACE</b>	<i>Press Ctrl-Shift-T.</i>
<b>INSERT AN EM SPACE</b>	<i>Press Ctrl-Shift-M.</i>
<b>INSERT A LINE BREAK (STARTS A NEW LINE WITHOUT STARTING A NEW PARAGRAPH)</b>	<i>Press Ctrl-Enter.</i>
<b>INSERT A DISCRETIONARY HYPHEN (A HYPHEN THAT ONLY APPEARS WHEN IT IS AT THE END OF A LINE)</b>	<i>Press Ctrl-Hyphen.</i>
<b>SHOW/HIDE TAB AND RETURN SYMBOLS</b>	<i>Press Ctrl-T (Remember T for Tab).</i>
<b>MOVING THE TEXT CURSOR</b>	<i>You can do this either by using the cursor keys (which move it forward and backward, up and down one character or one line at a time) or by pointing and clicking with the mouse.</i>
<b>CHANGE THE FONT OF A LETTER, WORD, OR GROUP OF WORDS WITHIN A PARAGRAPH.</b>	<i>Select Text mode. Drag the cursor across the letter, word, or group of words. Click on the Addition Button (it should read: Set Font). Fill in the desired settings in the dialog box.</i>

**MANUALLY KERN TWO LETTERS.**

*Select Text mode by pressing Ctrl-O or clicking on the text icon. Drag the cursor across the letter to the right of the space you wish to close up. Select Set Font. Type in the desired amount of kerning (the distance you want the two letters to be tightened up). Generally a value of 2 to 6 points is appropriate for 36-point type.*

---

## Graphics Mode

---

**SELECT MULTIPLE GRAPHICS**

*Hold down the Shift key while selecting them with the mouse.*

**SELECT ALL GRAPHICS**

*Press Ctrl-Q.*

**SELECT LINE ATTRIBUTES OR FILL ATTRIBUTES**

*Press Ctrl-L (Remember L for Line) or Ctrl-F (F for Fill).*

**BRING A GRAPHIC TO FRONT**

*Select the graphic and press Ctrl-A. An alternative is to select the graphic, press Del, and immediately press Ins.*

**DRAW MULTIPLE LINES, BOXES, OR FRAMES**

*Hold down the Shift key while using one of the graphic tools or the Add New Frames option.*

**PLACE A GRAPHIC IN THE CLIPBOARD**

*Select the frame or graphic and press Del.*

**PASTE A GRAPHIC FROM THE CLIPBOARD ONTO A NEW PAGE**

*Press Ins. The frame or graphic will reappear in exactly the same position on the page. This command cannot be used to paste a graphic to a new position on the same page.*

**COPY A GRAPHIC**

*Select the frame or graphic. Press Shift-Del (use the Del key on the numeric pad and make sure that Numlock is off). Use the D Then drag the frame or graphic to a new location. When you press Ins it will reappear in the old location.*

## APPENDIX C



# *Glossary*

**alley** The space between columns in a multi-column document. Ventura refers to this as the gutter.

**ascender** The part of a lowercase letter that extends above the body of the letter (as in b or d).

**ASCII** American Standard Code for Information Interchange. It refers to a type of file that contains only the characters of a standard computer keyboard.

**attribute** Variations applied to plain type, such as boldface, underlining, or strikethrough.

**backup button** A small black box contained in dialog boxes. Selecting it moves you one step up in the hierarchy of directories.

**base line** The invisible line on which type rests and below which descenders hang.

**batch pagination** An approach toward computer typesetting in which formatting commands are embedded in text and then formatting and text are both executed as the document is printed.

**body text** The name of the default style applied to plain text in a document.

**box text** A tool available in Graphics mode that allows you to draw a box on the screen and then type text into that box. Unlike text contained in frames, box text can be moved anywhere on the page without disturbing the underlying text or graphics. It is useful for labelling graphics and for creating tables.

**break** A point at which a new line, column, or page begins.

**chapter** A document, consisting of text, pictures, formatted by means of a style sheet. Also refers to the file that contains pointers to text, graphic, style sheet, and other files generated by Ventura.

**clipboard** A buffer that stores the most recently deleted material. There are actually three separate clipboards, the first for holding the most recently deleted frame, the second for the most recently deleted picture, and the third for the most recently deleted text passage.

**cropping** Cutting off an unwanted portion of a picture.

deleted picture, and the third for the most recently deleted text passage.

**cropping** Cutting off an unwanted portion of a picture.

**crop mark** A small mark that indicates a corner of the final document.

**current selection box** A small box at the lower left corner of the screen that displays the current file (in Frame mode), tag (in Tagging mode), and location of text attributes (in Text mode).

**descender** The part of a lowercase letter that extends below the baseline (as in p and q.) The size of a font is measured from ascenders to descenders.

**dialog box** A box that appears on the screen when you select an item from a menu, allowing you to enter settings.

**discretionary hyphen** A hyphen that is embedded in a text file and is only displayed if it coincides with a line break. If a discretionary hyphen is contained in a word, Ventura's hyphenation algorithm will not perform any additional hyphenation on that word.

**dithering** In computer graphics, using dot patterns to simulate gradations of gray.

**Em** A unit of measurement equal to the number of points of the type being set (i.e., 12 points for 12-point type).

**En** A unit of measurement equal to half an em.

**extension** The three letters to the right of the period in a file name. Indicates the type of file.

**feathering** The addition of small amounts of leading to make a column justify vertically.

**filter** A file designation containing the characters \* and ?. The \* holds the place of any number of characters, while the ? holds the place of a single character. For example, when Ventura encounters the filter P?C.\*, it will produce the following matching files, among others: PIC.TXT, POC.TXT, PAC.DOC, PXC.ASC, PIC.GEN.

**font** The complete set of characters, including punctuation symbols, for a typeface. In traditional typography this meant the actual metal type. With the advent of computer "fonts" it refers files stored on disks or on ROM cartridges.

**footer** A design element repeated at the bottom of each page of straight text, often incorporating the page number.

**frame** A container drawn on the page in order to load a text or graphic file. In addition, Ventura automatically creates an underlying frame for each page.

**frame handles** The eight small black boxes located at the corners and on the sides of a frame. By placing the cursor on one of these and holding down the mouse button while dragging the mouse, you can stretch a frame.

**global** Referring to any operation that applies to the entire document.

**Greeking** The technique of speeding up the display by representing small text on the screen with dummy type or straight lines.

**grid** The design “skeleton” on which a document is built; includes design standards for columns and frames, margins, leading and tracking, justification, headers and footers, and graphics.

**gutter** In traditional typography, the space on the page between the inside edge of the type and the spine of a bound book. As used in Ventura’s Margins and Columns dialog box, gutter refers to the alley between two columns of text.

**header** A design element repeated at the top of each page of straight text; can include chapter titles, book title, and/or page numbers.

**images** In Ventura, images refer to pictures stored as bits (0’s and 1’s). Such pictures cannot be enlarged without a reduction in quality.

**imagesetter** A phototypesetting machine that can handle pictures and text on the same page.

**indent** The horizontal offset of the first line (or designated number of lines) of text.

**interline spacing** The amount of vertical space between lines of text, measured from baseline to baseline. The default is 1.2 times the point size of the current font.

**italic** Slanted style of a given typeface, used for emphasis, for instance to offset book titles from the main text.

**item selector** The name for a type of dialog box used to load text, picture, or chapter files.

**justified type** A line of type that is precisely spaced so that it rests flush against both margins of the column.

**kerning** Moving two letters closer together to give them a closer fit.

**landscape** Refers to printing a page so that when positioned for reading, the page is wider than it is long.

**leader characters** Characters (usually periods) used to fill up the space between tabs. Frequently used in tables of contents.

**leading** The space, in points, between lines of type and measured from baseline to baseline. For example, a 10/12 specification for type means 10-point type on 12 points of leading (6 lines to the inch).

**letter spacing** Adjusting the space within words to assist line justification.

**line art** In traditional graphic arts, line art refers to pictures that use no shading. In Ventura, line art refers to graphics stored as mathematic descriptions, which can be scaled with no reduction in quality.

**mode** One of the four ways of working in Ventura, selected by means of the four icons in the upper left corner of the screen. The four modes are Framing, Tagging, Text Editing, and Graphics.

**orphan** The first line of a paragraph situated on the last line of a column. Traditional page layout calls for avoiding orphans.

**paragraph** A block of text ended by a hard carriage return (pressing Enter).

**pica** Typographic unit of measurement equal to 12 points or 1/6 inch.

**pixel** The smallest unit of a digitized picture, either on the screen or printed.

**point** Typographic unit of measurement equal to 1/12 pica or 1/72 inch. The "point size" of a font is measured from the bottom of the descenders to the top of the ascenders.

**portrait** Refers to printing a page so that when positioned for reading, the page is longer than it is wide.

**proportional spacing** The method of setting type in which wide letters, such as W, receive more space and thin letters, such as i, receive less space.

**publication** A file containing information about a sequential group of chapter files.

**ragged** Unjustified type, that is, centered or flush to one side but not to the other.

**rule** A line used as a design element on the page.

**sans serif** A typeface designed without serifs, such as Helvetica.

**scaling** Enlarging or reducing a picture.

**selection** The term for choosing a menu option, a command, or an element on the page by moving the cursor on top of it and then clicking with the mouse.

**serifs** Small counter strokes that "finish off" the ends of the body strokes of a letter; also, typefaces that incorporate such strokes. In theory, serifs help the eye to

recognize the shapes of different letters, thus aiding readability.

**spaceband** The spacing between words in a passage of text. In Ventura you can enter a minimum, a maximum, and an optimum setting.

**spine** The back of a bound book.

**style sheet** A collection of tags contained in a computer file.

**tag** A set of formatting instructions for a type of paragraph. Up to 128 different tags may be stored in a style sheet.

**thin space** A space the width of a period.

**tracking** The spacing of the letters throughout a passage of text. Typically loosened or made tighter to accommodate justification or enhance readability, while still maintaining an overall effect of uniformity.

**typeface** A particular type design, such as Palatino or Goudy.

**underlying page** The frame that Ventura automatically generates for each page in a chapter.

**widow** The last line of a paragraph situated on the first line of a column. In traditional page layout, widows were avoided.

**WYSIWYG** "What You See Is What You Get"; a description of programs, such as Ventura, in which the picture on the screen is an accurate representation of the page that is ultimately printed.

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