

The Answer Book for All Your Interleaf 5 Questions

# INTERLEAF<sup>®</sup>

## TIPS AND TRICKS



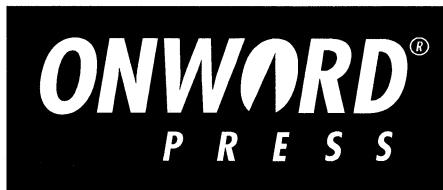
*Stacy Dymalski*

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# **Interleaf Tips and Tricks**

***Stacy Dymalski***



# **Interleaf Tips and Tricks**

**Stacy Dymalski**

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## **About the Author**

Stacy Dymalski has been working with computer graphics and desktop publishing for over 10 years, and specifically with Interleaf software for the past six years. She has written for *ComputerEdge* and *San Diego Woman* magazines, and briefly wrote for a local cable comedy TV show in L.A. The founder and CEO of Saffire Systems & Development (a technical consulting firm), Stacy currently makes her living as a consultant and writer, and moonlights as a standup comic.

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# **1. *Introduction***

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Nothing is more frustrating than being expected to be productive on a piece of software you really know nothing about. We've all been there: working feverishly on a project that everyone wanted done by yesterday, using a piece of publishing software that seems as foreign as another language. Why is it that in spite of vendor manuals, online helps, tutorials, and third party books, we still have trouble figuring out what it is we need to know (at the exact moment we need to know it)?

Regardless of what the answer might be, working in the dark can prove extremely frustrating if you are killing yourself to meet a deadline. It never fails that you desperately need to learn how to make the software perform a certain way before you can finish. I've had this experience with every piece of software I've ever come in contact with, including Interleaf. The difference with Interleaf, however, is that outside the reference materials that come with the product, there are very few books, if any, that help users learn to be more productive with the Interleaf software. I don't know about you, but I'd like to see that change.

## **Why this Book?**

For quite a while now, I've earned a living as a software consultant. When Interleaf 5 was being developed, Interleaf asked my husband (also a consultant) and me if we could help out by writing Interleaf 5 applications that would later be used for marketing purposes. We happily agreed, and in the process became very familiar with the functionality of Interleaf 5.

When the product was released, sales of Interleaf 5 increased rapidly, prompting the need for user training. Interleaf has a fine training department, with extremely competent instructors, and conveniently located training centers nationwide. When the demand for training increased, however, Interleaf found a need for more instructors. Interleaf again approached me and asked if I would like to work as an Interleaf instructor on a contract basis. Once again I agreed, and eventually became qualified to teach all of the Interleaf 5 training courses.

During my tenure as an Interleaf 5 instructor, I noticed that students asked the same questions in just about every class. These questions usually started out as a single question involving a specific application. Answers led to further questions, and before I knew it, I was repeating the same Q and A session in yet another class — which is fine, because that's what training is for.

Another common denominator was that the users in these classes complained about the Interleaf 5 user manuals. I repeatedly heard that the manuals were of little help because they did not answer specific questions or teach the user how to master particular skills. In response, I would gently try to tell them that this is not a fair assessment of the user manuals. The manuals that come with the software are meant as reference materials, not tutorials (by the way, Interleaf 5 does come with an online desktop tutorial). The manuals are provided so you can look up the definition of a term, the functionality of a command, or the location of a command on a pulldown menu. They are not there to teach you how to create your specific application or template. The manual is a building block that you use to make your own creations. A good analogy that illustrates this point is a dictionary. A dictionary is a reference book that shows you how to spell a word, and gives the definition of a word. It does not tell you how to structure your sentences, and you wouldn't expect it to.

The fact that people were asking me the same questions in class, and that these same people felt the manuals were lacking, led me to believe that there was room in the market for a book that did nothing but answer common Interleaf 5 questions. Over the years, I have kept a notebook of the questions that I was asked, along with the answers I came up with through research. As you can imagine, my collection grew, and eventually the questions and answers ended up in this book. If you are an advanced user, some of these questions may seem elementary to you (however, you would be surprised how many advanced users learned something new when they reviewed this material). The questions tackled here range from how to change your mouse button configuration to how to create an encapsulated postscript (EPS) file, with just about every level of expertise in between. I'm hoping there's a little something here for everybody.

## **What Is Not Included in this Book**

You can find out which topics I cover simply by reading the table of contents. If you do this, however, you will notice that there are a few glaring omissions. This is not an oversight. This book cannot possibly be all things to all people,

so some of the more esoteric topics were purposely left out. For example, revision tracking is not covered. Revision tracking is a purchasable option to Interleaf 5, and I have found that the people who buy it usually don't ask a lot of questions about it. I don't know if this is because they don't really use it or because they are exceptionally bright people (I'll assume the latter). In any case, space became a premium as this book grew, so revision tracking was eliminated.

WorldView is also another topic not tackled. WorldView is actually an additional product developed and distributed by Interleaf, and hence really deserves its own book. If, however, you use WorldView at your site, the chapter on filters (Chapter 16: *Document Format Conversions*) will be of help to you.

I also touch only lightly on Lisp and developing Lisp applications. This is a topic that can go very deep, because it involves creating your own Interleaf applications via writing Lisp programs. I do introduce the concept of Lisp (in Chapter 15), and explain how to use it on the Interleaf desktop in a cursory manner, but I do not get into how to create your own applications and packages. For that you need to go to other sources. To get you started, I recommend you read *Adventurer's Guide to Interleaf Lisp*, by David Weinberger (OnWord Press).

And finally, I do not teach you the basics of using Interleaf. The subject matter and writing in the following chapters are geared toward the intermediate to advanced Interleaf user, and therefore assumes the reader has the prerequisite knowledge listed below.

## Audience

To get the most out of this book, you should already know how to use Interleaf. If you don't, you might want to go through the Interleaf online tutorial first or take the Introduction to Interleaf course. The answers to the questions in this book assume that you already know how to invoke Interleaf and navigate through the Interleaf desktop. If you are using this book as a reference, here are the minimum Interleaf prerequisites with which you must be familiar:

- How to use the mouse buttons in conjunction with the Interleaf desktop
- How to use the Interleaf 5 desktop menus and pulldown menu structure
- How to move, cut, copy, and paste icons on the Interleaf desktop
- How to create a new document

- How to open and close a document
- How to edit a document
- How to create new containers (such as folders, drawers, books, and cabinets)
- How to open and close a container
- How to move and resize open windows on the Interleaf desktop
- How to exit the Interleaf desktop

## **Software Requirements**

This book was written for the Interleaf 5 software. An Interleaf 6 Tips and Tricks book of the same format and with the same type of questions is currently in the works. If, however, you are already using Interleaf 6, the Interleaf 5 Tips and Tricks book can still be of help. Most of the changes between Interleaf 5 and 6 involve the user interface. Much of the product functionality is the same. Therefore, if you have a specific question regarding an open document, for example, you will more than likely still be able to get your answer from this book.

## **How to Read this Book**

Each chapter is composed of a series of questions and answers, grouped together in topical sections. This book was written so that it could be read one of two ways: from beginning to end (like a novel, if you will), or in sections that apply only to your needs. To get the most value out of this book, I recommend that you first scan the questions in each chapter. Many times the answer to one question directly leads to the next question. Scanning will give you the flavor of the book, as well as allow you to see how the book is organized.

After you have become familiar with the book, you can use it as a reference whenever you need to learn how to perform a particular function. Each chapter has been divided into sections that you can easily refer to later.

## **The Companion Disk**

In some chapters, answering the question involves creating a template or a special component in a document; such examples are used to illustrate functionality. In these cases, you can follow the steps to create the template on your desktop, or the component in your own document. If however, you have trouble completing the steps on your system, I have provided the end results for you

in document files on the companion disk that comes with this book. If a question has a document associated with it, the text will refer you to a specific document on the companion disk. Let me stress, however, that the files on the companion disk are *not* required. The answers to the questions do not depend upon your having access to the files on the companion disk. The companion disk is there only for your added benefit. So if you misplace it, you can still use this book as a viable reference.

## Installing the Companion Disk

This disk contains files “packed” together into one file by the Interleaf Desktop utility (IDU). The IDU file is named “leafware.idu”. To use these files, you must unpack them using IDU. When IFU unpacks them, you will end up with a subdirectory named “lispware” that should appear as an Interleaf desktop cabinet. Inside will be further cabinets, as well as README files. IDU will ensure that the files you receive follow the differing naming conventions used by MS-DOS, UNIX, and other operating systems supported.

1. To unpack the files with IDU, first locate the idu utility. On UNIX systems, its probable path is: /interleaf/ileaf5/bin/idu. On DOS, it probable path is: \ileaf5\bin\idu.exe.
2. Next, change to your desktop directory (e.g., “cd D:\Desktop” in DOS).
3. Now extract the files by typing at the prompt:

idu-path -xf idu-file-path

Where “idu-path” is the path to your idu utility and idu-file-path is the path to “lispware.idu.”

For example, in DOS the command might be:

\ileaf5\bin\idu -xf A:lispware.idu

and in UNIX it might be:

/interleaf/ileaf5/bin/idu -xf /pcfs/lispware.idu

4. If you have Interleaf up and running already, do a “Rescan” on you desktop to force it to notice the new files put there.
5. If you have copied “lispware.idu” to your hard drive, after “unpacking” it you may delete it.

## My Offer to You

As I mentioned earlier, the questions in this book were compiled from users just like yourself. As time goes on, this book will be updated with new

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questions. Some existing questions and answers, particularly those that pertain to known bugs, will be removed. If you have a question about Interleaf 5 or Interleaf 6 that is not covered in this book, send me your question and maybe (I stress the *maybe* here), the question and its answer will end up in the next revision. I cannot promise you that I will response to you personally (in fact, I probably won't), but if you have a good question whose answer would benefit the masses, then it will more than likely end up in the next edition of this book.

Send your questions to Stacy Dymalski, PO Box 770, #368, Park City, UT, 84060. In addition to your question, include your name, address, and phone number (in case I like your question and need to speak to you further about it).

In the meantime, have fun creating those documents! I hope this book helps you achieve the results you want (and at the very least allows you to avoid even the tiniest of frustration).

## ***2. Customizing the Desktop***

---

In most offices everyone has a desk and work area, whether it be a private office, a cubicle, or just a corner of the room. When you want to personalize your work area, what do you do? You might put framed family pictures on your desk. Hang a poster or two. Display a calendar. Add plants. Whatever it is that you do, you add a piece of yourself to your work space when you decorate. There is nothing wrong with this. In fact, it contributes to a very healthy work environment because it allows you to express your personality while you work.

Your Interleaf desktop should be no different from your physical desk or office. In most cases, no one but you will use your computer. That means you can decorate your desktop to your heart's content. In fact, let's say that you like hearts so much, you want to see them scattered all over your Interleaf desktop. You can create a heart shade pattern, paint it red, and then apply your new creation to your desktop. From then on, everyone will know which desktop is unmistakably yours.

Interleaf provides you with myriad tools that allow you to customize your desktop in a variety of ways. The nice thing about customization is that it is optional. You do not have to change the way your desktop functions or appears, if you're currently happy with it. The point of customization is to make your experience with Interleaf a more pleasant and efficient one. Don't be afraid to experiment and try new options. Customizing your desktop is very easy, once you know how to use the Interleaf tools.

### **Using the Interleaf Tools**

Every Interleaf desktop that leaves the factory looks exactly the same. They are all the same color, use the same naming conventions, and have the same popup menus. This configuration is known as the Interleaf 5 Defaults.

The Interleaf 5 Defaults are acceptable to most people, however, there may come a time when you find yourself wishing that the Interleaf desktop behaved just a little bit differently. For example, you might like to use online documen-

tation. Or you may want your mouse buttons configured differently. Or maybe the WordPerfect filter doesn't convert a document exactly to your liking.

Whatever it may be, Interleaf has anticipated your request to make minor modifications to their software. As a courtesy, Interleaf allows (in fact, encourages) Interleaf 5 users to customize the Interleaf desktop. Customization is made possible through the use of the Interleaf tools.

### **How do I customize my desktop?**

It's true that you can customize your desktop to look and behave in just about any manner that you can imagine. There are two ways that you, as a user, can accomplish this:

- 1 By writing Interleaf Lisp layered applications
- 2 By invoking the Interleaf tools

### **What are the Interleaf Tools?**

The Interleaf tools are a collection of Lisp applications that run on the Interleaf desktop. They are provided by Interleaf, and allow you to change the way you interact with the Interleaf desktop. For example, one of the tools is called the *User Profile Tool* (sometimes called *Profile Tool* for short). It allows you to set up a desktop profile which dictates things like how your window scroll bar responds, how the buttons on your mouse are configured, or how often the software performs a backup save.

### **Where can I find a list of the Interleaf tools?**

Right here.

---

#### ***Interleaf Tools***

<b><i>Tool Name</i></b>	<b><i>Functionality</i></b>
Active Reference Tool	Provides interactive online reference information for the Interleaf software.
Active Tutorial	Provides an online tutorial for new Interleaf users.
Cloverleaf	Allows you to create your own custom filters or modify existing filters.

***Interleaf Tools (continued)***

<b>Tool Name</b>	<b>Functionality</b>
Font Manager Utility (FMU)	Allows you to install additional fonts, and modify them to fit your application needs
Developer's Toolkit (DTK)	Provides you with the necessary development environment to create your own layered applications using the Interleaf Lisp programming language. Included in the DTK are program editors, debugging tools, a compiler, and other tools that are helpful during the development process.
Hyperleaf Toolkit (Hyperleaf)	Allows you to add hypertext links to your Interleaf documents.
Keyboard Tool	Provides you with a list of the functions associated with specific function keys and key sequences used in the Interleaf software.
Leafware	Allows you to use unsupported, yet useful, Lisp scripts. (However, Interleaf does not guarantee that they will work for you, so use them with caution!)
Macro Tool	Allows you to record, play, and store your own macros on your Interleaf desktop.
Online Help	Provides you with online help for the Interleaf popup menu items.
Relational Document Manager (RDM)	Allows you to manage documents (including review cycles, updates, access history, etc.) across a variety of operating system platforms and networks.

***Interleaf Tools (continued)***

<b>Tool Name</b>	<b>Functionality</b>
User Interface Painter (UI Painter)	Allows you to create your own custom colors, color palettes, and shade patterns for use on your desktop and window backgrounds, icons, stickups, popups, property sheets, menu items, and other objects on the Interleaf desktop.
User Profile Tool (Profile Tool)	Allows you to make minor modifications to your working environment and Interleaf desktop interface.
WorldView Press Toolkit (WorldView Press)	Allows you to press files, making them readable by the WorldView Viewer.

Some of the tools in the above table are options that can be purchased. Contact your local Interleaf sales office or Interleaf VAR to find out which tools are optional, and how much they cost. Your systems administrator can tell which tools your site has already purchased.

**How do I obtain access to the Interleaf tools?**

The Interleaf tools are accessible through the popup menus on your desktop. By default, however, the Interleaf tools are not automatically loaded when you invoke the Interleaf desktop. This is because the tools take time to load, and need computer resources to be maintained. Interleaf's philosophy is, if you are not going to use the tools, then why waste the resources to load them? Therefore, Interleaf requires that you specifically activate the tools you will be using.

You activate the Interleaf tools by invoking the *Tool Manager*.

**What is the Tool Manager?**

The *Tool Manager* is a Lisp script that allows you to install the Interleaf tools that you want to use. You invoke the *Tool Manager* as follows:

- 3 Move the mouse cursor onto the Interleaf desktop (make sure that you don't have any icons selected).

- 4 Hold down the menu button and execute *Custom*→*ToolMgr*.

The main window of the *Tool Manager* appears on your desktop, as shown in Figure 1.

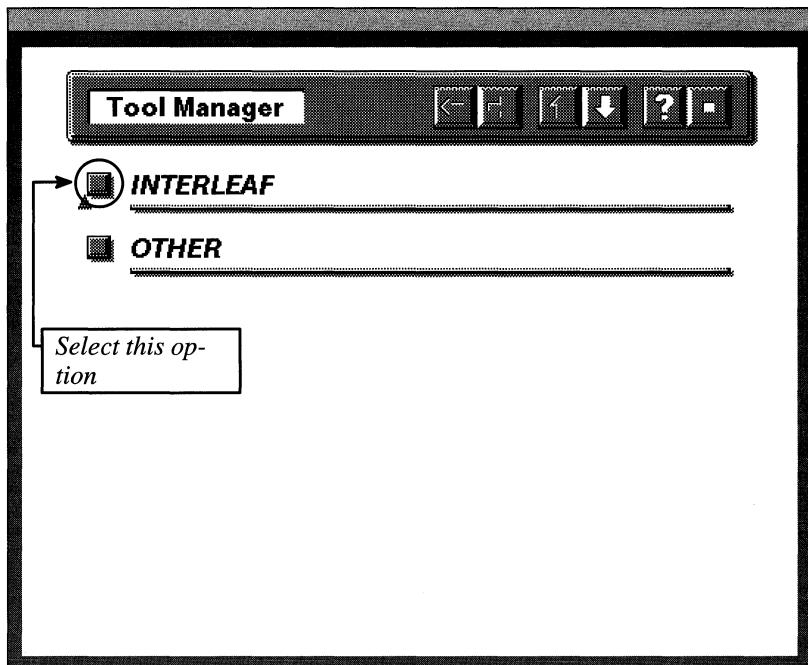


Figure 1

- 5 Click the left mouse button on the Interleaf option in the open *Tool Manager* window.

The Interleaf tools window appears on your desktop, as shown in Figure 2. (The tools window that you see on your desktop may vary from the one shown

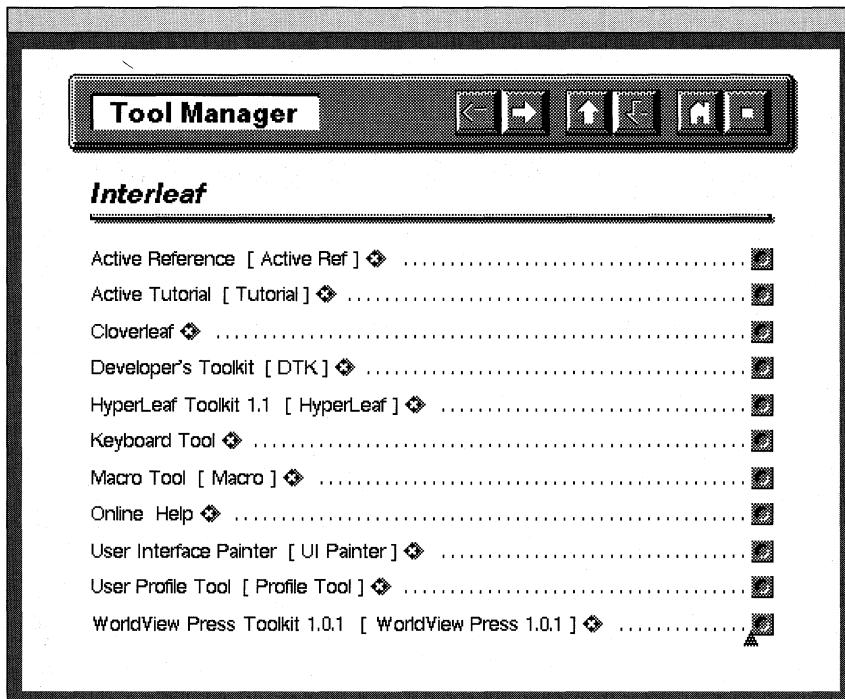


Figure 2

in Figure 2, depending on the tools that your site has purchased. Not all of the tools that Interleaf provides automatically come with the product. Some of them are purchasable options.)

### How do I install the tools I want?

In Figure 2, notice that each tool has a dotted leader on its right, followed by a box. If you've never invoked the *Tool Manager* before, all of the boxes contain zeros. When a box associated with a tool contains a zero, it means that tool has not been installed on the desktop. If the box contains a one, then that tool has already been activated and is available to you from your desktop popup menus.

To install a tool, you perform the following steps:

- 6 Move the mouse cursor into the box associated with the tool you want, and click the select button once.

*Notice that the zero in the box changes to a one. Use this same procedure to activate all the tools you wish to install.*

- 7 Once you have selected the tools you want, hold down menu button, and execute *Apply*.

*The software installs your selected tools in your System5 cabinet. A Tool Manager Log window appears, informing you of the status of this installation. As each tool is placed in your System5 cabinet, a message will appear that states “Setup of (name of tool) succeeded.” If you see this message then you know that everything is okay, and that you will be able to access the specified tool from a popup menu. If you get an error, print the Tool Manager Log (by placing the mouse cursor inside the Tool Manager Log window, holding down the menu button and executing Print), and show it to your systems administrator.*

For example, let's assume that you want to install the *Online Help*. Here's what you do:

- 8 In the open *Tool Manager* window, move the mouse cursor into the box associated with the *Online Help*, and click the select button once.

*Notice that the zero in the box changes to a one, as shown in Figure 3.*

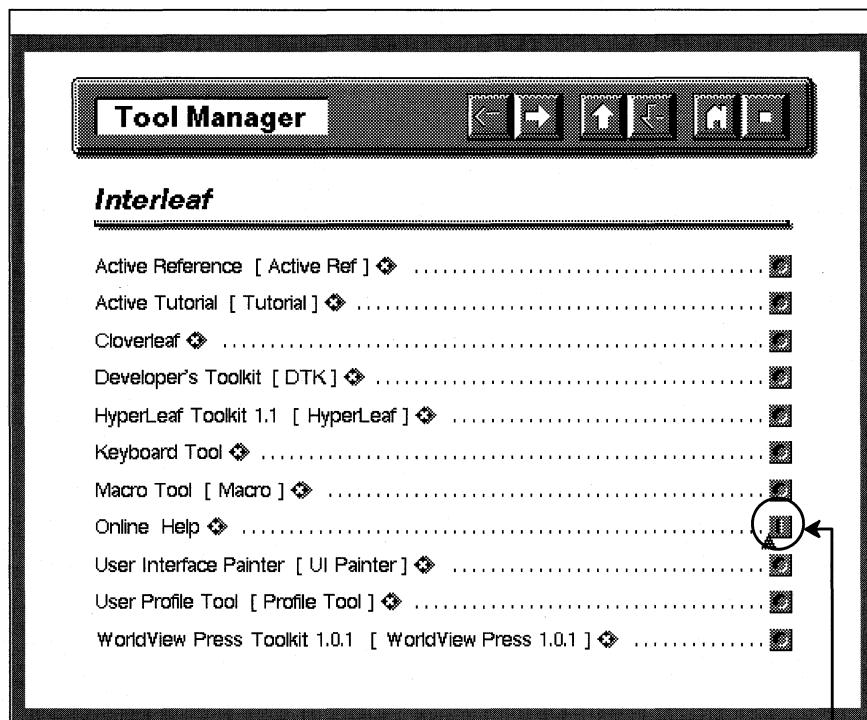
- 9 With the mouse cursor inside of the open *Tool Manager* window, execute *Apply*.

*The Tool Manager's Log window appears as shown in Figure 4, informing you that “Setup of the Online Help succeeded.”*

- 10 To dismiss the *Tool Manager Log* window, place the mouse cursor inside the window, hold down the menu button and execute *Close*.
- 11 To dismiss the *Tool Manager* window, place the mouse cursor inside the window, hold down the menu button and execute *Close*.

### **Where on my desktop does the Tool Manager put the tools?**

The tools are placed in the *Tools* drawer, which is in the *No Selection* cabinet, which is in the *Custom* cabinet, which is in the *System5* cabinet, as shown in Figure 5.



*Changes to a "1"*

Figure 3

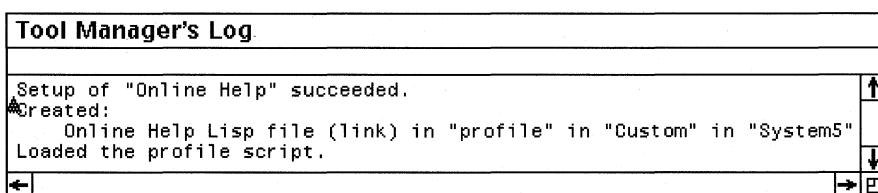


Figure 4

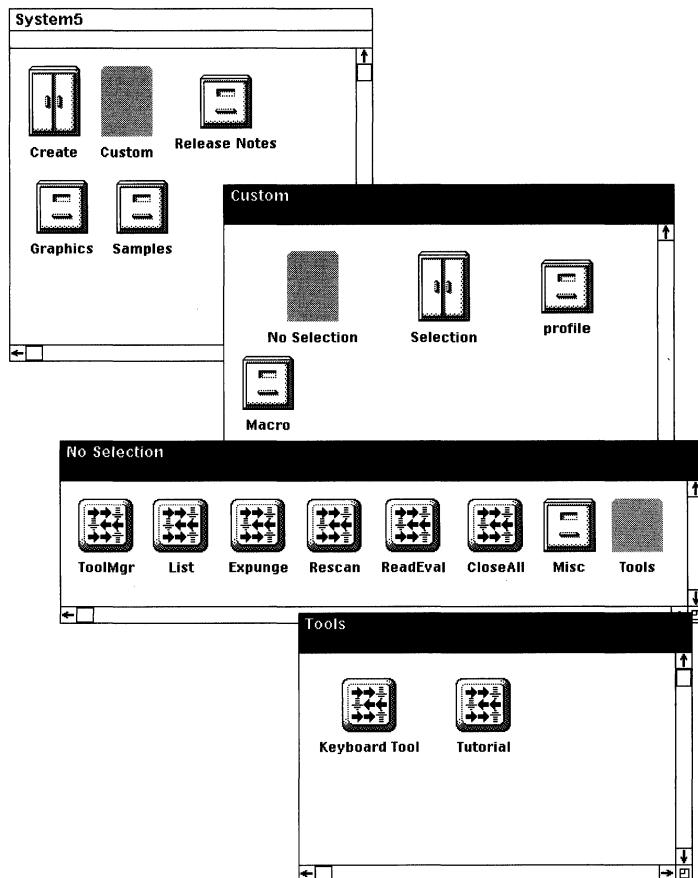


Figure 5

**If I open the Tools drawer in the System5 cabinet, will I be able to see the tools?**

Yes. As you can see in Figure 5 the tools are represented by icons that have funny little arrows on them. These icons indicate Lisp applications. The tools are Lisp programs that Interleaf provides for your convenience.

**Can I edit the tools in the Tool drawer?**

Yes, if you know how to program in Interleaf Lisp, and if you have the *Developer's Toolkit* (one of the options available in the *Tool Manager*). However, I caution you not to modify the tools unless you really know what you're doing. You can truly foul up your desktop if you happen to make an error and you don't know how to debug the program. I recommend that you

learn Lisp before you attempt to rewrite the Interleaf code. If you are interested in learning more about Lisp, a good place to start is *Adventurer's Guide to Interleaf Lisp* by David Weinberger (OnWord Press).

**If I want to use the same tools between sessions, do I have to invoke the Tool Manager every time I log on to Interleaf?**

No. The good news is once you install a tool, it remains in your *System5* cabinet until you use the *Tool Manager* to explicitly remove it. So every time you invoke Interleaf, the tools you installed during your previous Interleaf session will always be available to you.

**How do I use the tools once I've installed them?**

Most of the tools that you install are available to you from the desktop *Custom* menu; however, some are available through other means. To access a particular tool, perform the following steps:

- 12 Move the mouse cursor to the desktop (make sure that you don't have any icons selected).
- 13 Hold down the menu button and execute  
*Custom→Tools→(select the tool)*.

**If I install the tools on my desktop, do other Interleaf users on our network also have access to the tools that I've installed?**

No. When you install Interleaf tools on your desktop, only you have access to those tools. Each user has the opportunity to install (or not install) his or her own selected tools.

**Are there any other tools available for the Interleaf desktop?**

Yes. There are third party software developers that create utilities and tools specifically designed for the Interleaf 5 desktop.

Saffire Systems & Development, Inc., has created a product called the *Interleaf 5 Desktop Buddy*<sup>®</sup>. The *Desktop Buddy* is a collection of desktop utilities that enhance the Interleaf desktop (similar to how the Peter Norton utilities enhance DOS). A sampling of the utilities available in the current release of the *Desktop Buddy* includes the following:

- A print utility that allows you to print all odd or all even pages, or non-consecutive pages, such as 7, 10, 15 (the current Open Look version of Interleaf does not do either one of these things).

- A window manager that displays all the names of the windows open on your desktop and allows you to bring any one of those windows to the foreground, even if the window you want is completely obscured.
- A word count that records and displays the number of words in a document.
- An alarm clock reminder that you can set to go off at any time, and that goes off with your own custom message.

This is only a small subset of the *Desktop Buddy* tools. For more information on the *Desktop Buddy* write to Saffire Systems & Development, Inc., PO Box 770, #368, Park City, UT, 84060, or call (801) 649-4146.

Another third party vendor, Avalanche, Inc., has created an Interleaf utility packaged called *Proof Positive*. *Proof Positive* provides document editing tools specifically designed for Interleaf documents, including a Thesaurus and a Grammar Check facility (neither of which Interleaf 5 currently provides).

For more information on *Proof Positive*, write to Avalanche Development Company, 947 Walnut Street, Boulder, CO, 80302, or call (303) 449-5032.

## **Altering the Look and Feel of Your Desktop**

One of the most dramatic modifications you can make to your desktop is to change the way it looks and responds. With the Interleaf tools not only can you change the color and shade pattern of your desktop, but you can change the way your mouse and desktop windows behave as well.

### **How do I change my mouse button configuration?**

By default, the Interleaf 5 desktop configures the mouse such that the menu button is the right button, and the extend button is in the middle. This is because Interleaf 5 inherits its mouse configuration from the windowing system desktop (Open Look, Motif, etc.). If you prefer to have your mouse buttons as *Select, Menu, Extend* (left, middle, right), instead of *Select, Extend, Menu*, then you can either invoke Interleaf from the system command line using the *-sme* parameters, or you can use the Interleaf 5 *User Profile Tool* to reconfigure your mouse.

### **Using the Command Line Parameters**

To change the mouse button configuration using system parameters, you invoke Interleaf from the system prompt, followed by the parameters *-sme*

(which stand for *Select*, *Menu*, *Extend*). For example, if your site invokes Interleaf by typing in *ileaf* at the system prompt, then you would invoke the following to change the mouse button configuration:

**ileaf –sme**

This changes the mouse button configuration only for the current session. If you later reinvoke Interleaf without the *–sme* parameters, the mouse buttons go back to being *Select*, *Extend*, *Menu*.

### ***Using the User Profile Tool***

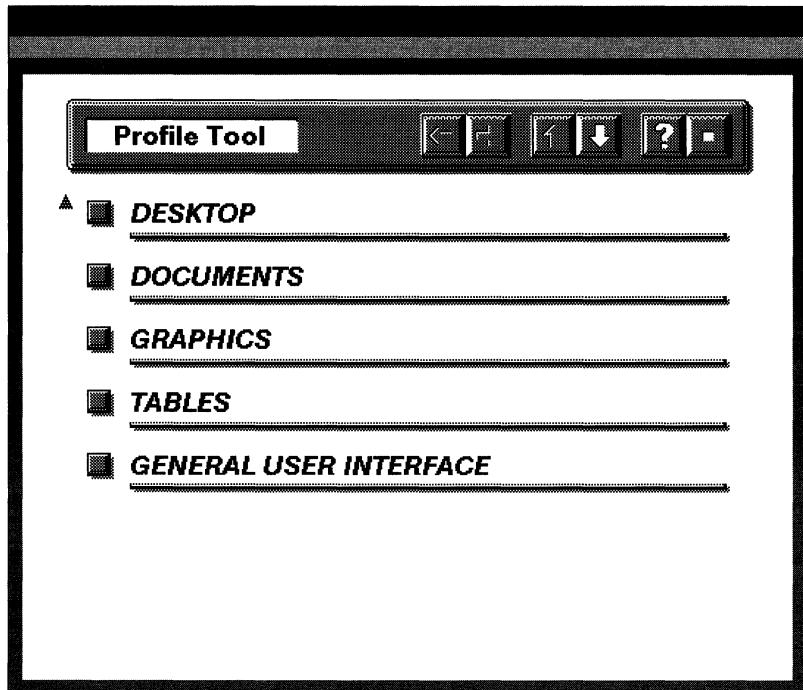
To change the mouse button configuration using the *User Profile Tool*, perform the following steps:

- 14 Invoke the *Tool Manager* and install the *User Profile Tool* (if you forget how to install a tool using the *Tool Manager*, review the first section of this chapter).

*If you have already set up the User Profile Tool, then you may skip Step 1, and proceed with Step 2.*

- 15 From the desktop, execute *Custom→Tools→Profile Tool*.

*The Profile Tool window opens on the desktop, as shown in Figure 6.*



*Figure 6*

- 16 Select the *General User Interface* button in the *Profile Tool* window.

*The General User Interface window opens, as shown in Figure 7.*

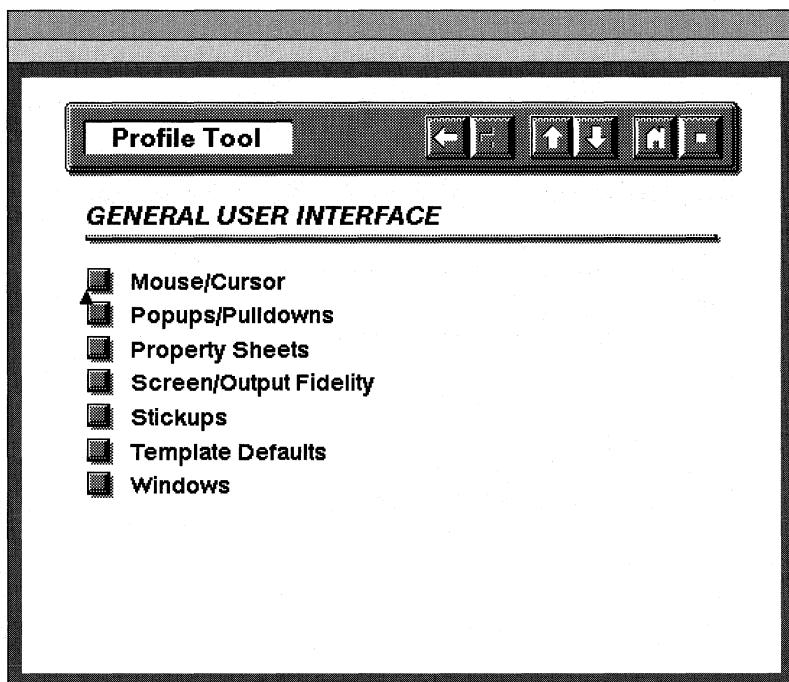


Figure 7

- 17 Select the *Mouse/Cursor* button in the *Profile Tool* window.

*The current mouse button configuration appears, as shown in Figure 8.*

- 18 Move the mouse cursor into the *Middle mouse button* field, hold down the menu button and select *Menu*.

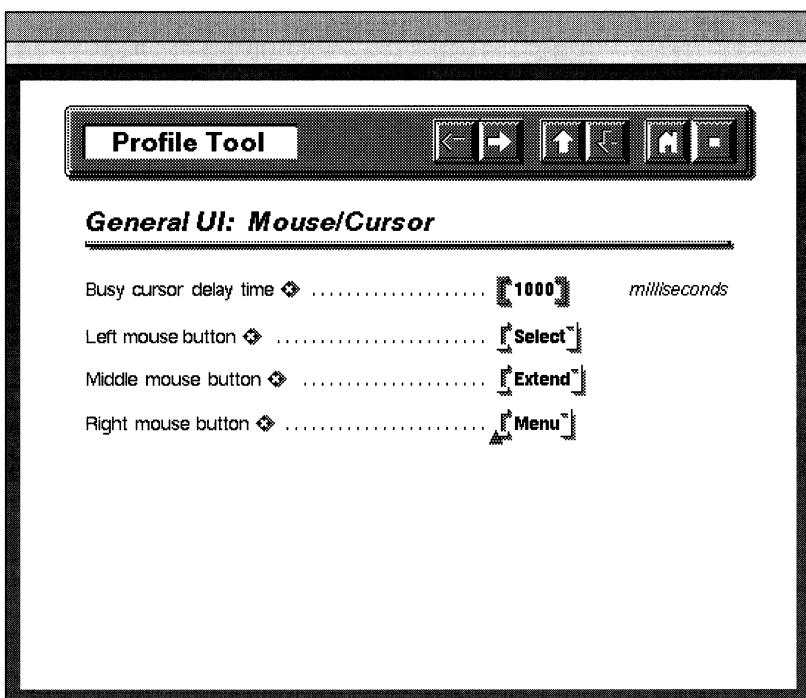


Figure 8

- 19 Move the mouse cursor into the *Right mouse button* field, hold down the menu button and select *Extend*.

*The new mouse button configuration appears now as shown in Figure 9.*

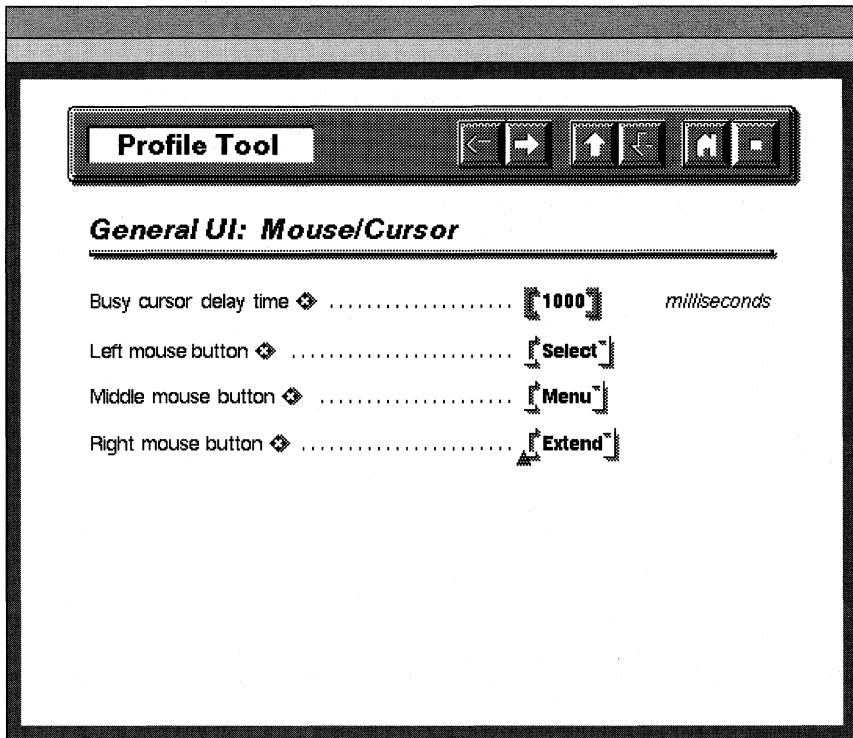


Figure 9

- 20 Hold down the menu button and execute *Load*.

*Your new mouse button configuration is loaded into memory. Notice that the middle button is now the menu button, and the right button is the extend button.*

- 21 Close the *Profile Tool* window.

#### Why doesn't the software retain my new mouse button configuration when I exit and then reinvoke Interleaf?

Because you didn't tell the software that you wanted to keep your new mouse button configuration. By default, Interleaf will always inherit the mouse button configuration of the windowing system, regardless of what you loaded during your last Interleaf session.

**Is there a way to permanently retain the desktop changes I make using the Profile Tool?**

Yes. To maintain your *Profile Tool* changes between sessions, you have to save your changes in a *Profile Tool* icon, and then put that icon in your *Profile* drawer. (The *Profile* drawer is in the *Custom* cabinet, which is in the *System5* cabinet.)

For example, to permanently modify your mouse buttons, make your configuration changes in the *Profile Tool* window, then perform the following steps:

- 22 In the open *Profile Tool* window, hold down the menu button and execute *Save*.

*A stickup window appears, asking you to enter a Profile name.*

- 23 In the stickup window type, “My Profile,” and then select *Enter*.

*The stickup window disappears, and your changes are saved in a Profile Tool file, which is represented by a Profile Tool icon (created on your desktop), as shown in Figure 10. The name of the icon is the same name you typed in the stickup.*

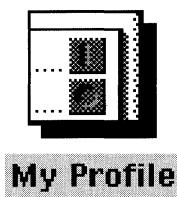


Figure 10

- 24 Close the *Profile Tool* window.
- 25 Open the *System5* cabinet.
- 26 Open the *Custom* cabinet.
- 27 Open the *Profile* drawer.
- 28 Cut the *Profile Tool* icon from your desktop and paste it into the open *Profile* drawer window to the right of the *init Lisp* script.

*Every time you invoke Interleaf, the software checks the Profile drawer for your desktop customizations. At login, the software loads whatever it finds in the Profile drawer. If your Profile Tool icon is in the Profile drawer, it will automatically be loaded when Interleaf is invoked, which means that all of the changes that you made to the Profile Tool window will automatically be loaded when you log in.*

*Now every time you invoke Interleaf, you will be able to use your new mouse configuration without having to reinvoke the Profile Tool.*

### **How do I change the color of my desktop?**

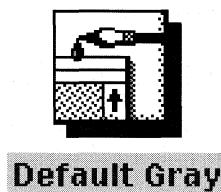
The *User Interface Painter* (also known as the *UI Painter*) is the tool you use to change desktop color. (Note: You must have a window environment and monitor (and in the case of DOS, a video card) that supports color before the *UI Painter* can change the color of your desktop.)

Interleaf software leaves the factory with a default monochrome desktop. This is because Interleaf does not know where each copy of their software is going, so they choose the lowest common denominator as far as desktop color is concerned; monochrome works on all systems.

To change the color of your desktop, perform the following steps:

- 29 Invoke the *Tool Manager* and install the *UI Painter* (if you forgot how to install a tool using the *Tool Manager*, review the first section of this chapter).
- 30 Once the *UI Painter* has been installed, move the mouse cursor to the desktop (make sure that you don't have any icons selected).
- 31 Hold down the menu button and execute *Create*→*Tools*→*UI Painter*→*Default Gray*.

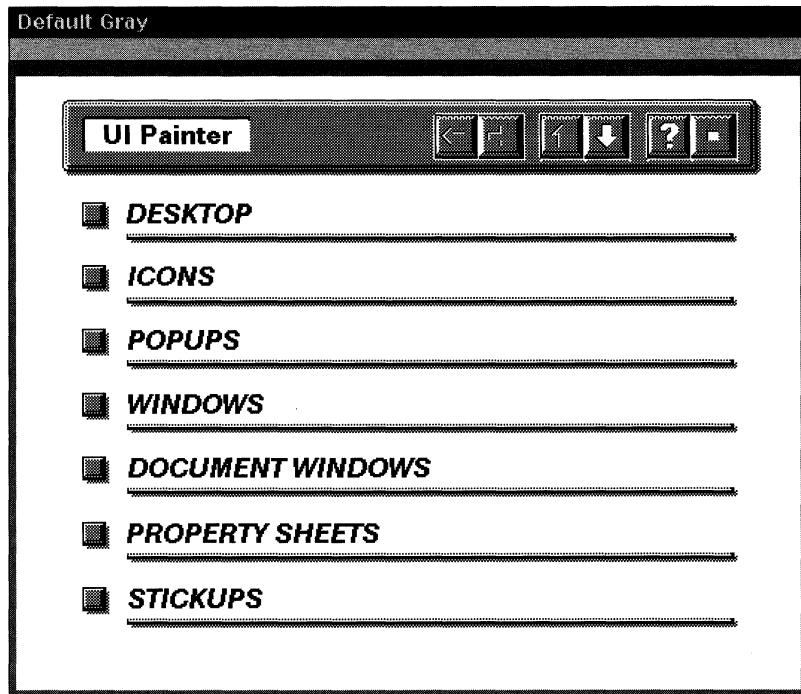
A *UI Painter* icon called "Default Gray," as shown in Figure 11, appears on the desktop in an animated state.



*Figure 11*

- 32 Move the icon to the right side of the desktop and click the select button.
- 33 While the icon is still selected, execute *Open*.

*The UI Painter window opens on the desktop, as shown in Figure 12.*



*Figure 12*

- 34 Select the *Desktop* button in the *UI Painter* window.

*The UI Painter Desktop window opens, as shown in Figure 13.*

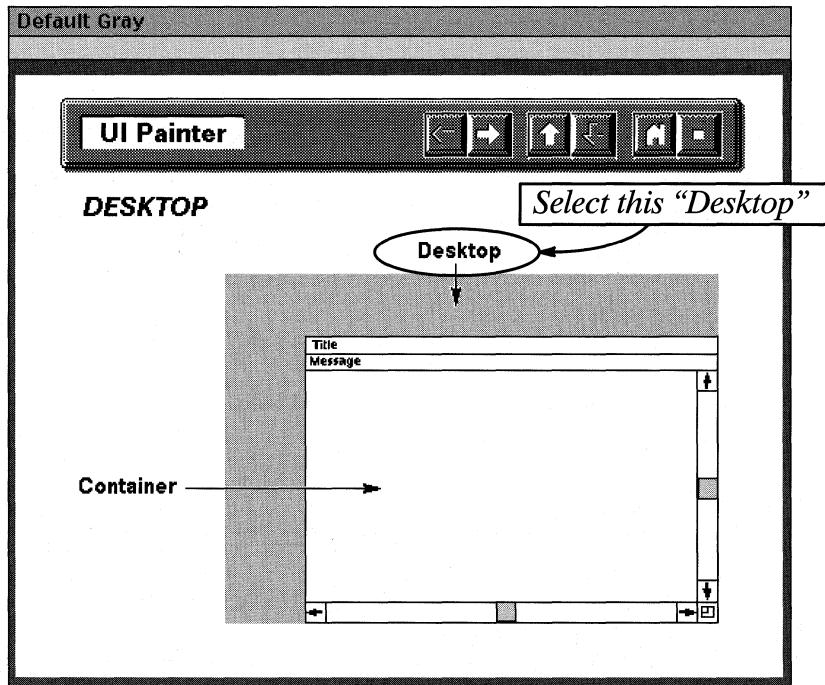


Figure 13

- 35 Select the word *Desktop*, as shown in Figure 13, and execute *Color→Edit*.

*The Color Editor window appears as shown in Figure 14.*

- 36 Select the slider bar for Magenta, as shown in Figure 14, and execute *Move→Slide*.
- 37 Move the slider to the right with the mouse.

*Notice that as you move the slider, the color box to the right begins to turn various shades of purple.*

- 38 When you've positioned the slider where you want it, click the select button to set the slider down.

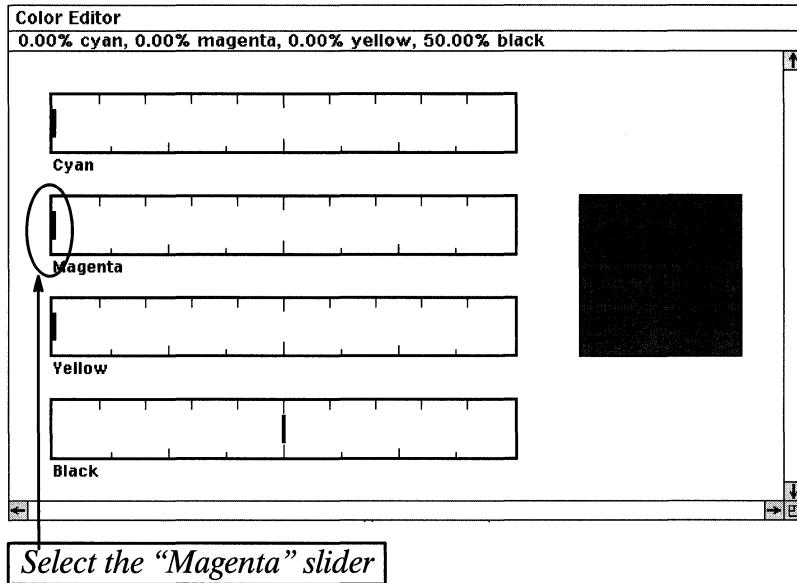


Figure 14

- 39 Individually select the sliders in the Cyan and Yellow color bars, and add these colors to create your own custom color. Use black to control the darkness of the color.
- 40 When you've mixed the color you want, execute *Apply*.

*Notice that the Desktop in the UI Painter window changes to match the new color you just created.*

- 41 Close the *Color Editor* window.
- 42 With the mouse inside the *UI Painter* window, execute *Load*.

*Wow! Look what happens! Your entire desktop changes to the custom color that you just created!*

You can use the *UI Painter* to change the color of any object in Interleaf, including the icons, the inside of documents, and the background in an open windows.

To close the *UI Painter* hold the menu button down while the mouse is in the open *UI Painter* window and execute *Close*.

## What are all those other choices under the *Create→Tools→UI Painter* desktop menu?

Those are the “premixed” color palettes offered by Interleaf. If you don’t want to mix your own colors, Interleaf was kind enough to provide you with a collection of color palettes. These palettes have been designed by graphic artists, such that the colors in each palette are compatible and aesthetically pleasing.

The color palettes offered by the Interleaf 5 *UI Painter* are as follows:

- Canyon
- Default Gray
- Egyptian
- Lilacs
- Mallard
- Ocean
- Sky

To change the color of your desktop to one of the Interleaf-provided palettes, perform the following steps:

- 43 Once the *UI Painter* has been installed, move the mouse cursor to the desktop (make sure that you don’t have any icons selected), hold down the menu button, and execute *Create→Tools→UI Painter→(pick a palette)*.

*A UI Painter icon named after the palette you selected appears on the desktop in an animated state.*

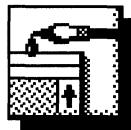
- 44 Move the icon to the right side of the desktop and click the select button.
- 45 While the icon is still selected, hold down the menu button and execute *Custom→Load*.

*Your desktop changes color to match the defaults specified by the palette.*

For example, to change your desktop color to the Mallard palette, you do the following:

- 46 Execute *Create→Tools→UI Painter→Mallard* on the desktop.

*A UI Painter icon named Mallard, as shown in Figure 15, is created on your desktop.*



**Mallard**

*Figure 15*

- 47 While the icon is still selected, hold down the menu button and execute *Custom→Load*.

*Your desktop changes color to match the defaults specified by the Mallard palette.*

Use the steps above to test all of the Interleaf-provided palettes to see which one you like the best.

**Why doesn't the software retain my new desktop color when I exit and then reinvoke Interleaf?**

Because you didn't tell the software that you wanted it to use a specific color palette every time you logged in to Interleaf. By default, Interleaf will always initially set up your desktop as *Default Gray*, regardless of what you loaded during your last Interleaf session.

To change your desktop back to the color you want, select the *UI Painter* icon for the palette that you want, and execute *Custom→Load*. Your desktop will change back to your desired color.

Unfortunately, this color change is temporary (meaning that it's valid for the current session only). To permanently specify a new desktop color palette default, perform the following steps:

- 48 Open the *System5* cabinet.
- 49 Open the *Custom Cabinet*.
- 50 Open the *Profile* drawer.
- 51 Cut the *UI Painter* icon for the palette that you want from the desktop and paste it into the *Profile* drawer window.

Every time you invoke Interleaf, the software checks the *Profile* drawer for your desktop customizations. At login, the software loads whatever it finds in the *Profile* drawer. If your color palette icon is in the *Profile* drawer, it will automatically be loaded when Interleaf is invoked, which means you'll automatically see a colorful desktop when you log in.

To illustrate how to permanently add desktop color, let's look at an example. Let's say that you want to have the Canyon palette automatically loaded onto your desktop every time you invoke Interleaf. Here's what you do:

52 Install the *UI Painter* with the *Tool Manager* (if you forget how to install a tool using the *Tool Manager*, review the first section of this chapter).

53 Move the mouse cursor to the desktop (make sure that you don't have any icons selected), hold down the menu button, and execute *Create*→*Tools*→*UI Painter*→*Canyon*.

*A UI Painter icon named Canyon appears on the desktop in an animated state.*

54 Move the icon to the right side of the desktop and click the select button.

55 Open the *System5* cabinet.

56 Open the *Custom Cabinet*.

57 Open the *Profile* drawer.

58 Cut the Canyon *UI Painter* icon from the desktop and paste it into the *Profile* drawer.

The colors in the Canyon palette will appear on your desktop every time you log on to Interleaf.

### **Why would I want to change the color of my desktop in the first place?**

Why wouldn't you want to change the color of your desktop? Why settle for gray when you can create any color imaginable?

Decorating your desktop is like decorating your office or cubicle. You hang pictures, posters, your kid's art work, whatever, on your office walls to make

yourself more comfortable in the area in which you work. Your desktop is no different. Don't let anyone tell you that changing the color of your desktop is a trivial time-waster. If changing your desktop color to chartreuse makes your day a little more fun, then ultimately, you'll be more productive. Hey, no one ever said work had to be dull and colorless.

### How do I add a shade pattern to my desktop?

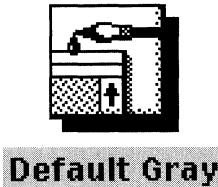
Now you're getting brave. You've created custom colors with the palette editor and now you want to know if you can do the same with shade patterns. Is there a shade pattern editor in Interleaf? You bet there is, and I encourage you to use it, if for nothing more than to add interest to your desktop.

You create custom shade patterns much the same way you create custom colors, by opening a *UI Painter* icon.

To change the shade pattern of your desktop, perform the following steps:

- 59 Invoke the *Tool Manager* and install the *UI Painter* tool.
- 60 Move the mouse cursor to the desktop (make sure that you don't have any icons selected), hold down the menu button and execute *Create*→*Tools*→*UI Painter*→*Default Gray*.

*A UI Painter icon called "Default Gray" appears on the desktop, as shown in Figure 16.*



*Figure 16*

- 61 Move the icon to the right side of the desktop and click the select button.
- 62 While the icon is still selected, execute *Open*.

*The UI Painter window opens on the desktop, as shown in Figure 17.*

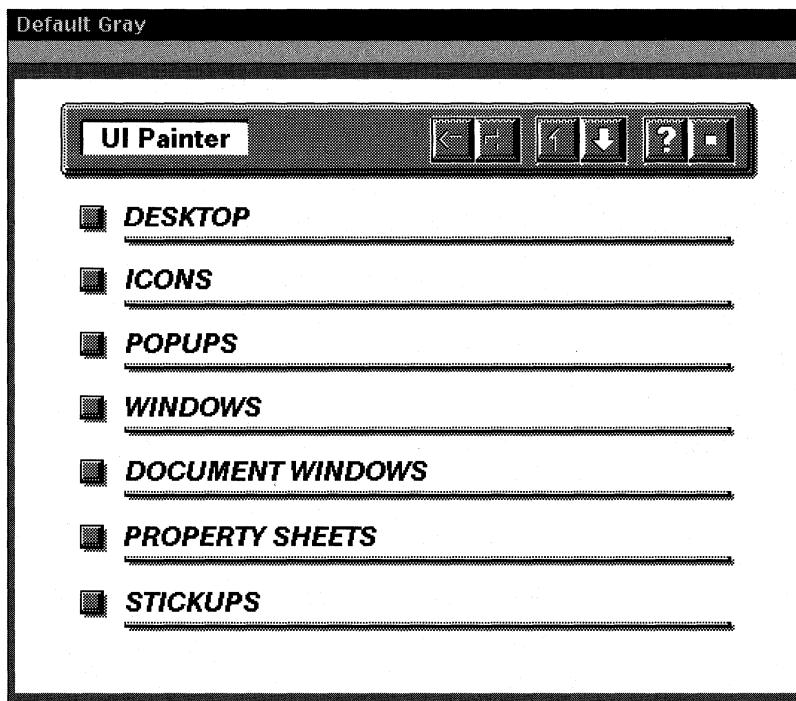


Figure 17

- 63 Select the *Desktop* button in the *UI Painter* window.

*The UI Painter Desktop window opens, as shown in Figure 18.*

- 64 Select the word *Desktop*, as shown in Figure 18, and execute *Pattern→Edit*.

*The Pattern Editor window appears as shown in Figure 19.*

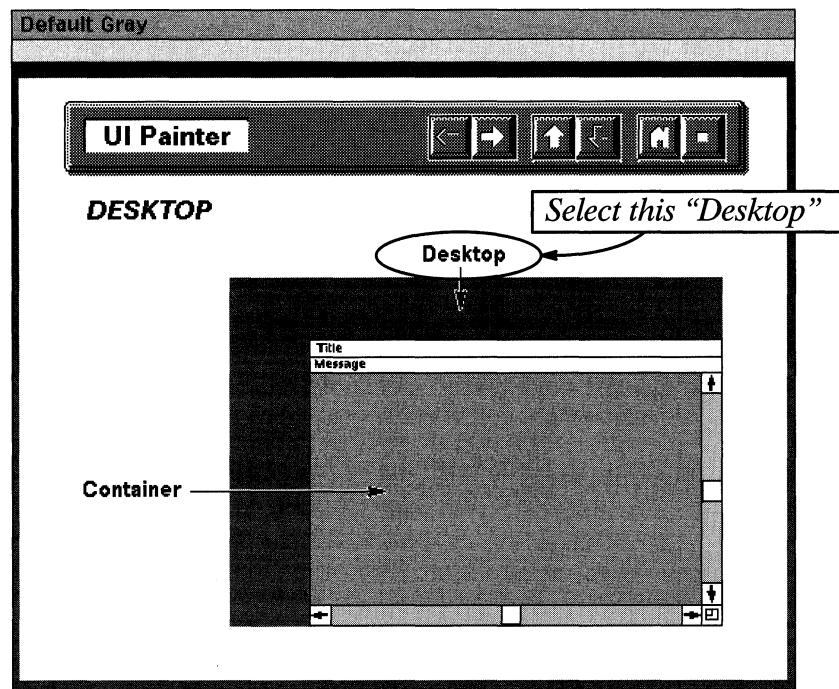


Figure 18

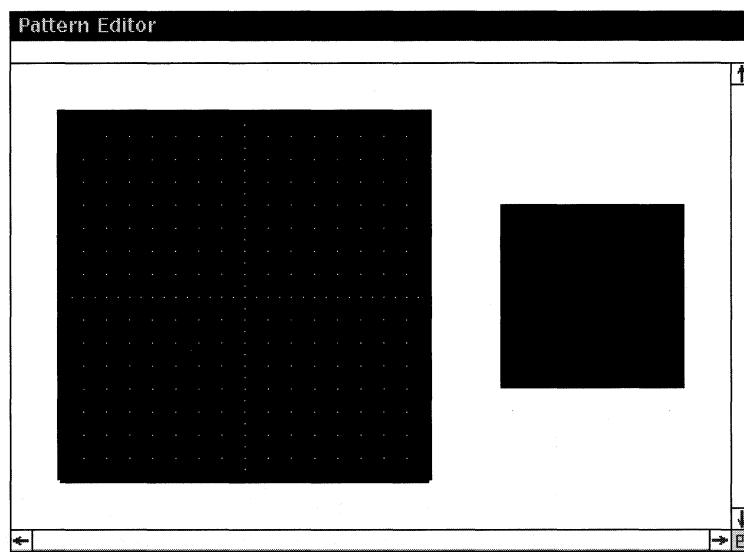


Figure 19

- 65 Inside the open Pattern Editor window, execute *Paint→White*.
- 66 Move the mouse cursor over the black field and create the shade pattern shown in Figure 20. If you make a mistake, execute *Paint→Black* to paint over your error.

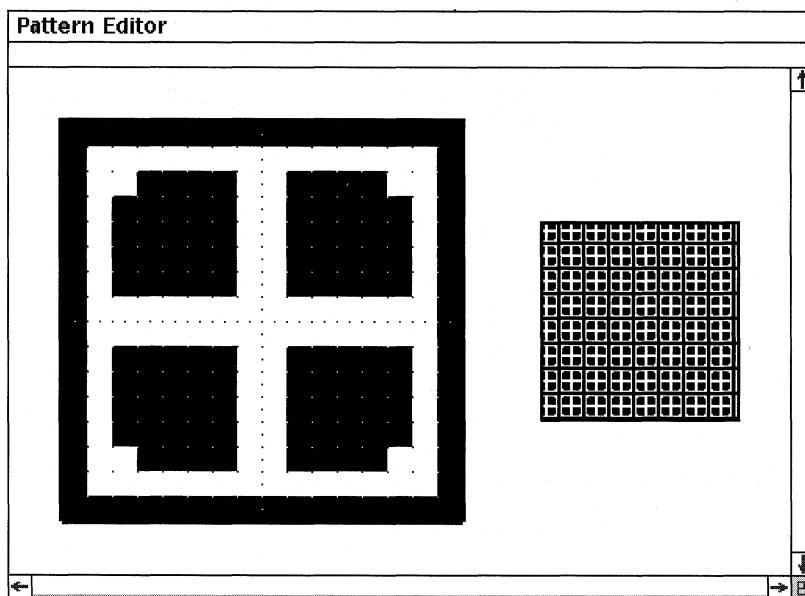


Figure 20

- 67 When you've finished creating the shade pattern, execute *Apply*.

*Notice that the Desktop in the UI Painter window changes to match the new shade pattern you just created.*

- 68 Close the *Pattern Editor* window.
- 69 With the mouse inside the *UI Painter* window, execute *Load*.

*Can you believe your eyes? Your entire desktop changes to the custom shade pattern that you just created!*

You can use the *UI Painter* to change the shade pattern of your desktop or the background shade pattern of an open window (also known as a container).

To close the *UI Painter*, hold the menu button down while the mouse is in the open *UI Painter* window and execute *Close*.

**Will my custom shade pattern still be on my desktop if I exit Interleaf and then reinvoke Interleaf?**

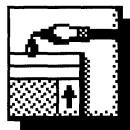
Not unless you store the customized *UI Painter* palette icon in the *Profile* drawer of your *System5* cabinet.

To permanently save your desktop's custom shade pattern palette, perform the following steps:

- 70 Rename your customized *UI Painter* icon.

*For this example, let's assume that you renamed the palette icon "My Shade Pattern."*

- 71 Open the *System5* cabinet.
- 72 Open the *Custom* cabinet.
- 73 Open the *Profile* drawer.
- 74 Cut the customized *UI Painter* icon, as shown in Figure 21, from your desktop and paste it into the open *Profile* drawer window.



**My Shade Pattern**

*Figure 21*

*Every time you invoke Interleaf, the software checks the Profile drawer for your desktop customizations. At login, the software loads whatever it finds in the Profile drawer. If your customized UI Painter icon is in the Profile drawer, it will automatically be loaded when Interleaf is invoked (which means that you'll see your custom desktop shade pattern when you log in).*

**How do I add a clock to my Interleaf desktop?**

To add a clock to your desktop, move the mouse to the desktop (make sure no icons are selected), hold down the menu button and execute *Custom*→*Misc*→*Clock*. A clock face will appear in a small open window.

Move the clock anywhere you want on the desktop and click the select button to set it down.

There are a couple of things you should know about the Interleaf desktop clock. First, the time displayed by the clock is inherited from the operating system clock. Therefore, if the operating system clock is wrong, your Interleaf desktop clock will not display the correct time.

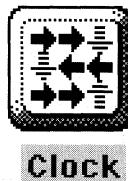
Second, the clock is a temporary display, meaning that when you exit the Interleaf desktop the clock goes away. If you were to reinvoke Interleaf, the clock would not be displayed on your desktop unless you once again executed *Custom→Misc→Clock*.

### **How can I keep the clock so that it appears on my desktop every time I invoke Interleaf?**

Remember our old friend the *Profile* drawer? Recall that anything you put in the *Profile* drawer is loaded when you invoke Interleaf. If, therefore, you wish to have the clock loaded every time you log in to Interleaf, then you must put the Lisp script that creates the clock into your *Profile* drawer.

To put the clock Lisp script in your *Profile* drawer, perform the following steps:

- 75 Open the *System5* cabinet.
- 76 Open the *Custom* cabinet.
- 77 Open the *Misc* drawer.
- 78 Select the clock Lisp icon, as shown in Figure 22, and execute *Copy*.



*Figure 22*

- 79 Close the *Misc* drawer.
- 80 Open the *Profile* drawer.
- 81 Move the mouse cursor inside of the open *Profile* drawer window, and execute *Paste*. Click the select button once to set the icon down.

A copy of the *clock* Lisp script is pasted inside of your *Profile* drawer. Make sure you pasted the *clock* Lisp script to the right of the *init* Lisp script in the open *Profile* drawer window.

Now every time you invoke Interleaf, the clock will automatically appear on your desktop.

## Accessing Online Documentation

The only thing more frustrating than not being able to understand the documentation is not being able to find the documentation in the first place. If you're like me, you can usually find all of the manuals except the one you need.

With Interleaf 5, however, you have most of the documentation you will ever need at your fingertips. There will still be times when you need to look at the written documentation that comes with the software, especially if you are developing layered applications, modifying filters, or installing new options. Most of the user documentation, however, is online. Interleaf 5 provides a number of places that you can look for online documentation. Some of those places are obvious, some are not. In all cases, however, the online documentation will prove to be an invaluable asset to you (especially when you need to look up something in a hurry, and you can't find your printed manual set).

### Does Interleaf have an online tutorial?

Yes. It's one of the tools that you can install using the *Tool Manager*. To gain access to the online tutorial, perform the following steps:

- 82 Invoke the *Tool Manager* and install the *Online Tutorial* tool (if you forget how to install a tool using the *Tool Manager*, review the first section of this chapter).
- 83 Once the *Online Tutorial* has been installed, move the mouse cursor to the desktop (make sure that you don't have any icons selected), hold down the menu button, and execute *Custom→Tools→Tutorial*.

*The Online Tutorial will begin.*

The *Online Tutorial* is very basic and, therefore, is only helpful if you are new to Interleaf. I would not recommend installing the *Online Tutorial* if you already know how to use Interleaf.

If the *Online Tutorial* has been installed on your desktop and you wish to remove it, invoke the *Tool Manager*, change the one to a zero in the box associated with the *Online Tutorial*, and execute *Apply*.

### How do I access Interleaf's Online Help facility?

The *Online Help* facility is one of those tools that you must install with the *Tool Manager*. Once the *Online Help* facility has been installed, you can access it at any time to get information about popup menu items. After you install *Online Help*, it is always available to you (at least until you use the *Tool Manager* to "de-install" it).

To illustrate how the *Online Help* facility works, let's look at an example. Let's say that you want more information about the *Paste* menu item. If you've never accessed *Online Help* before, the first thing you need to do is install the *Online Help* facility using the *Tool Manager*.

Once *Online Help* has been installed, you can obtain information about a particular menu item by simultaneously pressing the select and extend buttons when the menu item is highlighted. For example, to get help about the *Paste* command, you perform the following steps:

- 84 Hold down the menu button and highlight the *Paste* menu item.
- 85 While *Paste* is highlighted, press the extend button so that the menu button and extend buttons are down at the same time, then release.

*A help document about the Paste command appears on your desktop, as shown in Figure 23.*

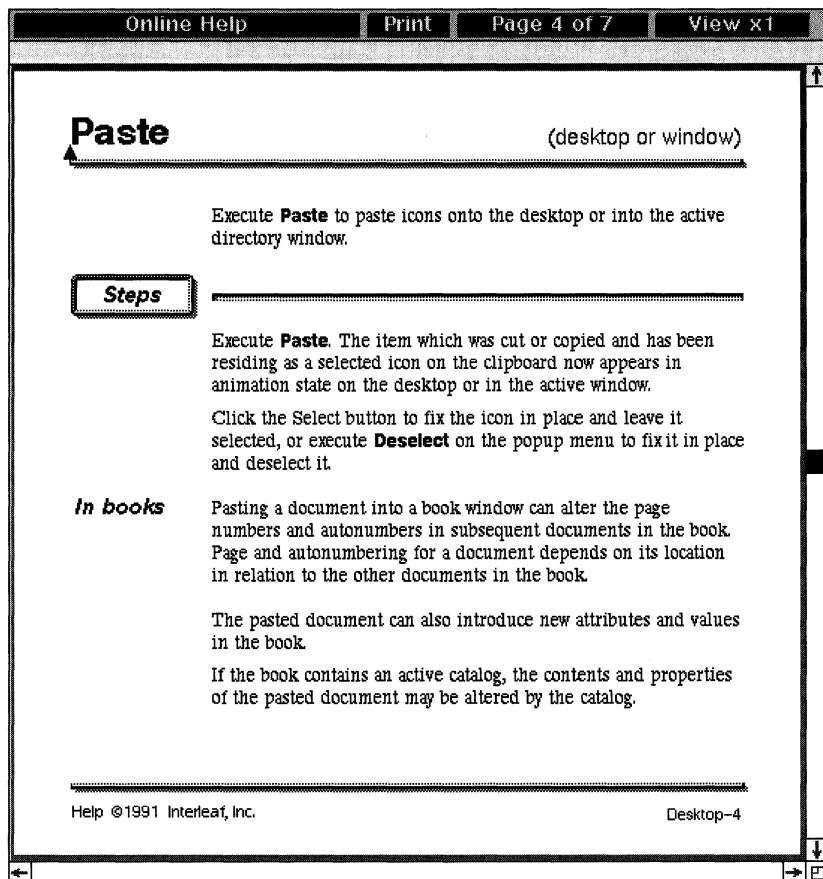


Figure 23

You can obtain help for any menu item by repeating the above steps (replacing the *Paste* menu item with the menu item for which you are seeking help).

To close the *Online Help* document, move the mouse cursor into the document name box, hold down the menu button and execute *Close*.

### What is the Active Reference tool?

The *Active Reference* is a layered application that offers you the opportunity to use online Interleaf reference materials. When invoked, the *Active Reference* displays a table of contents window, through which you are able to select individual topics. Each topic is linked to documents that provide you with further information.

The *Active Reference* also allows you to reformat the reference documents and send them to a printer. When formatting for a printer, you can specify whether you want to include the table of contents and index.

### How do I access the Active Reference tool?

The *Active Reference* tool is another one of those tools that you must install with the *Tool Manager*. Like the *Online Help* facility, the *Active Reference* tool is always available to you after it has been initially installed with the *Tool Manager*. (You would also use the *Tool Manager* to remove the *Active Reference* tool from your desktop, if you no longer need to use it.)

To illustrate how the *Active Reference* tool works, let's look at an example. Let's say that you want to find out more information about print properties. If you've never accessed the *Active Reference* tool before, then the first thing you need to do is install it using the *Tool Manager*.

Once the *Active Reference* tool has been installed, you can use it to find out more about print properties (or any other topic) as follows:

- 86 Move the mouse cursor to the desktop (make sure that you don't have any icons selected), hold down the menu button, and execute *Create→Tools→Active Ref→Interleaf 5 Features Doc*.

*An Interleaf 5 Features Doc icon appears, as shown in Figure 24.*



*Figure 24*

- 87 Open the *Interleaf 5 Features Doc* icon.

*A table of contents window opens, as shown in Figure 25.*

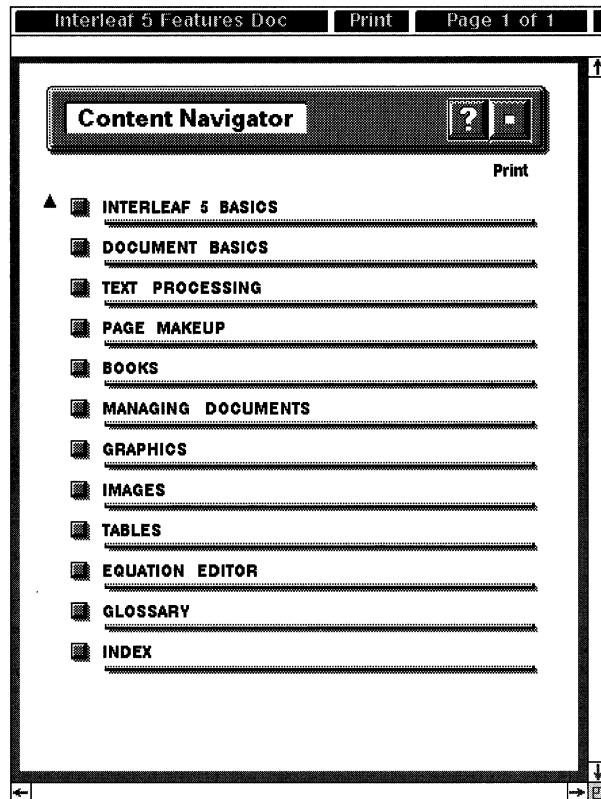


Figure 25

- 88 Select the *Document Basics* button in the table of contents.

*A detailed listing under the Document Basics entry appears, as shown in Figure 26.*

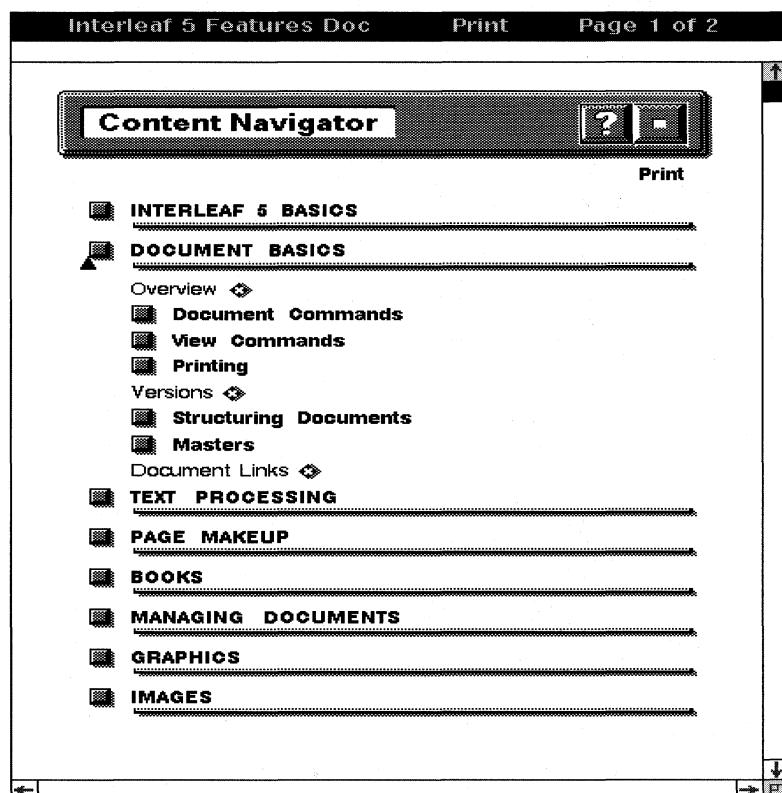


Figure 26

- 89 Select the *Printing* button in the table of contents.

*A detailed listing under the Printing entry appears, as shown in Figure 27.*

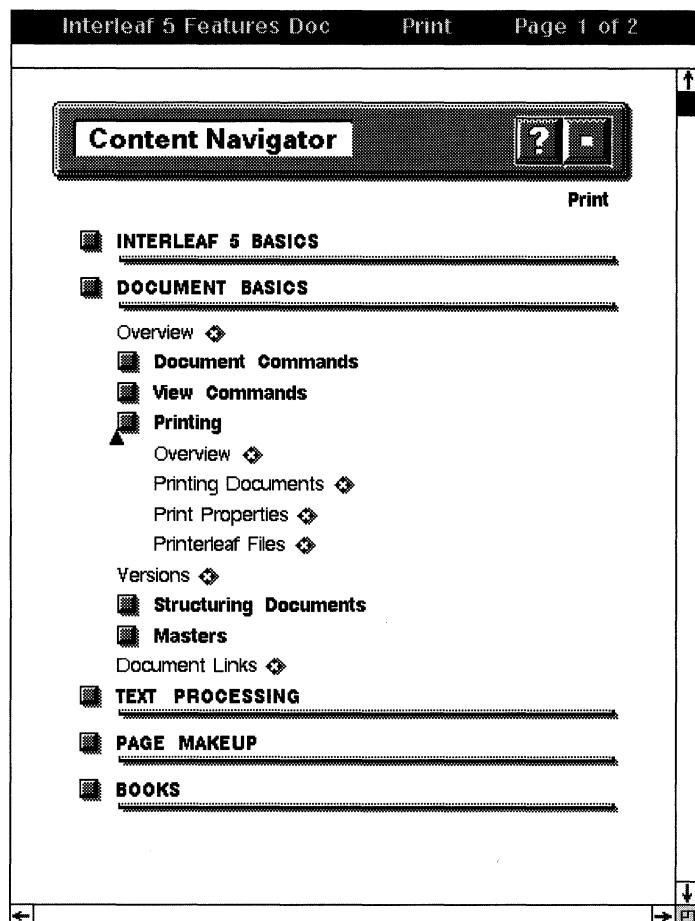


Figure 27

*Notice that there's a little diamond symbol (as shown in Figure 28) immediately to the right of the Printing Documents entry. Selecting this symbol allows you to hyperlink to further documentation.*



Figure 28

- 90 Select the diamond symbol to the right of the *Printing Documents* entry.

*A documentation window for “Printing Documents” appears, as shown in Figure 29. A diamond with an “x” in it, as shown in Figure 28, indicates that there is more information about whatever topic the diamond is sitting next to. This symbol is standard throughout Interleaf online documentation.*

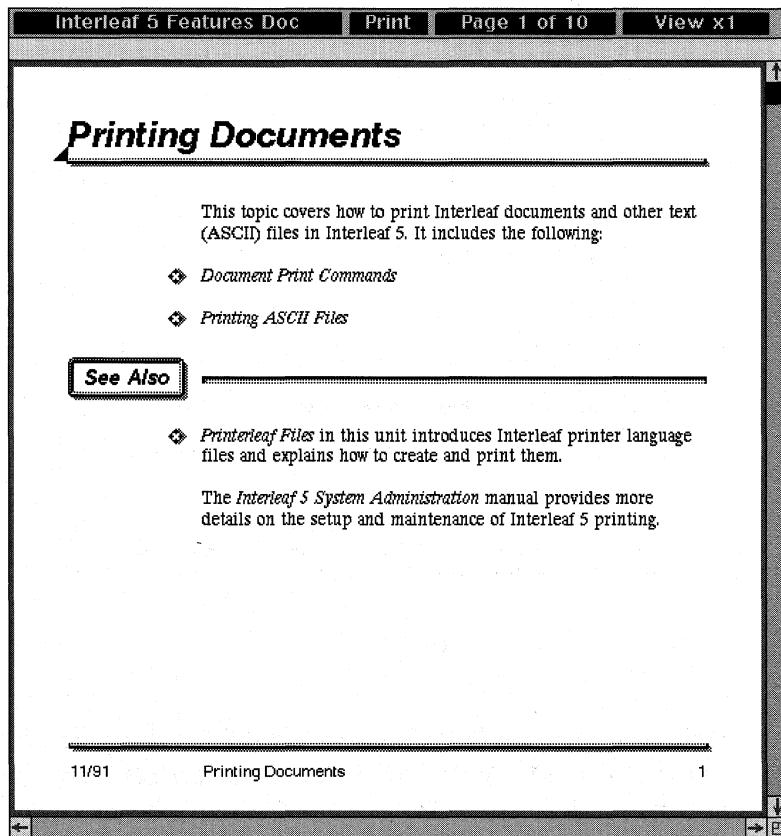


Figure 29

- 91 To close the documentation window, move the mouse cursor into the document name box and execute *Close*.
- 92 To close the table of contents window, move the mouse cursor into the document name box and execute *Close*.

**Is there any other online documentation (besides the Online Help facility and the Active Reference tool) that I should know about?**

Yes. There's the *Release Notes* drawer, the *Keyboard Tool* and the *Keyboard Display*.

The *Release Notes* drawer is in the *System5* cabinet. To get to the documents in the *Release Notes* drawer, open the *System5* cabinet and then open the *Release Notes* drawer.

Inside the *Release Notes* drawer are two documents of particular interest to you, the *Release Notes* document and the *New Features* document. The *Release Notes* document identifies known problems or bugs that may occur with your release of the Interleaf software. It also provides fixes or work-arounds for bugs that the Interleaf developers are currently working on. My hat goes off to Interleaf for sharing this information with their users. You can imagine how useful this is if you happen to read it *before* you get yourself into trouble. If you ever have problems with any aspect of the Interleaf software, I suggest that you look in the *Release Notes* document before you call the hotline. (Use the table of contents and the search and replace facility to pinpoint the section in the *Release Notes* that you need to read.) In some cases, your problem and fix will already be documented.

The *New Features* document describes all of the new features in your release of Interleaf 5 (new features compared with those in previous versions of Interleaf such as TPS 4 or TPS 3). If, for example, you are a user upgrading from TPS 4 to Interleaf 5 and you want to know specifically what the new features are in Interleaf 5, then all you have to do is read the *New Features* document.

Both the *Release Notes* and *New Features* documents may be printed.

The *Keyboard Tool* and the *Keyboard Display* tell you which functions are mapped to which key sequences. For example, if you need to know which function keys or key sequences you could press to create bold text, you could find this information in the *Keyboard Tool* or the *Keyboard Display*.

**What's the difference between the Keyboard Tool and the Keyboard Display?**

Conceptually, the purpose of both the *Keyboard Tool* and the *Keyboard Display* is the same, to reveal the function key sequences available to you on your Interleaf system. For example, if you want to know what the key sequence is

to set a tab from the keyboard (as opposed to from the tab sheet), you could use either the *Keyboard Tool* or the *Keyboard Display* to find this out.

The *Keyboard Tool* is a layered application that describes specific functions and then displays all of the function keys and/or key sequences that you can use to execute those functions, as shown in Figure 30. On most systems the *Keyboard Tool* is already installed for you. If not, the *Keyboard Tool* must be installed on your desktop with the *Tool Manager*. Once installed, it is available to you at any time by executing *Custom→Tools→Keyboard Tool*.

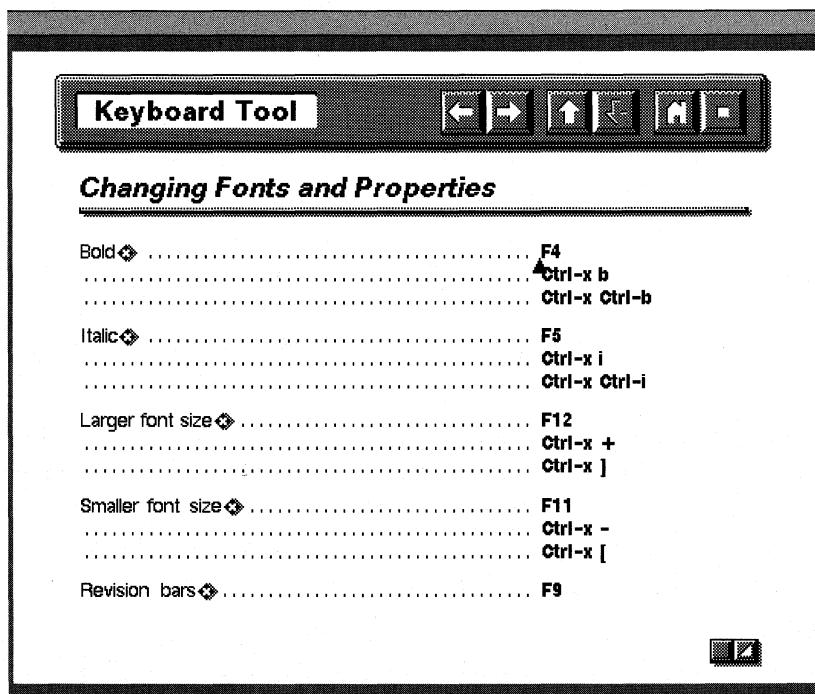


Figure 30: The Keyboard Tool

The *Keyboard Display*, on the other hand, is a graphical representation of your system's keyboard, where all of the keys are labeled with their associated functions, as shown in Figure 31. The *Keyboard Display* is invoked from the View box of an open document header or by executing the *Ctrl-x k* key sequence.

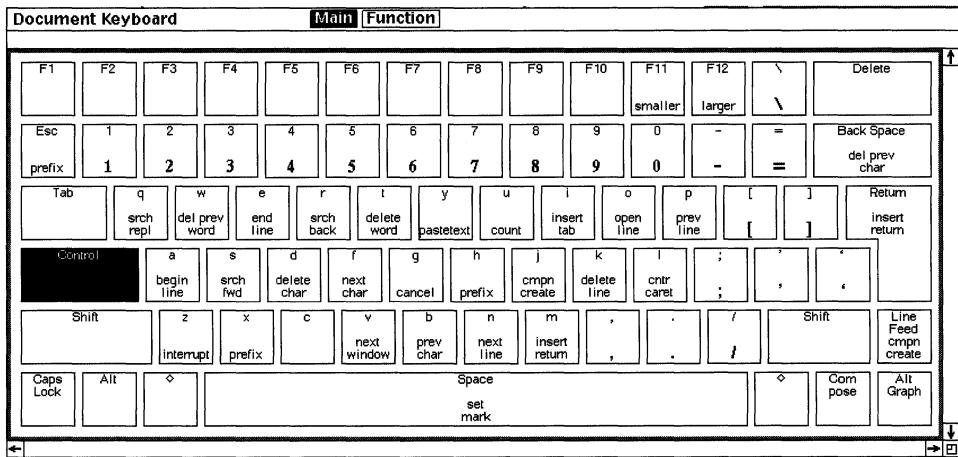


Figure 31: The *Keyboard Display*

### Which is better to use: the *Keyboard Tool* or the *Keyboard Display*?

That depends on the way you think. The *Keyboard Tool* is a “verbal” tool, and the *Keyboard Display* is a “visual” tool. If you learn things better by reading about them, then use the *Keyboard Tool*. If you retain knowledge better when you see a picture, then use the *Keyboard Display*.

I prefer the *Keyboard Tool* better because you can use the *Search* command to search for a particular function by name. In the *Keyboard Display*, you have to visually hunt for the particular key sequence you want. In the *Keyboard Tool*, you can hold down the menu button at any time, and execute *Search*. When the *Search String* window appears, simply type in the name of the function you are looking for; and if it's defined in the *Keyboard Tool*, the software will take you right to the definition.

### Are the *Keyboard Tool* and the *Keyboard Display* invoked the same way?

No. Each is invoked in a different manner.

## Keyboard Tool

To invoke the *Keyboard Tool*, perform the following steps:

- 93 Invoke the *Tool Manager* and install the *Keyboard Tool*.
- 94 Move the mouse cursor to the desktop (make sure that you don't have any icons selected), hold down the menu button, and execute *Custom→Tools→Keyboard Tool*.

*The Keyboard Tool window opens on your desktop.*

Notice that the key sequence definitions in the *Keyboard Tool* have been divided into categories, as shown in Figure 32. Let's assume, for example, that you want to find the key sequence that allows you to change the font face to bold. Font changes happen inside of documents, therefore you would look in the "Document Commands" section of the *Keyboard Tool*.

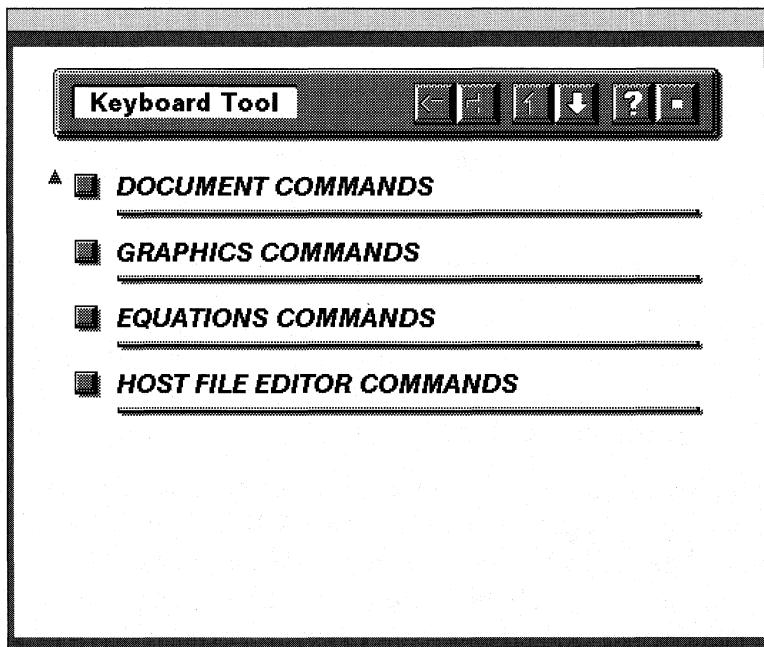


Figure 32

- 95 Move the mouse on top of the button associated with the "Document Commands" section, and click the select button.

*The Document Commands window opens.*

96 Select the “Changing Fonts and Properties” section.

*The Changing Fonts and Properties window appears as shown in Figure 30.*

### **Keyboard Display**

The *Keyboard Display* can on the other hand, be invoked from within any part of Interleaf. To invoke the *Keyboard Display* from within a document, move the mouse cursor up to the View box of the open document, hold down the menu button, and execute *Keyboard*. The document *Keyboard Display* will appear, displaying all of the key sequences that are available to you from within an open document.

To close the *Keyboard Display*, move the mouse cursor anywhere inside the *Keyboard Display* window, hold down the menu button, and execute *Close*.

To display the desktop *Keyboard Display*, move the mouse cursor outside of the open document, onto the desktop, and press the *Ctrl-x k* key sequence (the hyphen in this key sequence means that you must hold down the *Ctrl* key while pressing the *x* key; it does not mean that you literally press the – key). The desktop *Keyboard Display* will appear, displaying all of the key sequences available to you from the desktop.

To display the graphics *Keyboard Display*, open a frame and then move the mouse cursor to the View box of the document header, hold down the menu button, and execute *Keyboard*. The graphics *Keyboard Display* will appear, displaying all of the key sequences available to you from the desktop.

### **How do I print the Keyboard Tool?**

Move the mouse anywhere inside the open *Keyboard Tool* window, hold down the menu button, and execute *Misc→Print→(pick a printer)*.

### **How do I print the Keyboard Display?**

This is not quite as straightforward as printing the *Keyboard Tool*. To print the *Keyboard Display* you have to save the *Keyboard Display* in an Interleaf screen capture and then print the screen capture.

### **How do I create a screen capture on the Interleaf desktop?**

On most systems (DOS and Sun UNIX in particular) you invoke Interleaf’s screen capture utility by pressing the *Ctrl-z* key sequence and then selecting “Window Capture” from the resulting stickup window. (If *Ctrl-z* does not bring

up a User Interrupt window on your system, check the *Keyboard Display*. Look for a key sequence labeled “interrupt.”) Move and size the capture bounding box to enclose the part of the screen you wish to capture, and then press the select button. Everything within the bounding box will be captured in a *Mona Lisa* image file and stored on the clipboard. To bring the *Mona Lisa* image file to your desktop, simply execute *Paste* anywhere on your desktop.

To illustrate how the screen capture utility works, let’s save the *Keyboard Display* in a screen capture and then print it. To accomplish this, perform the following steps:

- 97 Display a document *Keyboard Display* (if you don’t know how to do this, review the previous question).
- 98 Press the *Ctrl-z* key sequence.

A *User Interrupt* stickup window appears.

- 99 Select the “Window Capture” button in the stickup window.

*The stickup window disappears and is replaced by an animated bounding box. (Note: It is important at this point that you do not press the select button of the mouse until you have completely enclosed the Keyboard Display in the bounding box. If you prematurely press the select button you will not get the entire Keyboard Display and you will have to start over with step 2.)*

- 100 Move the upper lefthand corner of the bounding box to the upper lefthand corner of the *Keyboard Display*, hold down the menu button and execute *Size*.
- 101 Size the bounding box such that it completely encloses the *Keyboard Display*, and then press the select button (or hold down the menu button and execute *Capture*).

*A screen capture of the contents of the bounding box is stored in a *Mona Lisa* image file named “image”, as shown in Figure 33. The image file is placed on the clipboard.*



**image**

*Figure 33*

- 102 Move the mouse to the desktop and execute *Paste*.

*The image file is pasted onto the desktop.*

- 103 Open the image file.

*Notice the image file contains a “snapshot” of the Keyboard Display.*

- 104 To print the *Keyboard Display*, make sure the mouse is inside the image file window, hold down the menu button, and execute *Print*.

*The Keyboard Display image prints on your selected printer.*

**Is there a way to find out which version of Interleaf I have installed on my computer?**

Yes. Move your mouse cursor to the desktop (make sure that no icons are selected), hold down the menu button, and execute *Custom*→*Misc*→*Info*. A stickup window appears (as shown in Figure 34) which tells you seven important pieces of information:

- Your Interleaf version number (for example, Interleaf 5.3.1)
- Your machine type (for example, Sun-4)
- Your operating system name (for example, SunOS)
- Your Lisp version number (for example, Lisp 2.0)
- Your user id name
- Your hostname
- Your hostid

*The stickup window on your desktop will have your site-specific information. The stickup shown in Figure 34 is just an example.*

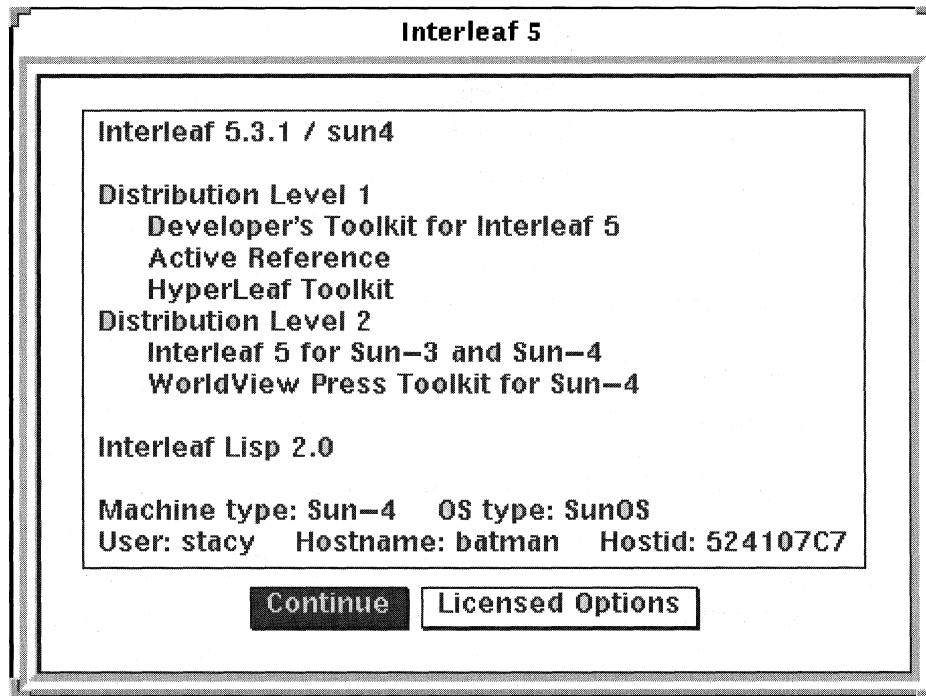


Figure 34

The *Custom→Misc→Info* command comes in handy when you call the Interleaf hotline for help. One of the first things they will ask you is which version of Interleaf you are running, and if you are getting a new password, they will want to know your hostid.

**Is there a way to find out which Interleaf options are installed at my site, and which of those options are available to me?**

Yes. Once again, move your mouse cursor to the desktop (make sure that no icons are selected), hold down the menu button, and execute *Custom→Misc→Info*. When the stickup window appears (as shown in Figure 34), select the *Licensed Options* button (at the bottom of the stickup window). A new stickup window appears (as shown in Figure 35), listing the options that are available at your site (the stickup window on your desktop will have your site-specific information).

If the word "On" appears next to an option it means you have access to that particular Interleaf option. If the word "Off" appears next to an option, it

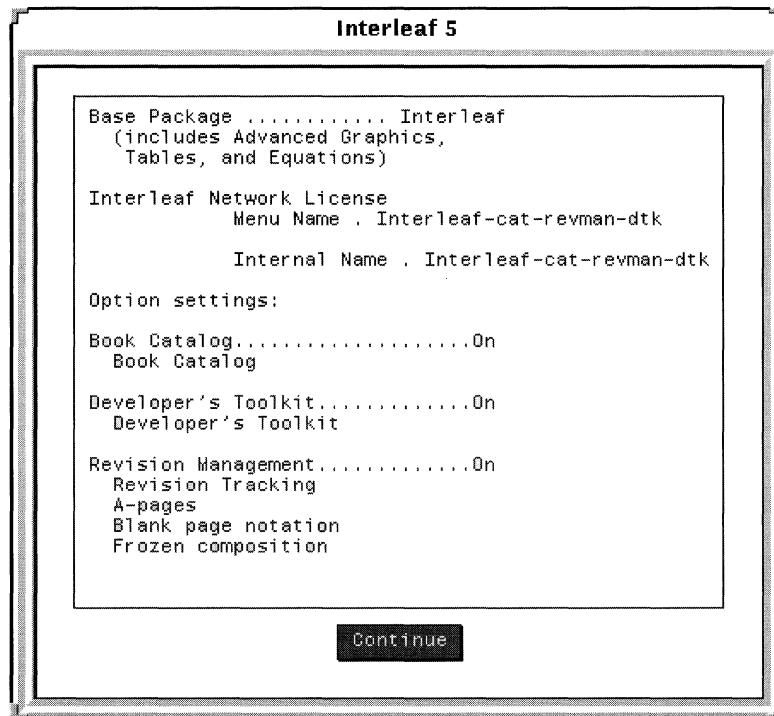


Figure 35

means that option has been “turned off” and is not available to you for use. The only way an option can be turned on is if your systems administrator inputs a new password that activates the option you want.

- 105 When you have finished viewing the options, select the *Continue* button.

*The stickup window disappears.*



### **3. *Documents and Windows***

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For every open window on the Interleaf desktop, there are certain commands that are the same regardless of the content of the open window (for example, *Open*, *Save*, and *Close* are available for use in both open documents and open windows). This book assumes that you already know how to use such commands.

Sometimes, however, it is not enough simply to know how to use a basic command. You may also need to know why the command works the way it does in order to take full advantage of its capabilities. The *Save* commands are a good example of this. There is more than one way to save an Interleaf document. But if you don't know why these various save formats exist, how do you know which one to choose?

In order to use Interleaf commands effectively, it is important that you know the difference between open documents and open windows on the Interleaf desktop and be familiar with the pulldown menu commands that are offered in each. Even though open documents and open windows may appear to be similar at first glance, they definitely are not the same. Each has its own separate menu structure, and, as a result, users very often confuse the menus between the two, expecting to see certain options come up when in fact they are in the wrong environment.

This chapter clarifies the use of the *Save* command in an open document and shows you how to modify the view of an open document. It then goes on to explain the differences between an open window and an open document and shows you how to modify the scroll bar manipulation of an open window.

#### **Opening and Saving Documents**

Opening and saving documents are the backbone of any desktop publishing system (if you can't open or save documents, what good is the system?). Fortunately, opening and saving documents in Interleaf are very easy tasks. The tricky part comes in knowing in which format to save your documents. Inter-

leaf provides more than one save format, and many users don't realize the difference between the two, or why you'd pick one over the other. This section addresses many of the commonly asked questions regarding save formats.

Because opening a document is so easy in Interleaf, you wouldn't think there would be any questions on this topic. There is one in particular, however, that seasoned Interleaf users always ask. Let me preface the question by asking *you* a question. Have you ever accidentally opened a large document and then had to sit there waiting forever for it to open, just so you could close it? I thought so. That's why the first question to be answered in this section is...

### **How do I stop a document from opening?**

While the document is opening, press the *Ctrl-z* key sequence twice (like this: *Ctrl-z Ctrl-z*). A stickup window labeled "Asynchronous User Interrupt" will appear. Select the *Cancel* button. The document will stop opening and return to its icon state.

Pressing *Ctrl-g* also stops the open process. In this case, however, no stickup window appears. The software simply cancels the open, and returns the document to a closed state.

### **What's the difference between *Save→Fast* and *Save→ASCII*?**

When you execute *Save→Fast* in an open document, you are saving the document in Interleaf save format. This means that the document can only be read by Interleaf. In this case, if you tried to open the Interleaf document in another software product, the product most likely would reject the document as unreadable.

If you execute *Save→ASCII* in an open document, you are saving the document in Interleaf ASCII format. A document saved in Interleaf ASCII contains the same information (markup, text, etc.) as a regular Interleaf document, except the Interleaf ASCII document is more compact and portable. An Interleaf ASCII file is used as input for the Interleaf filters. A filter is a program that converts an Interleaf file into some other file format. (For information on the Interleaf filters and document format conversions, refer to Chapter 16.)

The document icon for both formats (Interleaf and Interleaf ASCII) looks the same on the desktop. The only way you can tell the difference is by opening the document. In most cases, you will save your document in Interleaf save format. Usually, you use Interleaf ASCII format only if you are porting your Interleaf document to another software product (such as WordPerfect or Microsoft Word).

**If I execute *Save→ASCII*, is the resulting document considered a generic ASCII file?**

No. Interleaf ASCII format is not a generic ASCII file that can be read by any software that accepts ASCII format. If you want to convert your Interleaf document to a straight ASCII file, you need to save your document in Interleaf ASCII format and then invoke the *Interleaf to ASCII* filter. (For more information about the *Interleaf to ASCII* filter, refer to Chapter 16.)

**When I close and save my document, in which format am I saving my document: Interleaf format or Interleaf ASCII format?**

By default, you save your documents in Interleaf format when you select *Save* from the close stickup window.

**Can I change my save default, so that a specific document automatically saves in Interleaf ASCII format when I close?**

Yes. To change your save format default, perform the following steps:

1. Open the document object property sheet. The document object property sheet can be opened one of two ways: execute *Props* from the name box in the document header of an open document, or select the document icon from the desktop and execute *Props*.
2. In the open property sheet, select the ASCII button in the *Save Format* field, as shown in Figure 1.

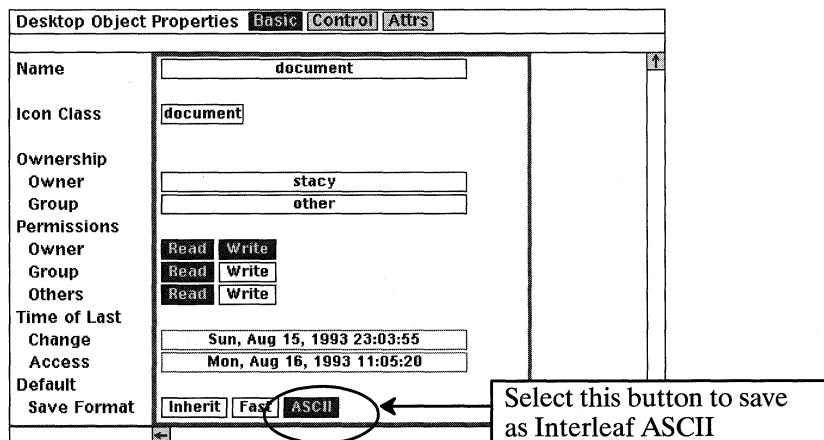


Figure 1

3. Execute *Apply* and close the property sheet.

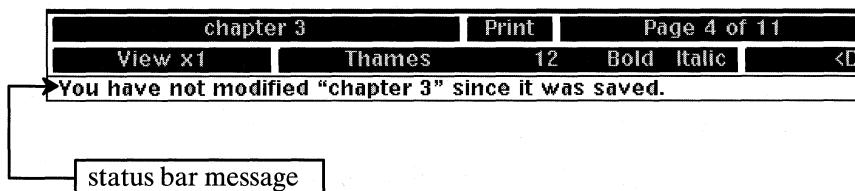
Now every time you select *Save* from the close stickup window, your document will be saved in Interleaf ASCII format.

### **Can I change the desktop so that all documents are saved in Interleaf ASCII format when I close?**

Yes. What you need to do is create a document as described in the previous question, and then store that document as a template in the *Create* cabinet of the *System5* cabinet. (If you need further information on creating document templates, refer to Chapter 5.)

### **What is the difference between *Save→Fast* and *Save→Fast-Forced*?**

*Save→Fast* saves your changes in Interleaf format without closing the document. You would execute *Save→Fast* if you decide in the middle of your editing that you want to save everything you've done since you opened the document (or since your last *Save→Fast*). If you execute *Save→Fast* and don't make any further editing changes and then execute *Save→Fast* again, the software will not issue another save. Instead it will respond with the status bar message shown in Figure 2.



*Figure 2*

In other words, *Save→Fast* will save the document only if changes to the document have been made.

If you want the software to save your document again, regardless of whether or not editing changes have been made, then you would execute *Save→Fast-Forced*. The *Save→Fast-Forced* command saves your document no matter what. You are "forcing" the software to save (hence the name *Save→Fast-Forced*).

### **Why would I want to force Interleaf to save a document that hasn't been changed?**

One of the most common reasons for using *Save→Fast-Forced* is to save a new current page before closing a document. Here's how it works. When you save

a document, not only are the editing changes saved but the current page number is saved as well. That means that if you close and save a document on page 3, for example, the document will return to page 3 when you reopen it.

But what if you saved the document while on page 3 yet you want the document to reopen on page 4? If you moved to page 4 without making any editing changes and executed *Save→Fast* again before closing, the software would not resave your document because no editing changes were made. This is because changing the current page is not considered an editing change. If, however, you moved to page 4 and then executed *Save→Fast-Forced*, the software would resave the document with the current page being page 4 (even though no editing changes were made). The next time you opened the document it would open on page 4.

Another time you might want to use *Save→Fast-Forced* is when you open a crash file. If the system crashes, sometimes your changes are saved by Interleaf in a crash file. After your system comes back up and you open the crash file, it's a good idea to immediately save the file. If the software won't let you save (because no editing changes have been made), then you can execute *Save→Fast-Forced*, forcing the software to save the crash file as the most recent version of the document.

### **Is there a *Save As* command in Interleaf, similar to the one found in WordPerfect, Microsoft Word, and most Macintosh products?**

First let's define what you mean by a *Save As* command. Here's the scenario: You open a document and start making editing changes. Five minutes into those changes, you decide you should have made a copy of the original before you started chipping away at this new masterpiece. You don't want to close without saving because you also want to keep the new changes you just made. So you invoke the *Save As* command which allows you to save your changes in a new document (with a new name), while still retaining the original document (under its original name).

If this is what you mean by a *Save As* command, then yes, Interleaf has one, only in Interleaf it's called the *Rename* command. Here's how it works. To save your current changes in a new document, perform these steps:

1. Move the mouse cursor up to the name box in the document header, hold down the menu button, and execute *Misc→Rename*.

*A stickup window will appear, asking you to enter the new document name.*

2. Enter the name that you want your new document to be saved as, and select *Confirm* from the stickup window.

A new document is created on your desktop with this new name. The new document contains all of your changes back to the last time you executed *Save→Fast* (or *Save→Fast-Forced*) or back to when the document was opened if you never issued a save command. The original document is saved under its original name.

### **Can I delete all of the changes I made to a document back to the most recent Save?**

Yes. There are two ways to do this.

- You can close the document without saving, in which case you will lose all the editing changes you made back to the last time you saved (or back to the time the document was opened if you never issued a save command).
- You can use the *Revert* command.

The *Revert* command allows you to revert your document back to the last time you saved or back to the last time Interleaf did an incremental backup save.

Here's how it works.

1. In an open document, move the mouse cursor up to the name box in the document header, hold down the menu button, and execute *Misc→Revert→to Saved* (or *to Backup*).

*A stickup window appears warning you that all of your current changes will be lost.*

2. Select *Confirm* from the stickup window and watch your document revert back to its original form.

This is similar to closing a document without saving, but you don't have to physically close (and then reopen) the document.

## **Viewing Documents**

The way your document looks on the computer terminal screen is just as important as the way your document looks when it prints. Ideally, the two views should be identical and in Interleaf they are.

There are times, however, when you don't want the two views to be the same. (What?!) Yes, it's true. Think about it. There may be times when you want to see editing aids on the desktop, but you don't want them to print. Or you may want to play with the paper size on the desktop to make it bigger so that it's easier to read, but you still want the document to print on 8.5" x 11" paper, regardless of the mess you made on the screen. (We users want everything, don't we?)

Changing the document view in Interleaf is easy, especially when you know how the viewing techniques in Interleaf are handled.

### **How do I “print preview” my document (so that I can see what my document looks like when it prints)?**

When you open an Interleaf document, you automatically see what your document will look like when it prints. Interleaf is the most WYSIWYG (“what-you-see-is-what-you-get”) publishing product that I know of. The way your document is formatted on the screen is exactly the way your document will be formatted when it prints.

If, however, you would like to see what your document looks like without all of the nonprintable control characters (such as tab indicators, hard return arrows, frame anchors, inline component markers, etc.) then you can turn those off while viewing your document. (Remember, control characters do not print. They are only there to help you while you edit your document.) To hide all nonprintable control characters, perform the following steps:

1. Open the document you wish to view.
2. Move the mouse cursor up to the View box of the document header, hold down the menu button, and execute *Markers→All Markers→Off*.

*All of the nonprintable characters disappear.*

### **Can I edit my document while the nonprintable control characters are invisible?**

Yes, but it is not a good idea. When the control characters are off, tabs, for example, look like regular white space, inline components look like regular component text, and hard returns are not noticeable. Without having these control characters visible, you could unintentionally reformat your document in a way that you did not intend.

For this reason, I recommend that you always have the nonprintable control characters visible when you edit your documents.

**Is there a nonprintable control character that indicates a soft space (so I can tell how many times the space bar has been pressed between characters)?**

Yes. Each soft space is indicated by an extremely small, faint dot (unfortunately, you need very good eyes or a terminal with very good resolution to see these dots). By default, the soft space indicators are not visible. If you want to see the soft space indicators in your open document, move your mouse cursor up to the View box in the document header, hold down the menu button, and execute *Markers*→*All Markers*→*On* to turn on all hidden control characters, including soft space indicators, or execute *Markers*→*Soft Spaces* to turn on just the soft space indicators.

**Can I change the view size of my document?**

Yes. To increase the view size of your document, perform the following steps:

1. Open the document you wish to view.
2. Move the mouse cursor up to the View box of the document header, hold down the menu button, and execute *Zoom*→*Larger*.

By default, your document will increase in size by 50 percent to 1.5 times its original size. If you zoom again, the document size will increase to 2 times its original size. Each time you zoom up, the document adds 0.5 its original size to the document's current size.

To decrease the view size of your document, perform the following steps:

1. Open the document you wish to view.
2. Move the mouse cursor up to the View box of the document header, hold down the menu button and execute *Zoom*→*Smaller*.

By default, your document will decrease in size by 50 percent to 0.5 times its original size. If you zoom down again, the document will decrease to 0.25 times its original size. Each time you zoom down, the document shrinks in size to 50 percent of its current size.

**What's the maximum and minimum I can size the view of my document?**

You can zoom the document up to 16 times its original size. Or you can zoom the document down to 0.25 times (one quarter) its original size.

### Can I override the default zoom factor?

Yes. You can specify a custom zoom factor in increments of 0.01 (one-one hundredth) of its original size (as long as you don't go below 0.25 times the original size of the document).

To input your own zoom factor, perform the following steps:

1. Move the mouse cursor into the View box of the open document and execute *Zoom→Numeric*.

*A stickup window appears asking you to enter a zoom factor.*

2. Enter a zoom factor (greater than or equal to 0.25 or less than or equal to 16), and select the *Enter* button.

*The open document zooms up or down by a factor of the value you entered in the stickup.*

### If I change the view size of my document, does that affect the size of my document when it prints?

No. Changing the view size of your document is for viewing purposes only. Your document will still print on the default paper size defined in the *Print* property sheet.

## Manipulating Windows on the Interleaf Desktop

Unfortunately, the windows in the Interleaf desktop do not behave exactly like the windows in other windowing systems (they do to a certain degree, but it's those minor little differences that really annoy us). The good news is a lot of these inconsistencies will go away with the introduction of new interfaces (Motif, Windows NT, etc.) for the Interleaf desktop.

In the meantime, however, users need to know how they can manipulate windows on the Interleaf desktop in a way that is most comfortable for them. Fortunately Interleaf 5 does not lock its users into one method of operation. With the help of the Interleaf tools, users can modify their desktop windows so that they behave in a manner that is more familiar to them.

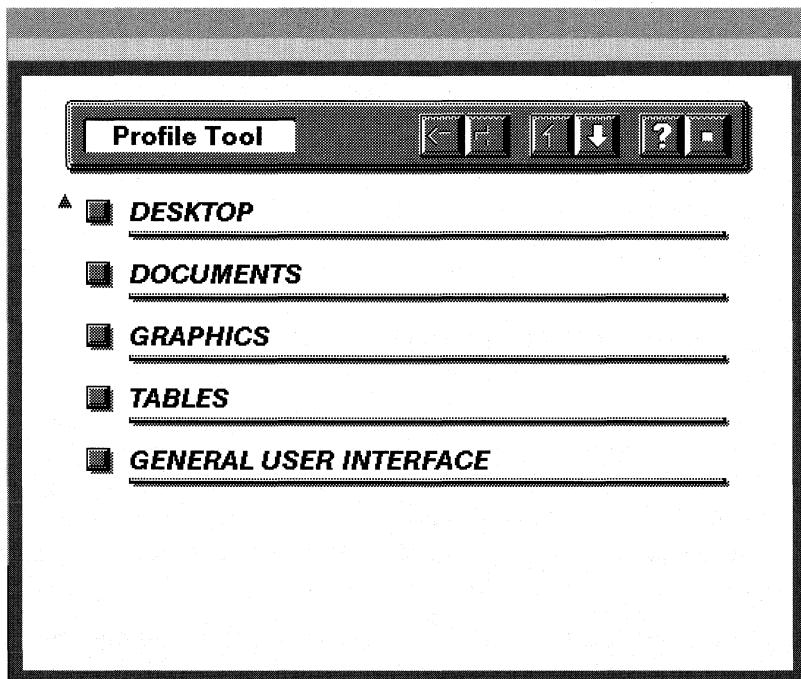
### Can I change the window scroll bars so that I can scroll by selecting and dragging the scroll elevator?

Yes. You can change the way your Interleaf windows behave by altering them with the *User Profile Tool*.

To change the window scroll bar behavior, perform the following steps:

1. If you've never accessed the *User Profile Tool* before, then you must first install it using the *Tool Manager* (if you forget how to install a tool using the *Tool Manager*, review Chapter 2: *Customizing the Desktop*).
2. Move the mouse cursor to your desktop, hold down the menu button, and execute *Custom*→*Tools*→*Profile Tool*. (Or, if you already have a *Profile* icon in your *Profile* drawer, then open your *Profile* icon instead.)

*The Profile Tool window opens on your desktop, as shown in Figure 3.*



*Figure 3*

3. Select the *General User Interface* button in the *Profile Tool* window.

The General User Interleaf window opens, as shown in Figure 4.

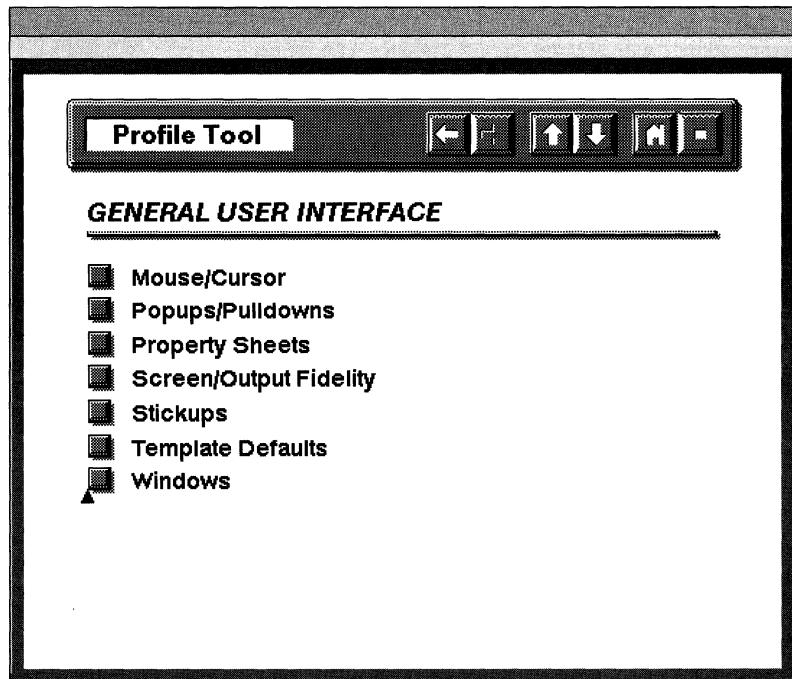
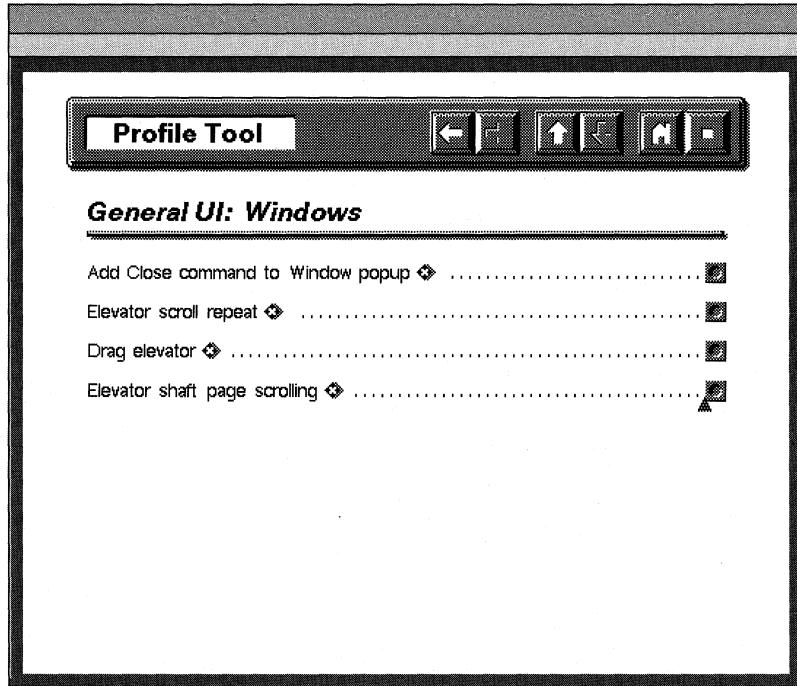


Figure 4

4. Select the *Windows* button in the *General User Interface* window.

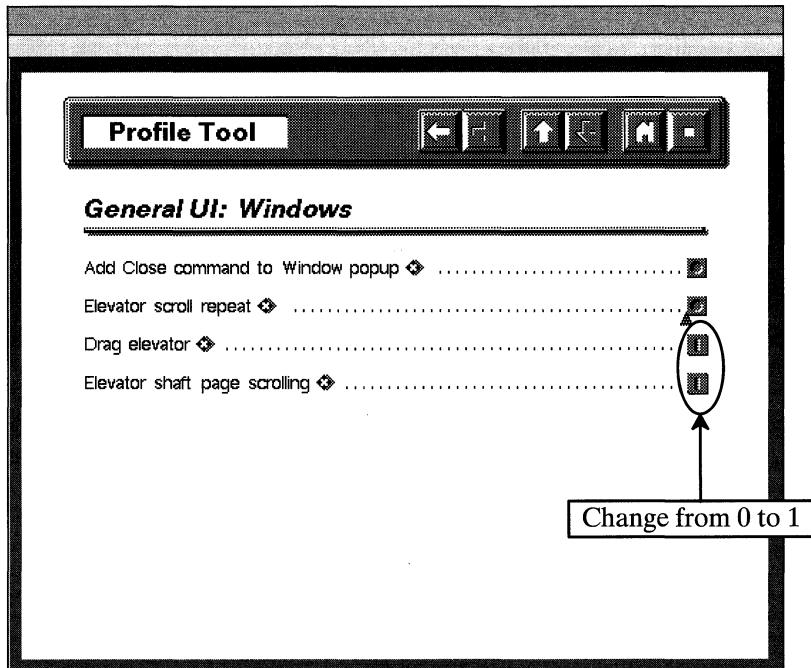
*The General UI: Windows window opens, as shown in Figure 5.*



*Figure 5*

5. Click the select button once in the box associated with the “Drag elevator” option.

*Notice the 0 changes to a 1, as shown in Figure 6.*



*Figure 6*

6. Click the select button once in the box associated with the “Elevator shaft page scrolling” option.

*Notice the 0 changes to a 1, as shown in Figure 6.*

7. In the open window, execute *Load*.

*Your scrolling changes are loaded into memory. You can now drag the vertical scroll elevator to page through a document or window.*

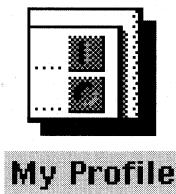
To permanently save your scrolling modifications, execute *Save* in the open *Profile Tool* window.

*If you have not already saved Profile changes, a stickup will appear asking you to enter a Profile name.*

8. In the stickup window type *My Profile* (or any *Profile* name that you choose) and then select *Enter*.

*The stickup window disappears, and your changes are saved in a Profile Tool file, represented by a Profile Tool icon (created on your desk-*

*top), as shown in Figure 7. The name of the icon is the same name you typed in the stickup.*



*Figure 7*

9. Close the *Profile Tool* window.
10. Open the *System5* cabinet.
11. Open the *Custom* cabinet.
12. Open the *Profile* drawer.
13. Cut the *Profile Tool* icon from your desktop and paste it into the open *Profile* drawer window.

*Every time you invoke Interleaf, the software checks the Profile drawer for your desktop customizations. At login, the software loads whatever it finds in the Profile drawer. If your Profile Tool icon is in the Profile drawer, it will automatically be loaded when Interleaf is invoked.*

*Now every time you invoke Interleaf, you will be able to use your new window scrolling configuration without having to reinvoke the Profile Tool.*

### **Is there a maximum number of windows I can have open on my desktop at once?**

Yes. By default, Interleaf allows you to have 32 windows open at once on the Interleaf desktop.

### **Can I increase the maximum number of windows I'm allowed open on my Interleaf desktop?**

Yes. You can increase the maximum open window default via the *User Profile Tool*.

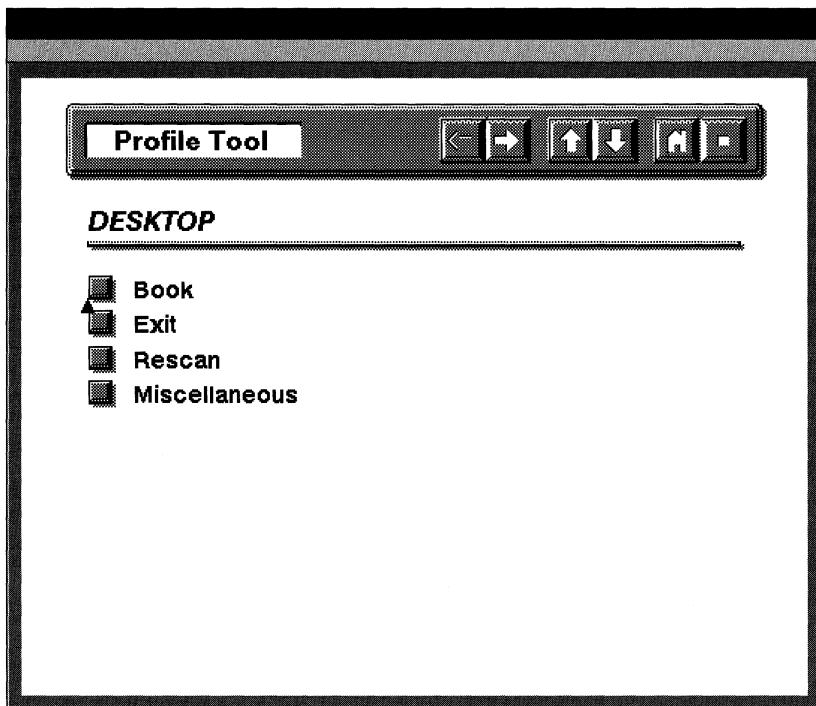
To increase this default, perform the following steps:

1. If you've never accessed the *User Profile Tool* before, then you must install it using the *Tool Manager*.
2. Move the mouse cursor to your desktop, hold down the menu button, and execute *Custom*→*Tools*→*Profile Tool*. (If you already have a *Profile Tool* icon in your *System5* cabinet, then open that instead of executing *Custom*→*Tools*→*Profile Tool*.)

*The Profile Tool window opens on your desktop, as shown in Figure 3.*

3. Select the *Desktop* button in the *Profile Tool* window.

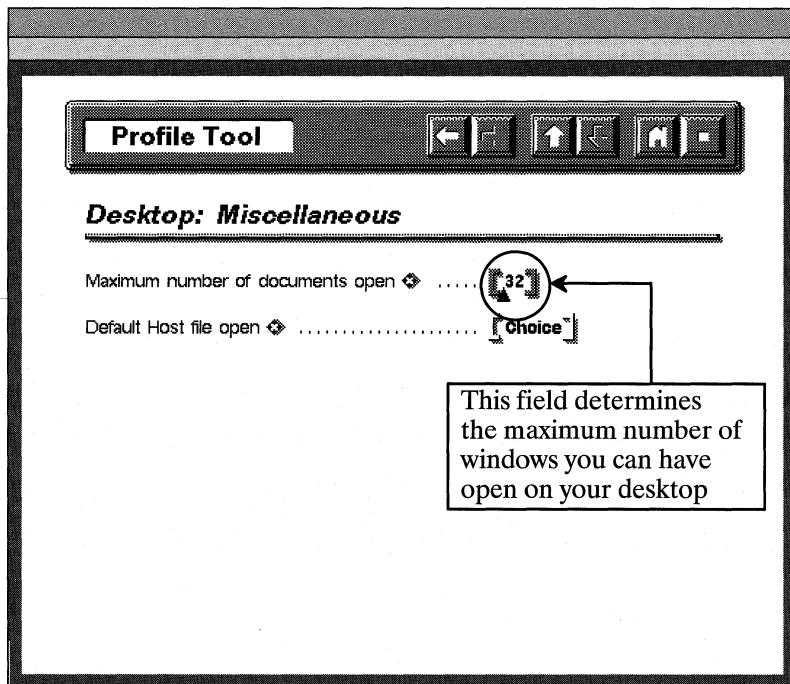
*The Desktop window opens on your desktop, as shown in Figure 8.*



*Figure 8*

4. Select the *Miscellaneous* button in the *Desktop* window.

*The Desktop: Miscellaneous window opens on your desktop, as shown in Figure 9.*



*Figure 9*

5. Click the select button once in the field associated with the “Maximum number of documents open” option and enter the new value. The new value is the maximum number of windows you want to be able to have open on your desktop at once.
6. In the open window, execute *Load*.

*Your maximum window changes are loaded into memory. You can now have as many windows open as you just specified.*

To save your maixumu documents modifications, execute *Save* in the open *Profile Tool* window. If you are editing your *Profile Tool* icon from your *System5* cabinet, your changes are permanently saved when you execute *Save*.

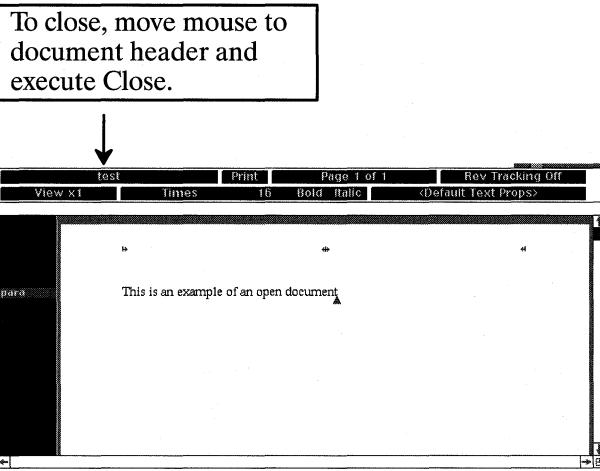
If, however, you are making *User Profile Tool* changes for the first time, and you wish to permanently save these changes in your *Profile* drawer, refer to Chapter 2 for the steps that show you how to do this.

**What's the difference between an open window and an open Interleaf document on my desktop?**

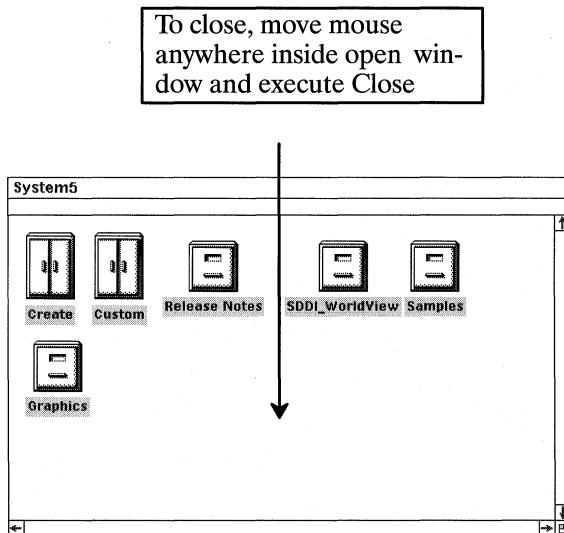
An open document *is* an open window on the Interleaf desktop, it's just that it's a special kind of window. As an Interleaf user, the differences between the two are:

- The way they look
- The way you close each (There are characteristic differences if you are creating windows via Lisp programming, but these characteristics are not important to you at this point.)

The most obvious difference between the two is that an open Interleaf document has a document header, and a regular open window does not, as shown in Figure 10. To close an Interleaf document you move the mouse cursor into the document name box of the document header, hold down the menu button, and execute *Close*, as shown in Figure 10. To close an open window, on the other hand, you move the mouse cursor anywhere inside the open window, hold down the menu button, and execute *Close*.



Open Interleaf Document



Open container window

*Figure 10*

**Do the scroll bars behave the same in both an open Interleaf document window and a regular open window?**

Yes. In fact, if you change your scroll bar behavior with the *User Profile Tool*, your changes will be reflected in any window you open on the Interleaf desktop, regardless of whether it is a document window or not.

**Are the popup menus the same in both an open Interleaf document and a regular open window?**

No. In both types of windows, the menu button works the same way, but the menus that come up are different. Every Interleaf document will always have the standard document popup menus, regardless of the content of the document. However, the popup menus in other open windows on the Interleaf desktop will vary, depending on the function of the open window.



## **4. Customizing Documents**

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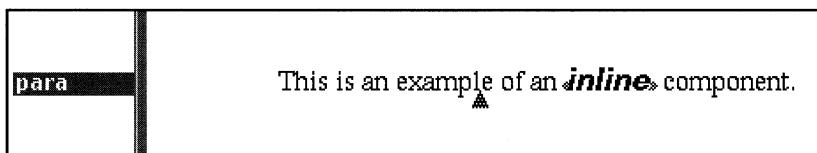
As wonderful a product as Interleaf is, Interleaf's developers could not possibly conceive of every component you would ever want in a document. They give you a few components to start with (in the default document), and then leave it up to you to be creative. This free rein can be a double-edged sword. Yes, it's great that you can create any component you want. But then the next question is, how do you know which components you want? And even if you do know, how do you create them?

This chapter shows you not only how to create some handy components that you may want to include in the template documents you add to your *System5* cabinet (see Chapter 5), but also how to think laterally when it comes to creating new component masters. Sometimes the most creative ideas are a result of using a particular function for something that no one ever initially intended. The key is to be adventurous when designing new components. With all of the capability Interleaf gives you, you can design your documents to coincide with anyone's imagination.

### **The Straight Story on Inline Components**

#### **What is an inline component and why would I use one?**

An inline component is a component within a component, as shown in Figure 1. An inline component is enclosed in gray nonprinting brackets (if you like, these brackets can be turned off from the View box in the document header). Just like a regular component, an inline component has its own property sheet.



*Figure 1*

The reason Interleaf provides you with an inline component is so that you can tag a small subset of text with specific properties. For example, let's assume the block of text shown in Figure 2 is all in one component named *para*. Notice this block of text has an inline heading ("Information"). If you want just the inline heading (and not the rest of the text) to appear in a table of contents, then you need to convert the inline heading text into an inline component. Once the text is in an inline component, the text will have its own property sheet. This means you can open the inline component property sheet, and tag it with a TOC tag. Then when you generate a table of contents, the inline heading will appear as an entry in the TOC.

para	<p><b>Information:</b> Information booths are located at the ends of each hallway, and next to all restrooms. Registration packets, as well as maps of the area, and locations of local restaurants and hotels are also available.</p>
------	--

*Figure 2*

### **How do I convert text into an inline component?**

Select the text you want to convert, hold down the menu button, and execute *Misc→Convert→to Inline→(pick an inline component master)*.

*The selected text is converted into an inline component.*

After the conversion takes place the selected text will appear in inline component brackets.

### **Are there other ways to create an inline component?**

Yes. You can create the inline component first and then add text to it. To accomplish this, move the text caret to where you want the inline component inserted in your text, hold down the menu button, and execute *Create→Inline→(pick an inline component master)*.

*An empty inline component is created.*

To insert text into the empty inline component, simply begin typing while the text caret is in between the inline component brackets.

### **How are inline component master definitions created?**

For every component master listed on the component bar *Create* menu, the software creates an associated inline component master. You can also create

your own inline component master definitions in the same manner in which you create new master definitions for regular components (change the name field on an existing inline component property sheet, execute *Apply*, and select *Confirm* from the resulting stickup window).

## Customizing Autonumber Streams

### How do I make the autonumbers in a prefix component align at the decimal?

When you put an autonumber stream in the prefix of a prefix component, chances are the component aligns the digits to the left. This is fine, until you get past the number nine. Then you have a list where autonumbers 9. and 10. appear to be misaligned, as shown in Figure 3.

9.

10.

*Figure 3*

To make autonumbers in a prefix component align at the decimal point, perform the following steps:

1. Select the prefix component and open its property sheet.
2. Change the left margin to 0.5, and the initial indent to -0.5, as shown in Figure 4.
3. Move to the Tab sheet and add a decimal tab at -0.1 inches, as shown in Figure 5.
4. Execute *Global Apply→Confirm*, and close the property sheet.
5. Delete the autonumber and any existing spaces or tabs in the prefix of the prefix component.
6. Press the tab key once, recreate the autonumber, and then press the tab key again.

*The autonumber in the prefix of the component will align vertically at the decimal.*

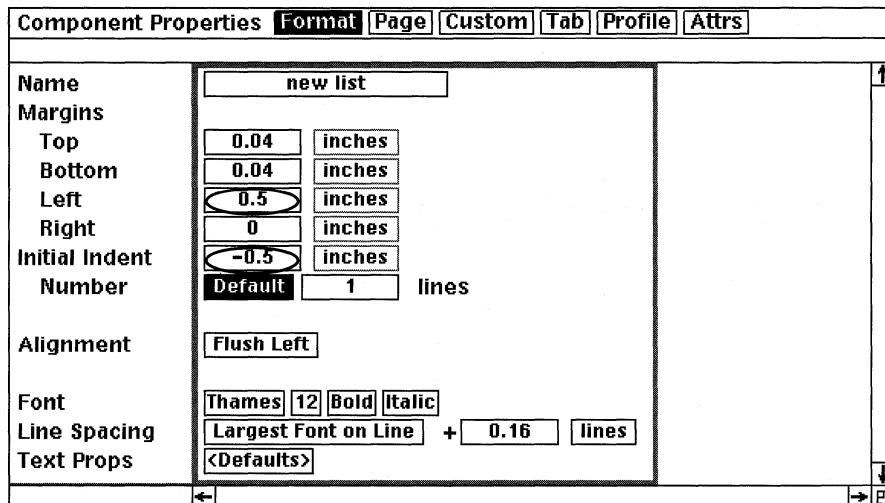


Figure 4

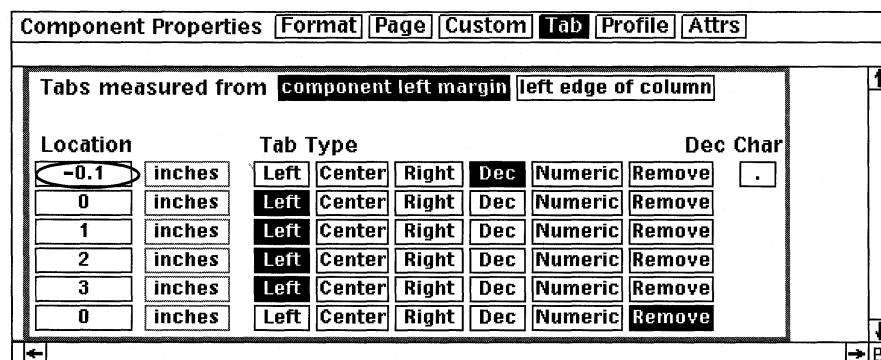


Figure 5

## How do I make hanging indent component masters for a multi-level outline?

The secret to success in this case is to create component masters for each level in the outline. The components will be prefix components, where the prefixes are different levels of a multi-level autonumber stream. For the outline in Figure 6, there are three levels: Roman numerals (I, II, III, ...) make up the first level, uppercase letters (A, B, C, ...) constitute the second level, and Arabic numbers (1, 2, 3, ...) form the third level. Since this outline has three levels, you will create three components (*Level 1*, *Level 2*, *Level 3*), as follows:

1. Create a *para* component and open its property sheet.
2. On the Format sheet, change the name field to *Level 1*, the left margin to 2, and the initial indent to  $-0.5$ , as shown in Figure 7.
3. Move to the *Custom* sheet and select the *Yes* box in the Prefix field (at the bottom of the window), as shown in Figure 8.
4. Execute *Apply* and select *Prefix* from the resulting stickup window.
5. Close the property sheet.

*You have just created the component for the first level. Later you'll put an autonumber in the prefix of the component, but first let's create the components for the other two levels.*

6. Create a second *Level 1* component immediately below the first and open its property sheet.
7. On the Format sheet, change the name field to *Level 2*, and the left margin to 2.5, as shown in Figure 9.
8. Execute *Apply* and select *Prefix* from the resulting stickup window.
9. Close the property sheet.

## **Putting Together a Business Plan**

I.....|Know Your Potential Business

A.....|Markets

    1.....|Competitors

B.....|Products

C.....|Services

II....|Describe Your Potential Business

A.....|Who is the Customer?

    1.....|Wholesale

    2.....|Retail

B.....|Products or Services Offered

C.....|Location

D.....|Personnel

    1.....|Management Structure

E.....|Insurance

    1.....|Errors & Omissions

    2.....|Liability

    3.....|Disability

    4.....|Health

III....|Marketing

A.....|Target Markets

B.....|Advertising

C.....|Pricing

IV....|Financial Statements

A.....|Sales Volume

B.....|Break Even Analysis

C.....|Fixed Operating Costs

*Figure 6*

Component Properties		Format	Page	Custom	Tab	Profile	Attrs	
Name	<b>Level 1</b>							
Margins								
Top	0.04	inches						
Bottom	0.04	inches						
Left	2	inches						
Right	U	inches						
Initial Indent	A -0.5	inches						
Number	Default	1	lines					
Alignment	Flush Left							
Font	Thames	16	Bold	Italic				
Line Spacing	Largest Font on Line + 0.16 lines							
Text Props	<Defaults>							

Figure 7

Component Properties		Format	Page	Custom	Tab	Profile	Attrs					
Hyphenation	Off	1	2	3	4	Normal	6	7	8	9	Full	↑
Wordspace	Default											
Optimum	1 times natural wordspace											
Track-Kern Spaces	Yes	No										
TOC Doc Name												
Page# Stream	page											
Content												
Prefix	Yes	No										
Shared	Yes	No										
Read-Only	Yes	No										

Figure 8

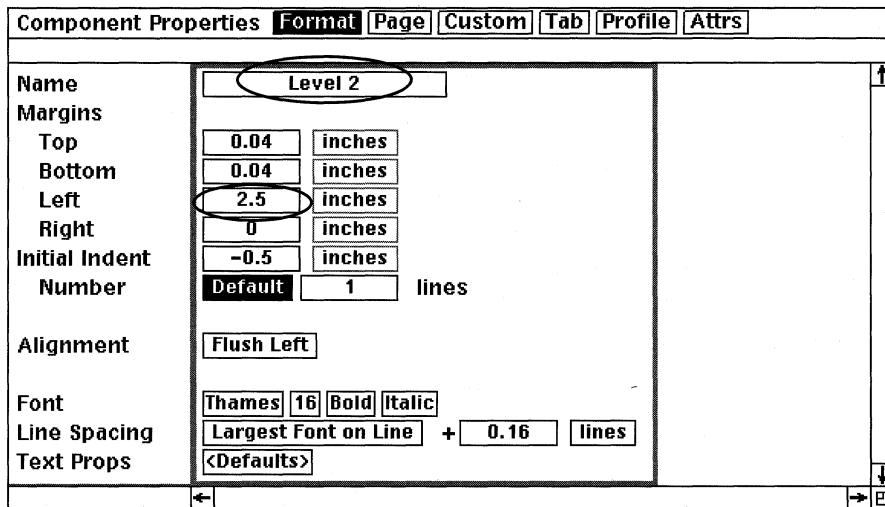


Figure 9

You have just created the component for the second level. Now let's create the last component for the third level.

1. Create a second *Level 2* component immediately below the first, and open its property sheet.
2. On the *Format* sheet, change the name field to *Level 3* and the left margin to 3, as shown in Figure 10.
3. Execute *Apply* and select *Prefix* from the resulting stickup window.
4. Close the property sheet.

The components for all three levels are complete. Notice that the prefix bars of the three components indent each time a new level is created, as shown in Figure 11. This gives you an idea of how your outline will look.

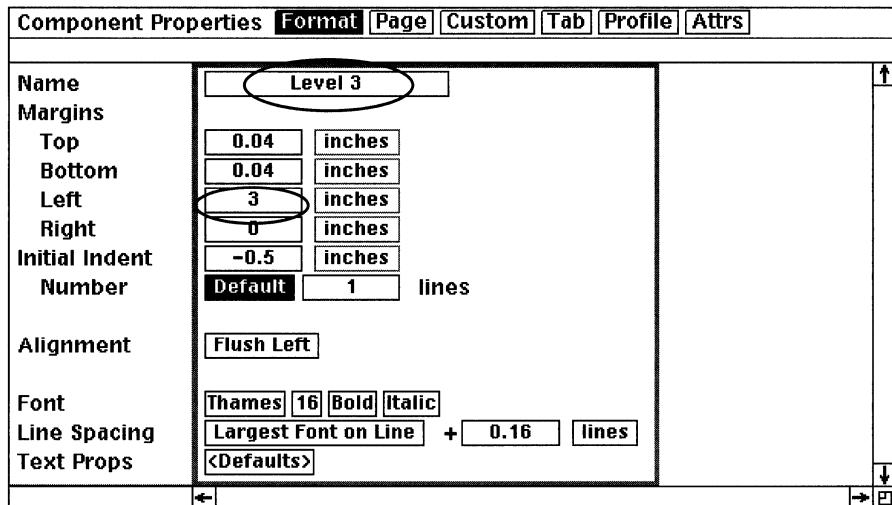


Figure 10

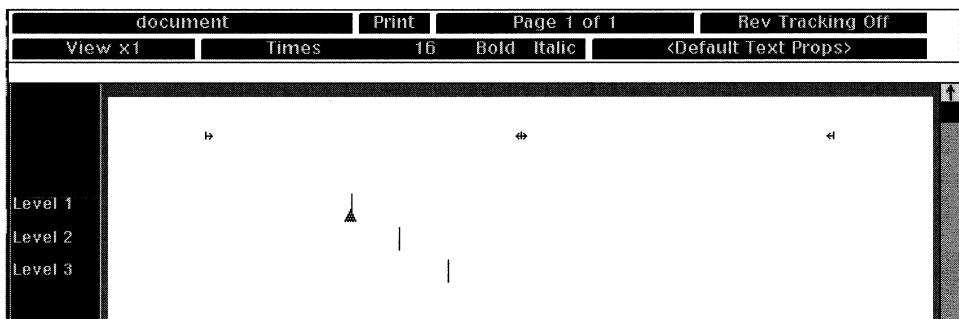
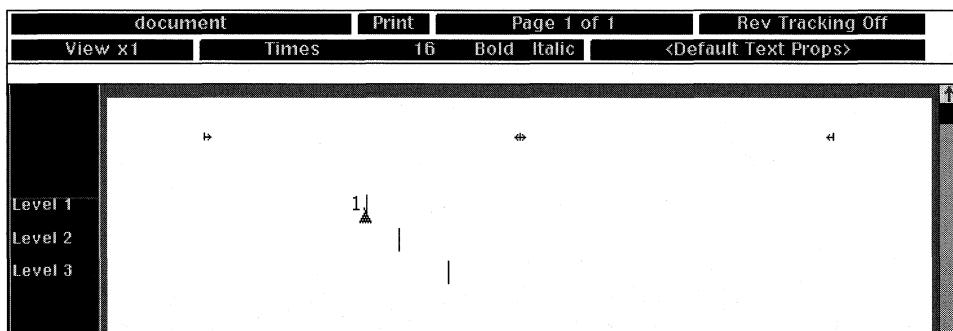


Figure 11

Now you need to create a custom autonumber specifically for the outline. Since this outline has three levels of indentation, the autonumber stream that you will create for the outline must have at least three levels. To create a custom autonumber stream for your outline, perform the following steps:

1. Move the mouse cursor to the left of the prefix bar in the *Level 1* component and execute *Create*→*auto #*→*list*→*level 1*.

*A default list autonumber is created in the prefix of the component, as shown in Figure 12.*



*Figure 12*

2. Select the autonumber you just created and open its property sheet.

3. Change the autonumber name to *outline*, as shown in Figure 13.

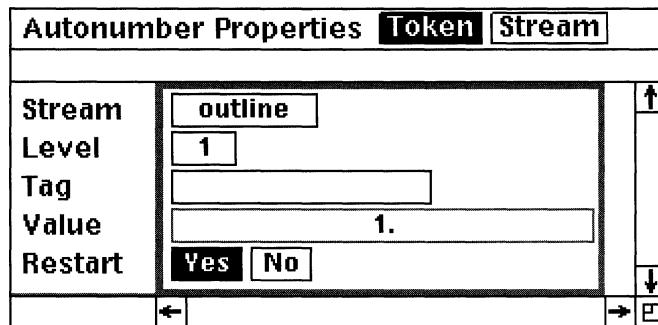


Figure 13

4. Move to the *Stream* sheet, change the Levels box from 1 to 3, and click the select button once.

*Notice that you now have three sets of level fields, one for each level in the outline, as shown in Figure 14.*

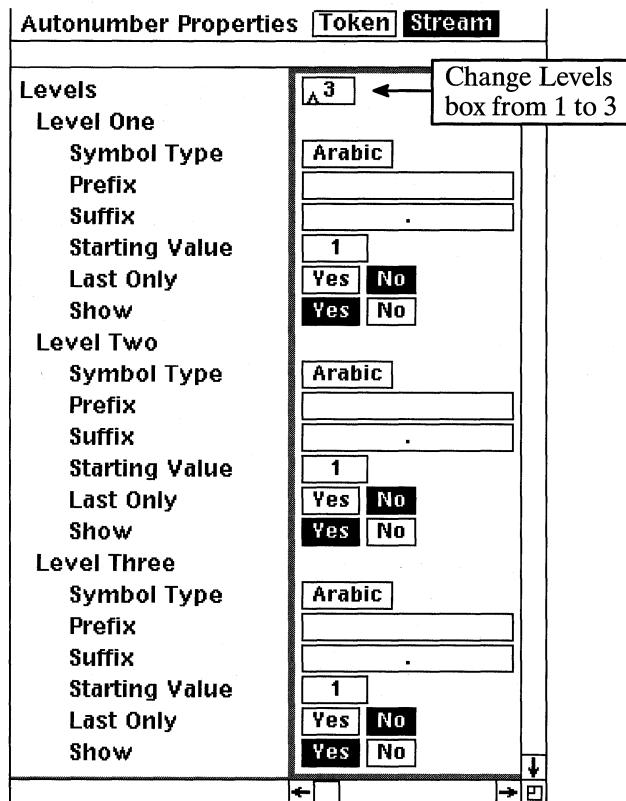


Figure 14

5. In the *Level 1* section, change the symbol type from Arabic to uppercase Roman, as shown in Figure 15.
6. In the *Level 2* section, change the symbol type from Arabic to uppercase Alpha, as shown in Figure 15.
7. Leave the symbol type for *Level 3* as Arabic.

*Your completed property sheet should look like the one shown in Figure 15.*

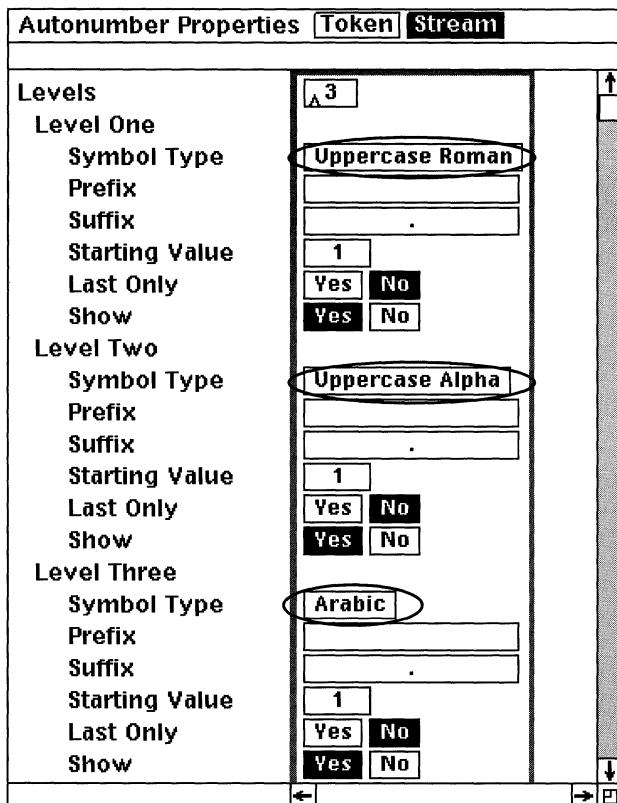


Figure 15

8. Execute *Apply* and select *Create* from the resulting stickup window.
9. Close the property sheet.

*Notice that the autonumber in the Level 1 prefix component changed from 1. to I. This is because you specified a symbol type of uppercase Roman for level 1 of the outline autonumber stream.*

10. With the text caret to the left of the prefix bar and to the right of the autonumber, press the tab key once.

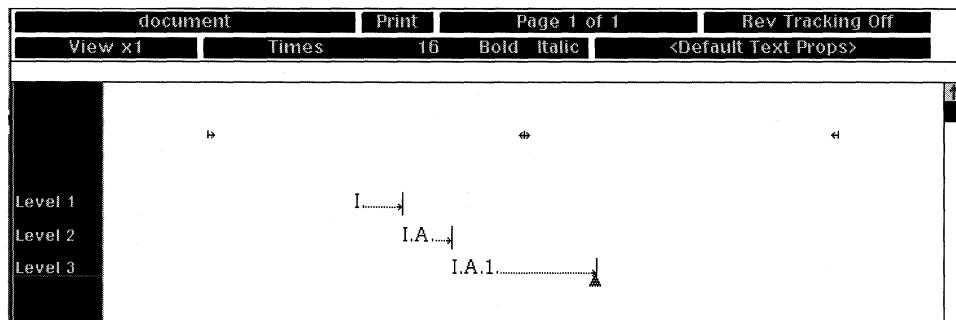
*A left tab is added to the prefix of the Level 1 component.*

Now let's add autonumbers to the *Level 2* and *Level 3* components.

11. Move the text caret to the left of the prefix bar in the *Level 2* component and execute *Create*→*Auto #*→*outline*→*Level 2*.

12. Press the tab key once.

*A Level 2 autonumber and a tab are added to the Level 2 component, as shown in Figure 16.*



*Figure 16*

13. Move the text caret to the left of the prefix bar in the *Level 3* component and execute *Create*→*Auto #*→*outline*→*Level 3*.

14. Press the tab key once.

*A Level 3 autonumber and a tab are added to the Level 3 component, as shown in Figure 16.*

At this point, the outline doesn't look quite right. Notice that the autonumbers in the *Level 2* and *Level 3* components are too big to fit in the prefix of the component. Besides, all you want are the last parts of each autonumber. For example, you don't want I.A. in the prefix of *Level 2*, you just want A. Similarly, you don't want I.A.1. in the prefix of *Level 3*, you just want 1.

To remedy this situation, perform the following steps:

1. Select the autonumber in the prefix of the *Level 1* component and open its property sheet.
2. On the *Stream* sheet of the autonumber property sheet, go to the *Level 2* section, and select the *Yes* box associated with the *Last Only*

field, as shown in Figure 17.

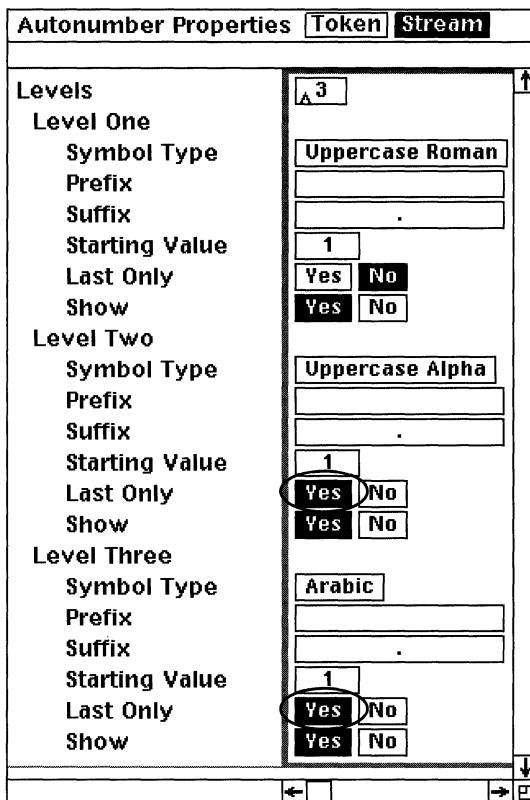


Figure 17

3. Go to the Level 3 section and select the Yes box associated with the *Last Only* field, as shown in Figure 17.

*Last Only tells the software to display only the last symbol in the autonumber. For example, instead of displaying I.A., the autonumber displays as A. when Last Only is turned on for Level 2. Similarly, 1. displays instead of I.A.1. for Level 3.*

4. Execute *Apply* and close the property sheet.

*Notice that setting Last Only to Yes causes all of the autonumbers now to display as single digits.*

5. Create another *Level 3* component immediately after the last *Level 3* component.

*Notice that the second Level 3 component increments to a value of 2.*

6. Create several other *Level 1*, *Level 2*, and *Level 3* components.

*Notice that each level increments, indents, and restarts where appropriate.*

If you create a lot of outlines, save this document as a template and store it in your *Create* cabinet (refer to Chapter 5 for instructions on how to save a document as a template). For your convenience a complete copy of the outline document is available on the companion disk that comes with this book.

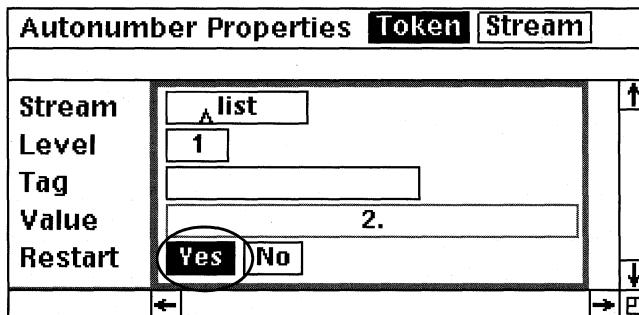
### **How many levels can a single autonumber stream have?**

Each autonumber stream can have up to twenty levels. (That means you can create an outline that indents up to twenty times!)

### **How do I make an autonumber list restart itself in the middle of a document?**

To restart any autonumber list is easy. All you have to do is select the *Restart* field on the autonumber property sheet, as shown in the following steps.

1. Select the autonumber at which you want the restart to take place and open the autonumber property sheet.
2. On the Stream sheet of the open autonumber property sheet, select the *Restart* box, as shown in Figure 18.



*Figure 18*

3. Execute *Apply* and close the property sheet.

The autonumbering will restart from the selected autonumber. All autonumbers previous to the selected autonumber will remain unaltered.

**How do I make a figure label component that automatically increments each time a new label component is added to the document?**

Using autonumbers in figure or table labels is a good idea because then you can use autoreferences to reference the labels in your text. The first step in creating a prefix figure label is to create a prefix component that will act as the label.

1. Create a *para* component and open its property sheet.
2. Rename the component from *para* to *Label*, change the top margin to 0.15, the bottom margin to 0.15, the alignment to *Centered*, the font type to *Thames*, the font size to 10, and the font face to *Italic*, as shown in Figure 19.

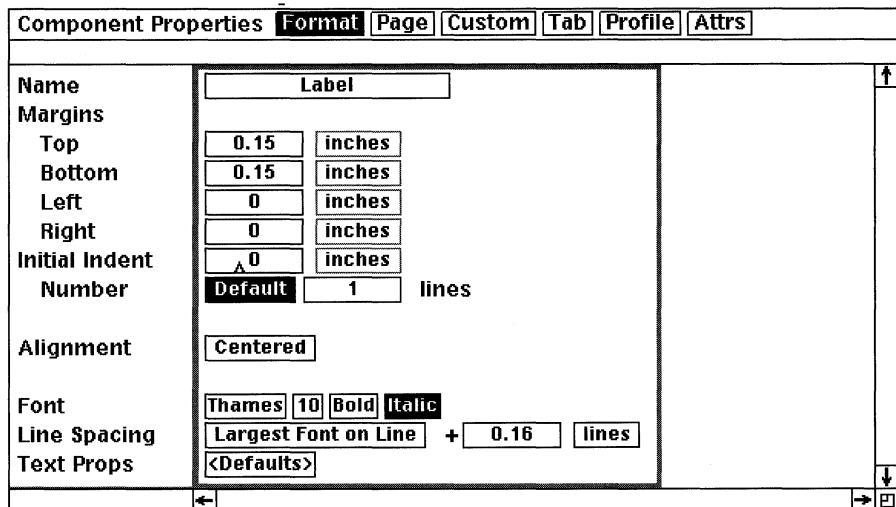


Figure 19

3. Move the mouse cursor to the top of the property sheet and click the select button in the *Custom* box.
4. Select the *Yes* box in the *Prefix* field at the bottom of the property sheet, as shown in Figure 20.
5. Execute *Apply* and select *Prefix* from the resulting stickup window.
6. Close the property sheet.

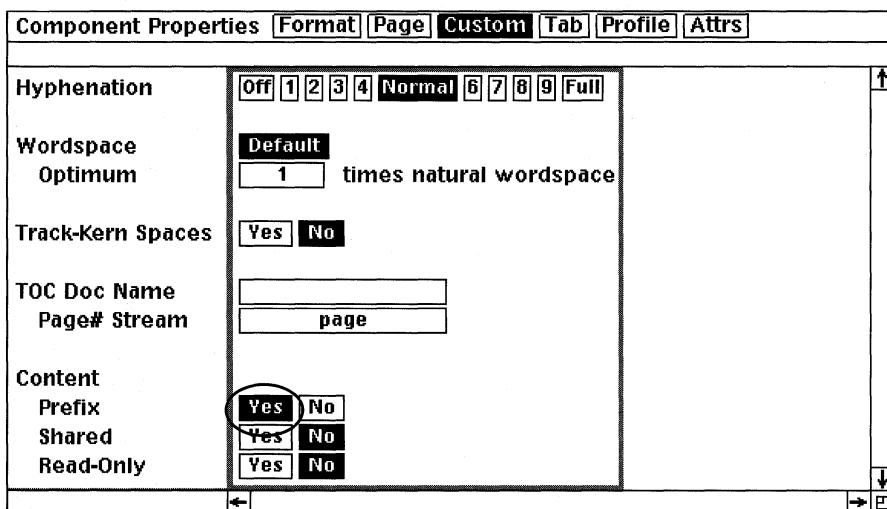


Figure 20

Once the prefix component master is created, you must create a new autonumber and put it to the left of the prefix bar in the *Label* component.

7. In the *Label* component, move the text caret to the left of the prefix bar, hold down the menu button, and execute *Create*→*Auto #*→*list*→*Level 1*.

*An autonumber is created to the left of the prefix bar.*

8. While the autonumber is still selected, open its property sheet.
9. Move the mouse cursor to the top of the property sheet and select the *Token* box (if you are not already there).

10. Change the *Stream* name from *list* to *Figure*, as shown in Figure 21.

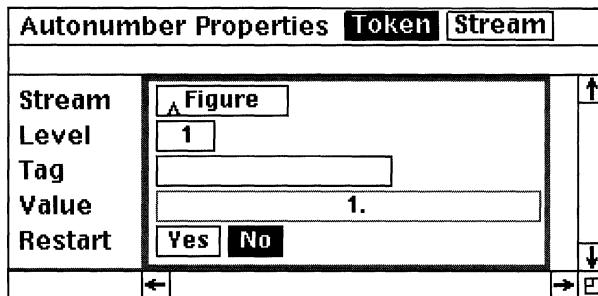


Figure 21

11. Move the mouse cursor to the top of the property sheet and select the *Stream* box.
12. Move the mouse cursor to the *Prefix* field, click the select button, and type:

**Figure**

*This will add the word “Figure” to the left of the autonumber.*

13. Press the space bar once.

*Pressing the space bar after typing in the autonumber prefix text inserts a space between the prefix text and the autonumber.*

14. Move the mouse cursor to the *Suffix* field and click the select button.
15. Press the *Ctrl-k* key sequence.

*The period disappears. When creating figure labels, you do not want the period to be included as part of the autonumber stream. If the period were part of the autonumber, the period would also appear in any autoreferences made to the figure labels.*

Your open autonumber property sheet should resemble the one shown in Figure 22.

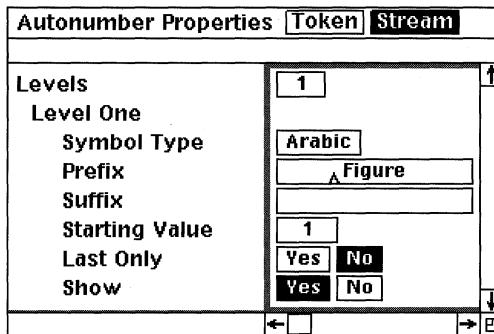


Figure 22

16. Execute *Apply* and select *Create* from the resulting stickup window.
17. Close the property sheet.

*You've just created a new autonumber stream called Figure.*

18. In the *Label* component, type a period immediately after the autonumber but before the prefix bar, so that the autonumber in the prefix looks as follows:

### Figure 1.

*By typing the period in the figure label (instead of including it in the autonumber stream), any autoreferences to this label will not include the period.*

19. With the text caret still to the left of the prefix bar (but to the right of the period in the autonumber), press the space bar twice (or enter two hard spaces if exact spacing is required).

*Two spaces are added after the autonumber. This separates the autonumber from any specific text you want to add to your figure label.*

20. Move the text caret to the right of the prefix bar and type:

### This is an example of a Figure label with text

*Because the Label component is a prefix component, any text to the right of the autonumber will appear only in that instance of the Label component.*

*The Figure autonumber, however, is to the left of the prefix bar. This means that whenever you create a new Label component, the Figure autonumber will automatically increment.*

21. Create a new *Label* component immediately below the first *Label* component.

*Notice that the second Label component increments to “Figure 2.”*

*Now, whenever you create a Label component it will automatically appear as “Figure 1.”, “Figure 2.”, “Figure 3.”, etc., to the left of the prefix bar; allowing you enter specific text (for each Label) to the right of the prefix bar.*

*For your convenience, a document that contains predefined Figure labels is available on the companion disk that comes with this book.*

## **Creating Cross References**

**How do I automatically reference figure labels in my text (such that when the figure label changes the reference also automatically changes)?**

You can automatically reference autonumbers with autoreferences. This is why it is a good idea to use autonumbers when you create labels you need to reference later.

There are two ways to create an autoreference of an autonumber:

- You can select the autonumber and ask the software to reference it for you.
- You can create an autoreference first and then tell it which autonumber you want it to reference.

### ***Option 1: Letting Interleaf Create the Reference Tag***

An autoreference finds the number it is supposed to reference through the use of reference tags. You can create your own reference tags or let the Interleaf software create them for you. To let the software create a reference tag for you, perform the following steps:

1. Select the autonumber you want to reference and execute *Misc→Autoref*.

A message on the status bar of the document informs you that the reference to the autonumber has been copied onto the clipboard, as shown in Figure 23.

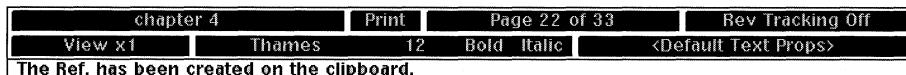


Figure 23

2. Move the text caret to the position in which you want the reference to be printed and execute *Paste*.

*The autoreference is pasted into the document at the position of the text caret. From now on, the autonumber and the autoreference are linked together, so that when the autonumber changes, the reference to the autonumber also changes.*

Like everything else in Interleaf, autoreferences have property sheets. To open an autoreference property sheet, select the autoreferencer and execute *Props*. The autoreferencer property sheet opens, as shown in Figure 24.

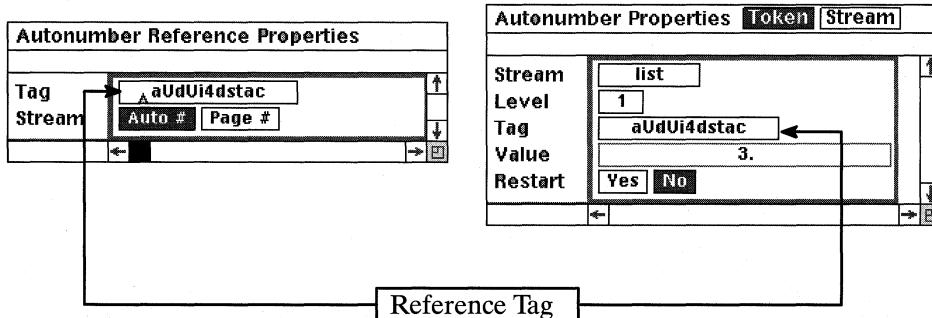


Figure 24

Notice that one of the fields in the autoreference property sheet is called *Tag*. The *Tag* field contains a reference tag (an alphanumeric sequence) which is also listed on the associated autonumber property sheet, as shown in Figure 24. When you execute *Misc→Autoref*, the software randomly generates a reference tag and assigns it to both the selected autonumber property sheet and the autoreference property sheet. This is how the autoreference knows which autonumber to reference. (Reference tags are case-sensitive and must match on both property sheets exactly.) The only nonrandom parts of a soft-

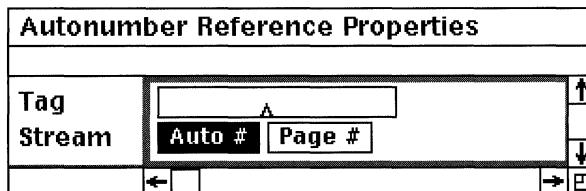
ware-generated reference tag are the last four digits of the tag. The last four digits of the reference tag are the first four digits of your system logon ID.

### ***Option 2: You Create the Reference Tag***

The only irritating thing about software-generated reference tags is that they are literally meaningless to you, since they are randomly generated. You can, however, create your own tags, and call them whatever you wish. For example, if you have a graphics library, you can use the figure names or IDs as reference tags on both the autoreference and autonumber property sheets. If you want to create tags that are meaningful to the object you are referencing, perform the following steps:

1. Move the text caret to where you want the autoreference to be and execute *Create→Ref→Auto #*.

*The autoreference property sheet opens, as shown in Figure 25. The software wants you to enter a reference tag. You can enter a tag that already exists, or you can make up a new one.*



*Figure 25*

2. Type in a reference tag, execute *Apply*, and close the property sheet.
3. If the reference tag is new, open the property sheet of the autonumber you wish to reference, enter the name of the new tag in the *Tag* field, execute *Apply* and close the property sheet.

For example, let's assume that you want to reference a table label that reads "Table 2: Yearly Revenues", where the Table 2 portion of the label is an autonumber. If you let the Interleaf software create the tag reference, it will be randomly generated and might be something like the tag reference shown in Figure 24. If, on the other hand, you want to create your own reference, and call it *Revenues*, you will need to create the autoreference yourself. To accomplish this, perform the following steps:

1. Move the text caret to where you want the autoreference to be and execute *Create→Ref→Auto #*.

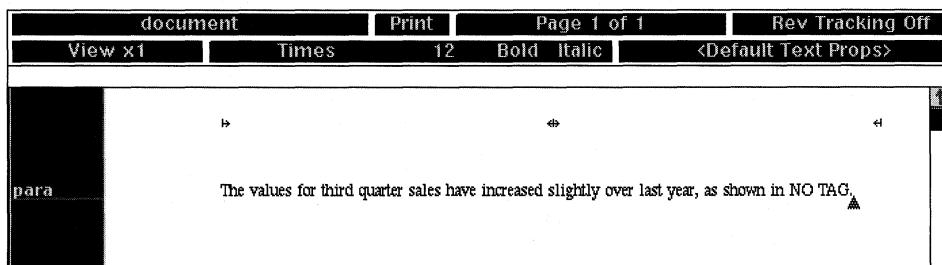
The autoreference property sheet opens, as shown in Figure 25.

2. In the *Tag* field type:

### **Revenues**

3. Execute *Apply* and close the property sheet.

*The autoreference in the text area of the document says NOTAG, as shown in Figure 26, because it still doesn't know which autonumber you want it to reference. Since we haven't yet added the new reference tag to the autonumber property sheet, the autoreference can't find the autonumber it's supposed to reference.*



*Figure 26*

4. Select the *Table 2* autonumber in the prefix of the label component, open its property sheet, and in the *Tag* field type:

### **Revenues**

The autonumber property sheet should look like the one shown in Figure 27.

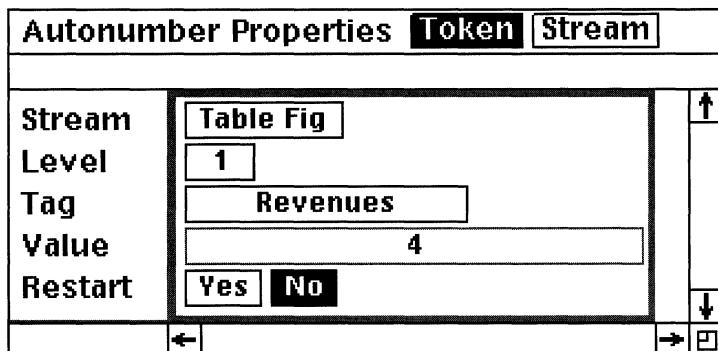


Figure 27

5. Execute *Apply* and close the property sheet.

Notice the “NOTAG” autoreference changes to “Table 2,” as shown in Figure 28.

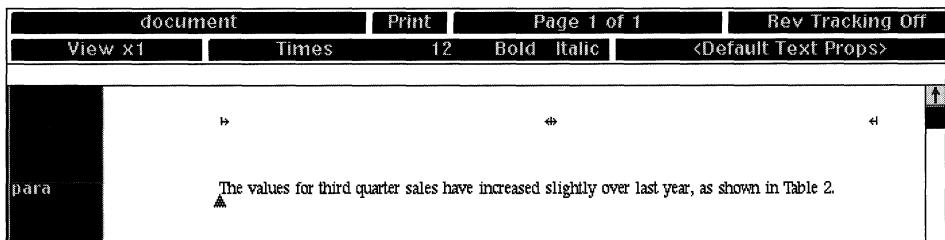


Figure 28

In this case, you created the autoreference first and then assigned your own tag to the autoreference and autonumber.

*For your convenience a copy of this document used in this example is available on the companion disk that comes with this document.*

**Sometimes when I select an autonumber or autoreference and execute *Props*, the property sheet does not open. Why is that?**

This happens for the following reasons:

- You selected text that is not really an autonumber or autoreference, but merely a block of text.

- You selected extra spaces or characters adjacent to the autonumber or autoreference.

When you open the property sheet of an autonumber or autoreference, you must select only the autonumber or autoreference, and nothing else. If you happen to select the spaces or characters around the autonumber or autoreference and then execute *Props*, you will see a message on the document status bar, as shown in Figure 29, and the property sheet will not open.

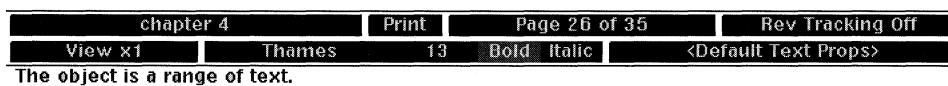


Figure 29

If you want to be sure that you select only the autonumber, move the text caret immediately to the left of the autonumber and execute *Misc→Find→Auto #→Next*. The software automatically selects the autonumber, allowing you to open its property sheet.

If you want to be sure that you select only the autoreference, move the text caret immediately to the left of the autoreference and execute *Misc→Find→Ref→Next*. The software automatically selects the autonumber, allowing you to open its property sheet.

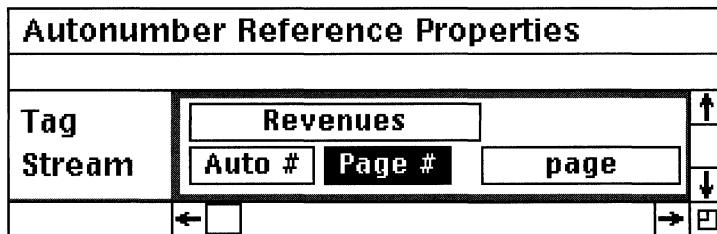
### Can I autoreference a page number in my text?

Yes. You can reference the current page number, or you can reference a page number that contains a particular autonumber. To reference the current page number, do the following:

1. Move the mouse cursor to the position in the text in which you wish to reference the page number and execute *Create→Ref→Page #→page*.

*A page number token for the current page appears in your text at the position of the text caret. If the block of text that contains the page token moves to a new page, then the page token changes to reflect the new current page number.*

To reference the page number on which a particular autonumber exists, simply autoreference the autonumber, and on the autoreference property sheet, select the *Page #* box, as shown in Figure 30.



*Figure 30*

*A reference to the page number on which the autonumber exists (instead of the autonumber itself) is referenced in the text.*

**How do I double reference a figure label? For example, how do I make an autoreference that looks like this: “...as shown in Figure 2, on page 2...” where Figure 2 and page 2 both autoreference the same label?**

It's very simple. You make two autoreferences to the same figure label: one that references the autonumber in the label, and one that references the page number on which the label exists. You control how the reference looks through the autoreference property sheet.

For example, let's assume you have a document that contains *Label* components that allow you to label artwork as follows: Figure 1, Figure 2, Figure 3, etc. Let's also assume that somewhere in your text you want to autoreference Figure 2 as follows: “...as shown in Figure 2, on page 2...,” such that if the autonumber or page number of Figure 2 changes, the associated references also change. To accomplish this, perform the following steps:

1. Select the *Figure 2* autonumber (in the prefix of the *Label* component) and execute *Misc→Autoref*.

*An autoreference to the figure label is created on the clipboard.*

2. Move the text caret to the position in the text in which you want the reference to be inserted and execute *Paste*.

*The reference to the figure number (Figure 2) is pasted at the position of the text caret, as shown in Figure 31.*

Design Doc		Print	Page 2 of 2		Rev Tracking Off
View x1	Times	12	Bold	Italic	<Default Text Props>

*Figure 31*

3. Select the autoreference you just created and execute *Copy*.
4. Move the text caret to the right of the autoreference, press the space bar once, and type:

**on**

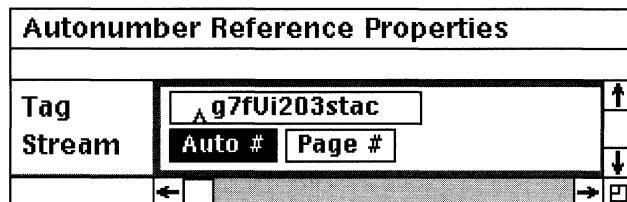
5. Press the space bar once again, and execute *Paste*.

*A second reference to the figure number is pasted at the point of the text caret, as shown in Figure 32.*

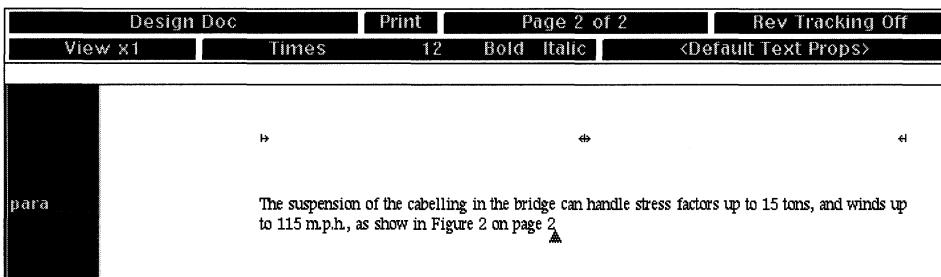
Design Doc		Print	Page 2 of 2		Rev Tracking Off
View x1	Times	12	Bold	Italic	<Default Text Props>

*Figure 32*

6. Select the second autoreference and open its property sheet.
7. On the open property sheet select the *Page #* box, as shown in Figure 33.
8. Execute *Apply* and close the property sheet.

*Figure 33*

The two references to the diagram now read “Figure 2, on page 2”, as shown in Figure 34.

*Figure 34*

### **What happens if I accidentally cut an autonumber that's being referenced?**

The autoreference is replaced by the text *NOTAG*. That's why it's a good idea (if you use autoreferences) to execute *Misc→Find→Ref→Next NOTAG* after you finish editing. The *Misc→Find→Ref→Next NOTAG* command will sequentially search for all the existing *NOTAGs* in your document. Once you find a *NOTAG*, you can select it, open its property sheet, and find out the name of its reference tag. If it's a reference tag that you recognize, you can either cut the autoreference, or paste back the autonumber with which the autoreference was associated. (This is when it's handy to have reference tag names that meaningfully describe whatever is being referenced.)

## Tricks with Tabs

### How do I make a ruling component?

First let's explain what we mean by a ruling component. A ruling component is a component that, when created from the component bar, creates a solid horizontal line from the left to right margin. A ruling component is often used in chapter headings or in the heading of a table of contents, as shown in Figure 35.

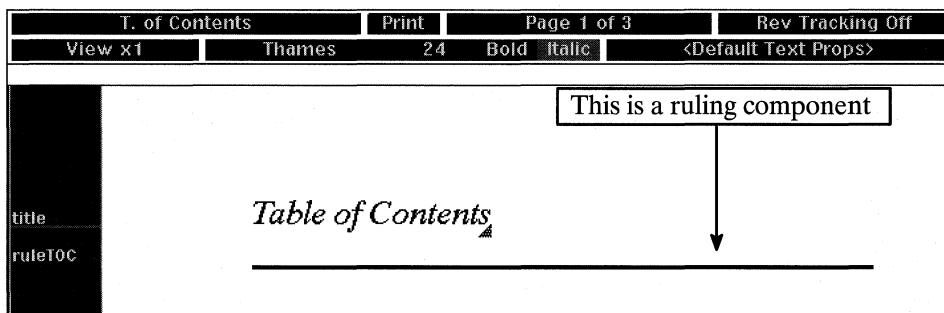


Figure 35.

Most people create a ruling by repeatedly pressing *Shift* – (Shift dash key) until a horizontal line stretches across the page. This works fine, until you change the size of the left or right margin or you increase the font size of the dashes. In both these cases, the ruling will wrap to the next line, as shown in Figure 36. On the other hand, if you decrease the width of the margins, your ruling won't extend from margin to margin.

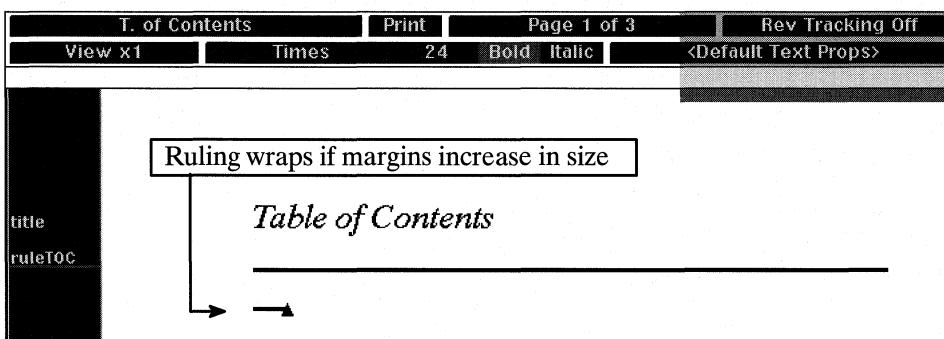


Figure 36

It would be nice to have a ruling that automatically grows and shrinks with the width of the left and right margins.

In Interleaf a ruling component such as the one described previously is possible with tabs or frames.

### **Using Tabs**

To create a margin-dependent ruling component using tabs, perform the following steps:

1. Create a *para* component and open its property sheet.
2. In the open property sheet, change the name of the component to *Ruling*, the font size to 24, and the font face to *Bold*, as shown in Figure 37.

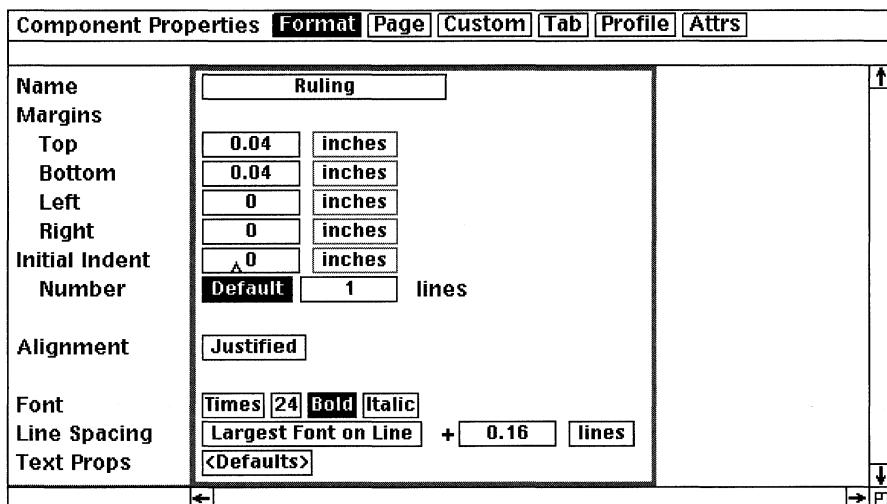


Figure 37

3. Go to the *Custom* sheet of the open property sheet and in the *Shared* field, click the select button in the *Yes* box, as shown in Figure 38.

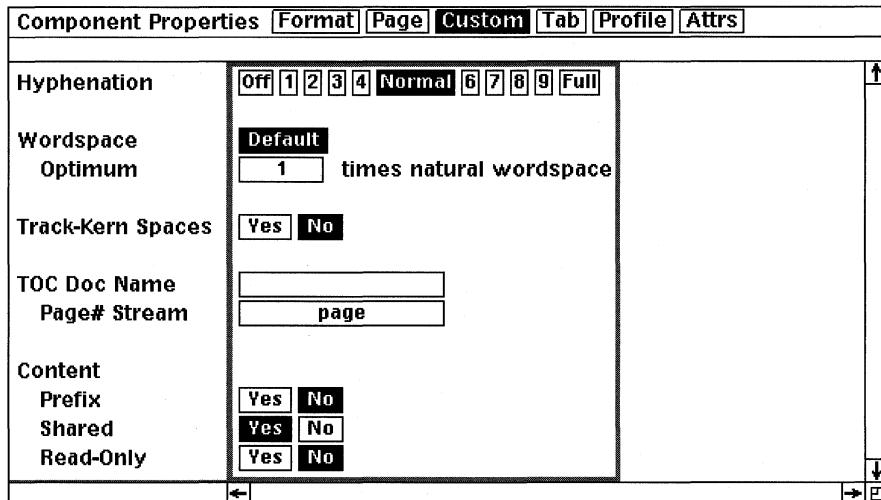


Figure 38

*This converts the component to a shared content component.*

4. Go to the *Tab* sheet of the open property sheet and remove all of the existing tabs, (except the zero tab), as shown in Figure 39.

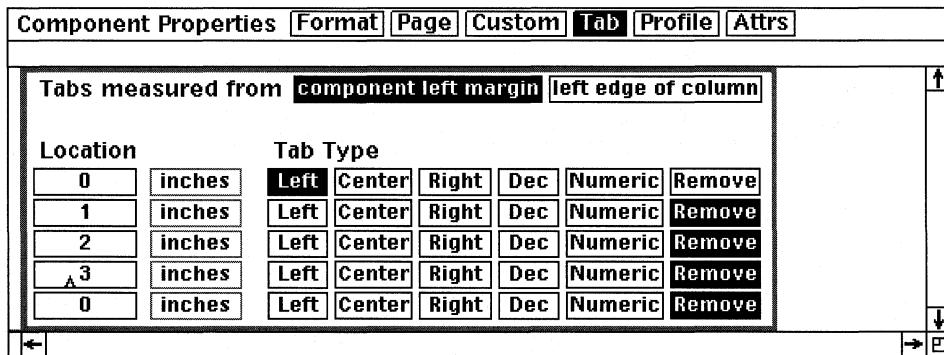


Figure 39

5. Execute *Apply* and select *Confirm* from the resulting stickup window.

6. Close the property sheet.

*Notice in the component bar that the selected component is now called Ruling.*

7. Move the mouse cursor into the text area, hold down the menu button, and execute *Misc*→*Tabs*→(pick the solid line, second from the bottom of the menu).
8. While the text caret is in the new *Ruling* component, press the tab key once.

*A heavy solid line extends from margin to margin, creating a ruling. The ruling goes from margin to margin because you removed all of the tab stops and changed the tab style to a solid line. As a result, when you press the tab key, the software tabs a solid line starting at the left margin and extending all the way to the right margin. Since the ruling is a tab (and not key strokes), the ruling will grow and shrink as the left and right margins change.*

9. Move the mouse cursor into the component bar and execute *Create*→*Ruling*.

*Whenever a new ruling component is created, the ruling line is included. This is because you created the Ruling component as a shared content component.*

*For your convenience a copy of a ruling document is available on the companion disk that comes with this book.*

## **Using Frames**

To create a margin-dependent ruling component using frames, perform the following steps:

1. Create a floating frame and open it.
2. In the open frame, create a horizontal line of any length.
3. Select the line and execute *Size*→*to Frame*→*Horizontal*.

*The line extends from the left to right edge of the frame.*

4. Select the line again, and execute *Edit*→*Edge*→*Weight*→(pick a medium weight).

*The line in the frame becomes thicker.*

5. Close the frame and open its property sheet.
6. In the open property sheet, change the name of the frame to *Ruling*, the frame height to *Contents*, as shown in Figure 40.

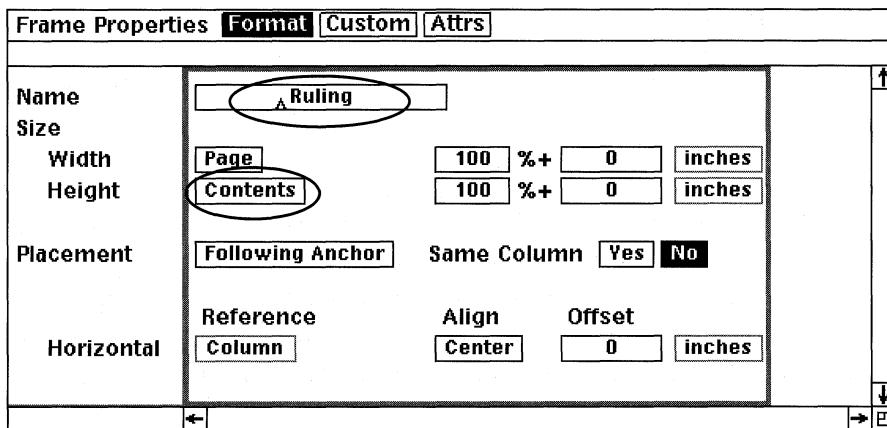


Figure 40

7. Execute *Apply*.

*A stickup window appears, asking if you would like to create the frame as empty or copy its contents as part of the master definition.*

8. Select *Copy* from the stickup window.

*The frame resizes itself vertically to accommodate the height of the line.*

*You now have a Ruling frame that contains a margin-dependent ruling line. The frame is sized to the page margins, and the line is sized horizontally to the frame. Hence, when the margins change, the line in the frame will change accordingly.*

*For your convenience a copy of a frame ruling document is available on the companion disk that comes with this book.*

### How do I change one tab style to another (without recreating the tab)?

The default tab style in Interleaf documents is blank, meaning that when you press the tab key, the tab is represented in the document by white space. Other

tab styles in Interleaf documents include dots, dashes, solid lines, and underscores.

To change the existing tab style of one or more tabs, select the text that contains the tab stops, and execute *Misc*→*Convert*→*Tabs*→(*pick the tab style you want*).

The tabs in the selected block of text will convert to whatever tab style you select from the menu.

For example, let's assume that you want to change the blank tabs in a table of contents to dotted tabs. To accomplish this, perform the following steps:

1. Select all of the text in the table of contents. (Be sure you select the text, not the components in the component bar.)
2. While the text is selected, execute *Misc*→*Convert*→*Tabs*→...

*All of the tabs in the selected text convert from blank to dotted tabs.*

### **Can I convert tabbed text into a table?**

Yes. Simply select the text (tabs and all) and execute *Misc*→*Convert*→*to Table*→*Default* (or instead of *Default*, pick a table master, if one exists). For more details on converting tabbed text to a table, refer to Chapter 13.

### **Can I create tab settings from the keyboard without opening a component property sheet?**

Yes. If you want to visually set tabs from the document text area (as opposed to entering them on the tab sheet of the component property sheet), you can use the *Esc-Tab* key sequence. Simply move the text caret to the position where you want the tab setting to be inserted and press *Esc-Tab*. The tab setting location will be displayed on the document status bar, and the actual location itself will automatically be added to the component's tab sheet.

For example, let's assume that you want to insert a tab setting five spaces from the left margin in the *para* component. The easiest way to accomplish this is as follows:

1. Move the text caret to the left margin in the *para* component and press the space bar five times.
2. Press the *Esc-Tab* key sequence.

A tab is set at the position of the text caret. Notice the message on the status bar of the document, stating that a tab setting has been inserted at a specific location, as shown in Figure 41.

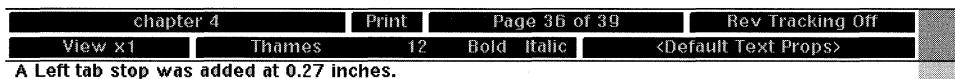


Figure 41

In this case, if you were to open the *para* component's property sheet, you would see that the software inserted the new left tab at 0.27 inches on the component's tab sheet. If you wanted all of the *para* components to contain this new tab setting, you would then execute *Unify→All→Props* from within the open property sheet.

**How do I make a component where text wraps to the left edge of the component's rightmost tab setting, as shown in Figure 42?**

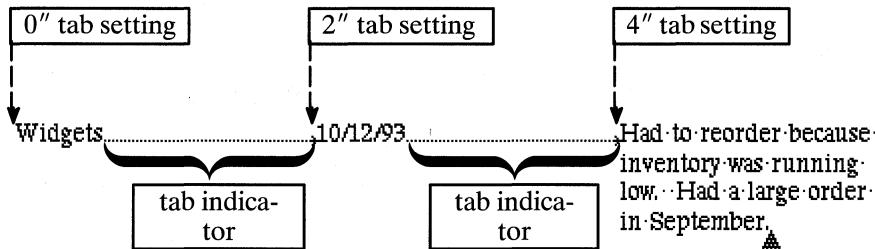


Figure 42

Let's assume that you have a component named *item* with three tab settings; one at 0", one at 2", and one at 4", and you want text to wrap at the 4" tab setting, as shown in Figure 42. In this case, to set up text that wraps to the last tab setting, perform the following steps:

1. Select the *item* component and open its property sheet.
2. Move the mouse cursor to the top of the property sheet and click the select button in the *Tab* box.
3. In the open tab sheet, remove all the existing tab settings and replace them with the following tab settings:

**0" Left**

**2" Left**

**4" Left**

*Notice that the last tab setting is at 4 inches. This is where you want the text to wrap after the first line.*

4. Move the mouse cursor to the top of the property sheet and click the select button in the *Format* box.

*Text always wraps to the left component margin. Therefore, if you make the left margin of the item component 4, the text will wrap at the 4" location.*

5. Change the left margin to 4.

*But you only want text to wrap at the 4" location after the first line. You want the first line of the component to begin at the left page margin. Therefore, you need to make the initial indent -4 (to offset the first line back to the left page margin).*

6. Change the initial indent to -4.

*The Left Margin and Initial Indent fields of the component property sheet should look like the ones shown in Figure 43.*

7. Move the mouse cursor to the top of the property sheet and click the select button in the *Tab* box.

*The tab sheet once again appears.*

8. Move the mouse cursor to the *Tabs measured from* field near the top of the property sheet and click the select button in the *left edge of column* box.

*Selecting the "left edge of column" box on the tab sheet tells the software that you want the tab settings measured from the left edge of the page (or column, in a multi-column document) instead of from the left component margin.*

*Your tab sheet should resemble the one shown in Figure 44.*

9. Execute *Global Apply→Confirm*.
10. Close the property sheet.

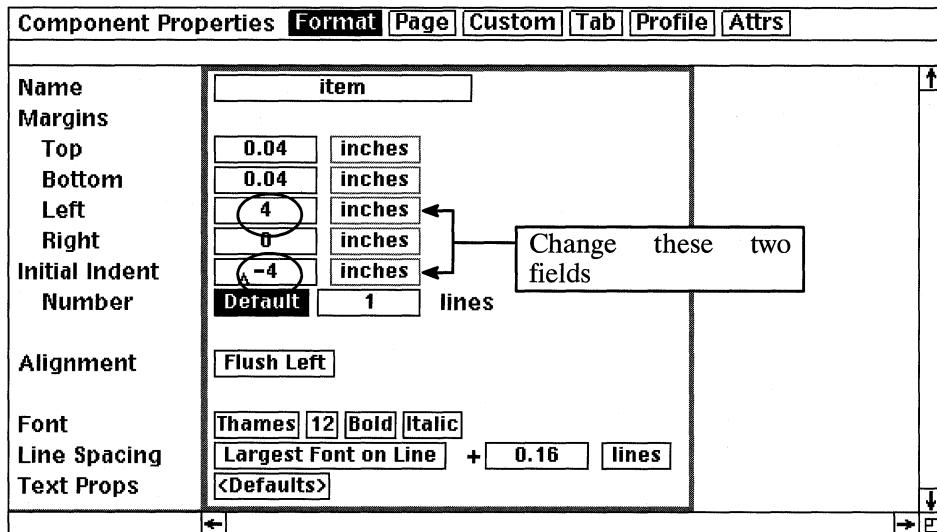


Figure 43

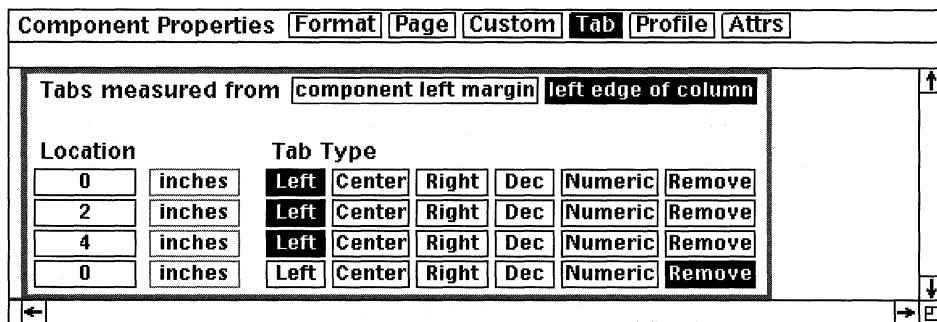


Figure 44

11. In the newly created *item* component, type:

### Widgets

12. Press the *tab* key and type:

**10/12/93**

13. Press the *tab* key and type:

**Had to reorder because inventory was running low. Had a large order in September.**

*Notice the text in the third column wraps to the 4" tab setting, which is the last of the three columns. This text will continue to wrap at the 4" setting until a new component is created.*

*For your convenience, a document that contains a component that wraps to the last tab setting is available on the companion disk that comes with this book.*

## Annotating the Header, Footer, and Margins

### How do I put a horizontal ruler in the header of my document?

A horizontal ruler in the header of your document is handy to have. You can use the ruler to help you align columns, tabs, or graphic data. Even though the ruler is present on the screen when you are editing your document, the ruler does not print on the hardcopy output. To put a ruler in the header of your document, perform the following steps:

1. Open the document in which you wish to add the ruler.
2. Open the *System5* cabinet.
3. Open the *Graphics* drawer.
4. Open the *Rulers* folder.

*Interleaf provides a centimeter ruler, an inch ruler, and a pica ruler.*

5. Open the *InchRuler* document.
6. Select any part of the ruler.

*Notice that the ruler begins to flash. This means that the ruler is in a selected state. The ruler must be selected before you can continue.*

7. Hold down the menu button and select *Cut*.

*The ruler is cut-locked in the graphics drawer. This means that even though you cut the ruler, the ruler is never actually removed from the graphics drawer.*

8. Move the mouse to the header area of the open document and click the select button.

*A gray border appears around the header area, as shown in Figure 45. The gray border at the top of the page indicates that the header is open.*

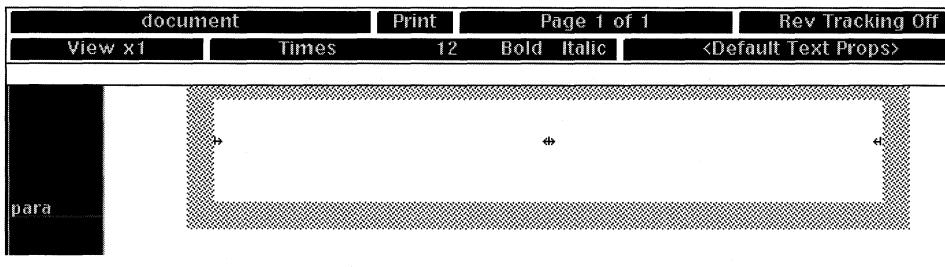


Figure 45

9. Move the mouse into the open header, hold down the menu button, and execute *Paste*.

*The ruler is pasted into the header.*

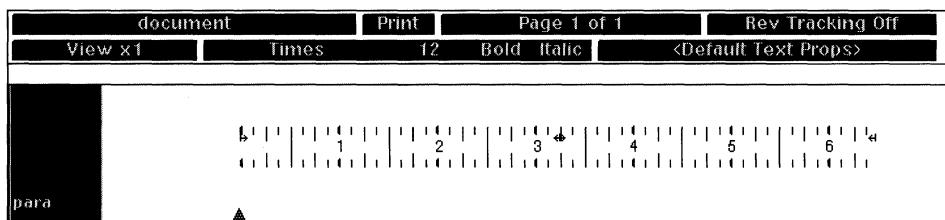
10. While the ruler is selected, hold down the menu button and execute *Misc→Align→to Frame→Left*.

*This aligns the left edge of the ruler with the left edge of the frame. You must do this to ensure that the ruler actually measures from the left page margin.*

11. In the open header, hold down the menu button and execute *Select→Again*.
12. While the ruler is selected, hold down the menu button and execute *Misc→Align→to Frame→T/B Center*.

*This centers the ruler vertically in the header, making it easier to read, as shown in Figure 46.*

13. Close the *InchRuler* document.
14. Close the *Rulers* window.
15. Close the *Graphics* window.
16. Close the *System5* window.



*Figure 46*

The ruler is *printlocked*, and therefore does not print, even though it is visible in the header of your document. This means that you can place the ruler over any existing header text. The text will not be obscured by the ruler when the document prints. For more information on graphic locks, refer to Chapter 11.

*For your convenience, a document that contains a ruler in the header is available on the companion disk that comes with this book.*

### **How do I create a vertical ruler in the left or right margin of my document?**

Just as a horizontal ruler is important for vertical alignment of documents, a vertical ruler is handy to have for horizontal alignment.

To put a vertical ruler in the left margin of your document, perform the following steps:

1. Create a full-page frame, and open its property sheet. (Recall that to create a full-page frame, you place the text caret anywhere on the page and execute *Create→Frame→Fullpage*. While the frame is selected, execute *Props*.)
2. On the frame property sheet, change the frame name to *Vertical Ruler*, the width to *Margin→Page Left*, the frame placement to *Underlay*, the *Horizontal Reference* field to *Margin→Page Left*, the *Vertical Reference* field to *Anchor*, the *Horizontal Align* field to *Left*, and the *Vertical Align* field to *Top*, as shown in Figure 47.
3. Execute *Apply*, select *Confirm* from the resulting stickup window, and close the property sheet.

*Notice that you now have a frame in the left margin of your document. All you need to do at this point is copy the ruler from the Graphics drawer in the System5 cabinet into your newly created frame.*

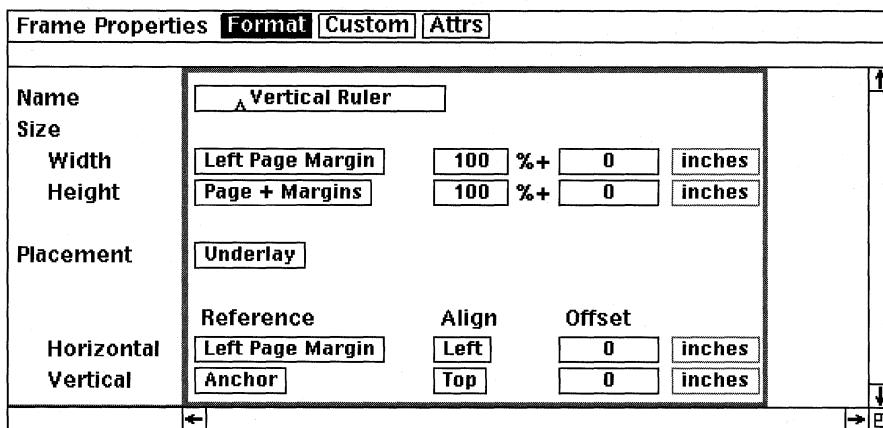


Figure 47

4. Open the *System5* cabinet.
5. Open the *Graphics* drawer.
6. Open the *Rulers* folder.
7. Open the *InchRuler* document.
8. Select the ruler and execute *Cut*.
9. Open the *Vertical Ruler* frame you just created and execute *Paste*.

*The ruler is pasted into your frame. Unfortunately, the ruler is horizontal. You want it to be vertical. That means you are going to have to rotate the ruler 90 degrees.*

10. Select the newly pasted ruler again (if it is not selected already) and execute *Rotate→Numeric*.

*A stickup window appears, requesting a rotation factor.*

11. Enter 90 in the stickup window and select *Confirm*.

*If the ruler disappears at this point, it's only because it has rotated out of the viewing boundaries of the frame.*

12. In the open frame, execute *Select→Again*.

*The ruler is again selected, even if you can't see it.*

13. While the ruler is selected, execute *Misc*→*Align*→*to Frame*→*Left*.

*The left side of the ruler is aligned with the left side of the frame.*

14. Execute *Select*→*Again*.

15. While the ruler is selected, execute *Misc*→*Align*→*to Frame*→*Top*.

*The top of the ruler is aligned with the top of the frame.*

*The vertical ruler is now aligned in the left margin frame, as shown in Figure 48.*

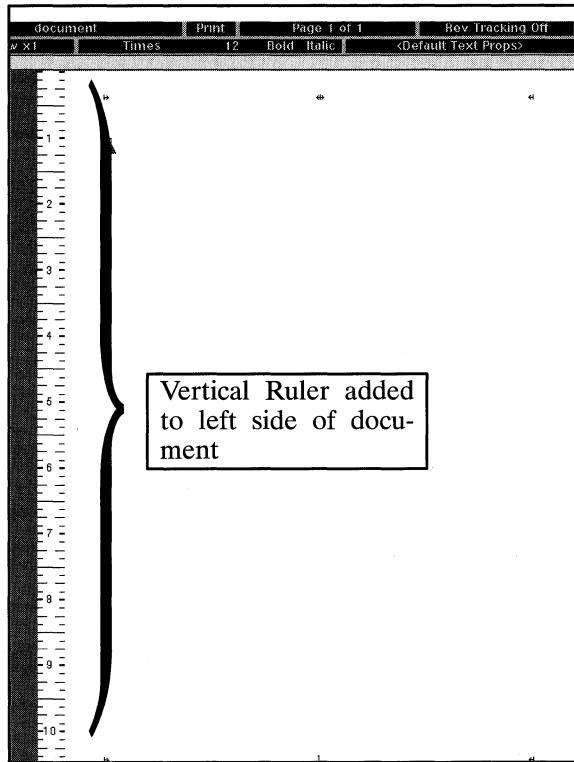


Figure 48

As with the horizontal ruler, the vertical ruler does not print, even though it is visible in your document. This is because the ruler you copied from the *Graphics* drawer is printlocked. As a result, you can place the vertical ruler

over any existing text. The text will not be obscured by the ruler when the document prints.

For your convenience, a document that contains a vertical ruler in the left margin is available on the companion disk that comes with this book.

**Do I have to go through all the above steps every time I want to create a horizontal or vertical ruler in my document?**

No. You only have to go through it the first time, if you save the ruler as a named graphic object and then use that document as a template.

To save the horizontal ruler as a named graphic object, create the ruler in the header as described previously, then perform the following steps:

1. Select the ruler and execute *Props*.

*A property sheet for the ruler opens.*

2. In the name box of the open property sheet, type:

**ruler-horizontal**

3. Execute *Apply* and close the property sheet.

The name that you added to the property sheet will be added as a menu item to the *Create→Named* menu in an open frame. Let's test this.

1. After you have saved the ruler as an NGO, select the ruler in the open header frame, and execute *Cut*.

*The ruler disappears from the header.*

2. In the open header, execute *Create→Named→ruler-horizontal*.

*A horizontal ruler is created inside the header.*

3. While the ruler is selected, execute *Misc→Align→to Frame→Left*.

*The ruler becomes left aligned with the left edge of the header frame.*

To create a menu item under the *Create→Named* menu for the vertical ruler, go through the same steps as shown previously, except in the name box of the open property sheet, type:

**ruler-vertical**

As a result, the name *ruler-vertical* will be added as a menu item to the *Create→Named* menu in an open frame. Whenever you select this menu item, you will create a vertical ruler.

**Is there a key sequence I can type to put the current date in the header or footer of my document?**

Yes. The key sequence is *Ctrl-x d*. You must enter this key sequence in a micro-document (as opposed to a text string). When you type this key sequence, the current date is entered in the microdocument as follows: Day of Week, Month, Day, Year. For example, if today were 3/4/94 and you pressed *Ctrl-x d*, then the date entered in the microdocument would be as follows: *Friday, March 4, 1994*. This date is taken from your operating system calendar. If the operating system calendar is wrong, the date resulting from this key sequence will also be wrong.

**Can I use the *Ctrl-x d* command in regular text components as well?**

Yes. The *Ctrl-x d* command puts today's date in microdocuments or regular text components.

**If I put the date in my document using *Ctrl-x d*, close and save my document, and then open my document the next day, will the *Ctrl-x d* date stamp change to reflect the current "today's" date?**

No. The date stamp created by *Ctrl-x d* does not change as time goes on. Once you execute *Ctrl-x d*, the resulting date remains fixed.

**Why don't I get a date stamp when I execute *Ctrl-x d*?**

Because you aren't pressing the key sequence correctly. Here's how you do it:

1. Press the *Ctrl* key and hold it down. While holding it down press the *x* key. Then release both keys simultaneously.
2. Press the *d* key once.

The date appears after pressing the last key in the sequence. (You may have to practice this key sequence a few times before you get it right, as the touch of different keyboards varies slightly.)

**How do I create a custom page number stream in the footer of my document?**

By default the only page numbering stream that comes in an Interleaf document consists of single-level, Arabic characters: 1, 2, 3. Single-level page numbers are fine, but often you need to use a page numbering stream that displays more than just the page number. Sometimes it's nice to include information such as the chapter and the page number (1-1, 1-2, 1-3, 2-1, 2-2,...), or the

section number and the page number ( $i-1, i-2, ii-1, ii-2, \dots$ ), or the appendix number and page number ( $A-1, A-2, A-3, B-1, B-2, \dots$ ). In Interleaf you can set up your own custom page numbering streams.

Any new page numbering stream that you create can consist of two parts: the prefix to the page number and the page number. The prefix to the page number is an autonumber that is currently being used in the document. The page number is the current page number. So, for example, if you have your document divided into chapters and you want the page number in the footer to reflect the current chapter, along with its current page number (as in  $1-1, 1-2, 1-3$ , etc.), then you need to make sure that the chapters in the document are being tracked with an autonumber stream.

To create a custom page number stream that includes chapter and page numbers, perform the following steps:

1. Open the document in which you wish to change the page numbers.

*Make sure that your document has an autonumber stream for chapters. In this example we will assume that such an autonumber stream exists, and that the autonumber stream is called Chapter.*

2. In the open document, move the mouse cursor into the *Page* box at the top of the document window, as shown in Figure 49, and open the page property sheet.

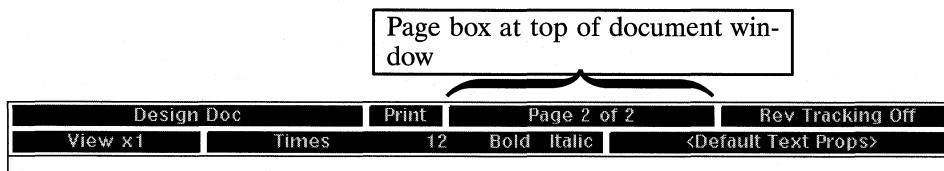


Figure 49

3. Move the mouse cursor to the top of the open property sheets, and click the select button in the *Page # Streams* box.

*The Page # Streams portion of the property sheet opens, as shown in Figure 50. The default numbering stream currently being used by the document is displayed in the Default Stream field at the top of the property sheet. In this case, notice that the Name box contains the word "page." The "page" stream is the default that Interleaf uses for page numbers in default documents.*

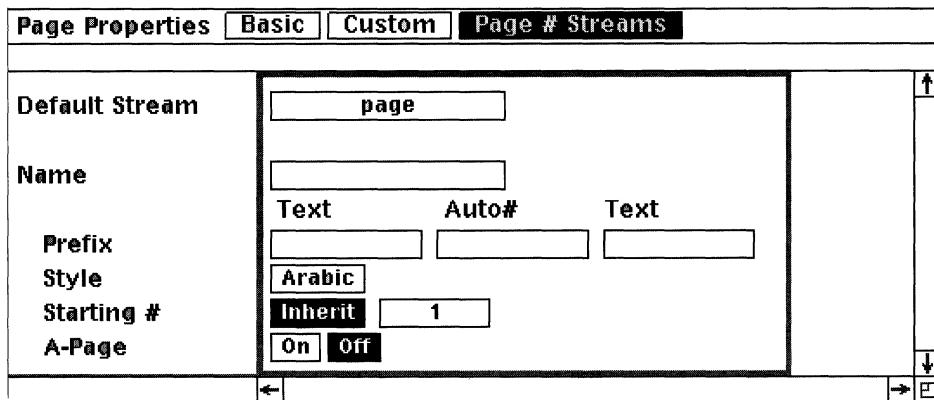


Figure 50

4. In the empty *Name* field, type:

### **Chap–page**

*You can call your custom page number stream anything you want. In this case, since the stream will include the chapter number and then the page number, we will call this page number stream Chap–page.*

5. Move the mouse cursor into the *auto #* box of the first *Prefix* field, hold down the menu button, and select *Chapter*.

*Chapter is an autonumber stream that is currently being used in this document. This autonumber stream must be defined and used within the document before you can include it as part of a custom page number stream. (If Chapter does not appear as one of the menu items, then you must close the property sheet, create a Chapter autonumber stream, and use it somewhere in your document. Then when you get back into the Page # Streams portion of the Page property sheet, the Chapter autonumber will be available as a selection from the auto # box.)*

6. Move the mouse cursor into the second *Text* box of the first *Prefix* field, and type:

*The second Text box (to the right of the Auto# box) is for the separator character that you wish to be placed between the Chapter autonumber stream and the page numbers.*

*The first Text box (to the left of the Auto# box) is for a prefix for the entire page number stream. For example, if you want the word "Page" as in Page 2-1 to be included as part of the page number stream master definition, then you would put the word "Page" in the first Text box.*

7. Execute *Apply*.

*The new Chap-page stream has been built. Now you must tell the software to use this particular stream.*

8. Move the mouse cursor into the *Default Stream* field, hold down the menu button, and select *Chap-page*.

*Notice that Chap-page has been added to the list of available page number streams. The software numbers pages in this document using the page number stream specified in the Default Stream box.*

9. Execute *Apply*.
10. Move the mouse cursor to the top of the open property sheet and click the select button in the *Basic* box.

*Notice the fields in the Page Number fields. The first Text box is empty, the Auto# box contains the autonumber stream "Chapter," and the second Text box contains the separator character between the chapter and the page number, as shown in Figure 51.*

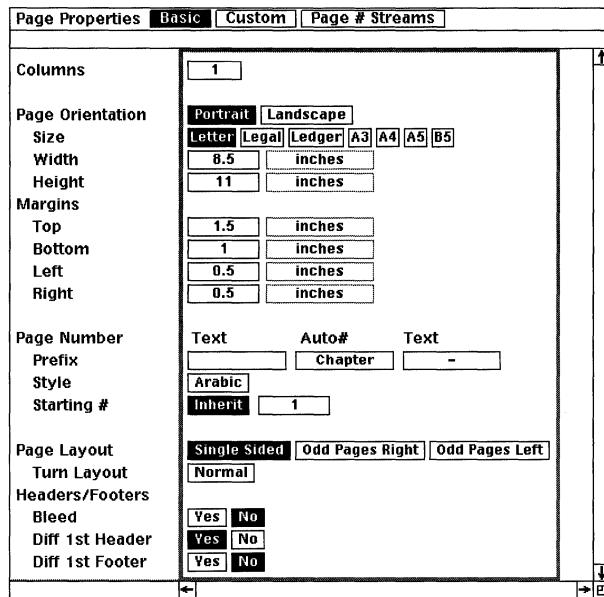


Figure 51

11. Close the property sheet.

*At this point, if you paged through the document, the page numbers in the footer would be displayed as chapter-page.*

*For your convenience, a document with a Chap-page default page number stream is available on the companion disk that comes with this book.*

### **How do I use the same page numbering stream for all of the documents in a book?**

In a nutshell, you define the custom page number stream in a catalog and then export page properties from that catalog. For the steps needed to add a common custom page numbering stream to all of the documents in a book, refer to Chapter 7.



## **5. Using Template Documents**

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As you probably already know, Interleaf 5 spawns a lot of talk about templates. Templates, template, templates! That's all we heard when the software first came out. At the time, everyone acted as if they all knew what was going on with this template business (including me), but in reality most people were in the dark about it (including me).

I eventually came to realize that templates were simply skeleton documents that I could reuse every time I started a new project; this way I wouldn't have to reinvent the document format or add repeatedly used text and graphics. Even though I finally grasped this concept, three questions still haunted me about templates: Where do they come from? Where are they stored? And how do I access them?

I found the answers to these questions are very simple. First of all, a template is simply a document that I (the user) choose to call a template. In the beginning, I thought a template was some separate icon class on the Interleaf desktop; it's not. I (the user) create a template simply by customizing a document's format. Secondly, I store the customized document in the *System5/Create* cabinet. And as a result, the template document name appears on the pulldown menu when I hold down the menu button and execute *Create* from the desktop.

Okay. So then I knew how to create a template, but I still didn't know what kind of stuff went into a template (can you tell I was kind of green back then?). At that point, I needed some help in determining which documents deserved to be made into templates.

After lots of trial and error, I realized that creating templates goes beyond adding a few new components to a document and then sticking the document in the *System5/Create* cabinet. When you create a template, you want to give some thought to the potential uses of the template document. Will the template meet the needs of many people (as opposed to just a few)? Does the template need a special autonumbering stream? Does it need a custom page numbering stream? Is a custom color palette necessary? These are just a few of

the questions you should ask yourself when setting up a document template. As we shall see in this chapter, the whole point of creating a template is to do as much document formatting in the beginning, so you have to do as little as possible in the end.

## Setting Up Templates in General

**Can I change the Interleaf default document so that when I execute *Create→document*, the resulting document already contains my customized component masters, autonumber streams, color palette, named graphic objects, etc.**

Absolutely! You don't think Interleaf would be so bold as to make you live with their document defaults, now do you?

There are two ways you can change the default document on your desktop:

1. Create a new default document and put it in your *System5* cabinet
2. Have your systems administrator change the default document in the *MasterSystem5* cabinet

If you choose option 1, then only *you* will have access to the new default document. Anyone else on your network will not be able to use your new default document unless they link to your desktop.

On the other hand, if you choose option 2, then everyone on the network will have access to the changes made in the default document (because everyone on the network links to the *MasterSystem5* cabinet under the systems administrator's *root* ID).

To add a template using the Option 1 method described above, perform the following steps:

1. Create your new default document template and rename it to *my\_doc* (or whatever name is appropriate for you).
2. Copy the new default document template in the *Create* cabinet (found in the *System5* cabinet).

*The new default document template name will show up on the Create popup desktop menu.*

You cannot save changes made to the default document named *document* in the *Create* cabinet (even on your own desktop). This is because the document named *document* is owned by *root*, and therefore can only be changed by the systems administrator. If you want your changes added to the systemwide default *document* (the one everyone on the network has access to), then you must ask the systems administrator to modify the default *document* in the *MasterSystem5* cabinet.

To add a template using the Option 2 method described above, perform the following steps:

1. Login as *root* or as *leafadm*.
2. Invoke Interleaf and add the changes to the document named *document* in the *Create* cabinet (found in the *System5* cabinet).
3. Close and save the document.
4. Have every Interleaf user on the network open his or her *System5* cabinet on the Interleaf desktop and execute *Update* in the *System5* window.

After the users issue the *Update* command, the changes in the master *document* will be reflected in each user's *System5* cabinet. This means that every user will get the modified default *document* when he or she executes *Create*→*document*.

### **What types of documents do I store in my *Create* cabinet as templates?**

Any document whose format you use repeatedly (you don't want to have to re-create the wheel every time you start a new project, do you?). For example, if you write a lot of proposals, you probably want to create a proposal template so that each time you start a new proposal, the format is already in place. Some sites create manuscript templates. Others create simple templates such as fax cover sheets, memo pads, or company letterhead stationery. In all these cases, these documents can be stored as templates in the *System5/Create* cabinet, making them accessible to the user via the *Create* desktop menu.

### **Can I put my template documents in a container other than the *System5/Create* cabinet?**

You should always put your templates in the *Create* cabinet so that they show up on the *Create* desktop menu; however, you can create new containers in the

*Create* cabinet and put your templates in there. In this case, your templates would appear under a submenu of the *Create* menu.

For example, let's assume that your company has a group of templates that the Engineering Department uses, and a group of templates that the Human Resources Department uses. In this case, you can create two new folders in the *Create* cabinet: one called *Engineering* and one called *HR*. All of the Engineering Department templates would go in the *Engineering* folder, and all of the Human Resources Department templates would go in the *HR* folder. When someone from Engineering wants access to a template, they will execute *Create*→*Engineering*→(pick a template). Similarly, when someone from Human Resources want to access a template, they will execute *Create*→*HR*→(pick a template).

Because you can have as many containers and subcontainers in the *Create* cabinet as you want, you have the potential to develop a fairly sophisticated *Create* menu structure.

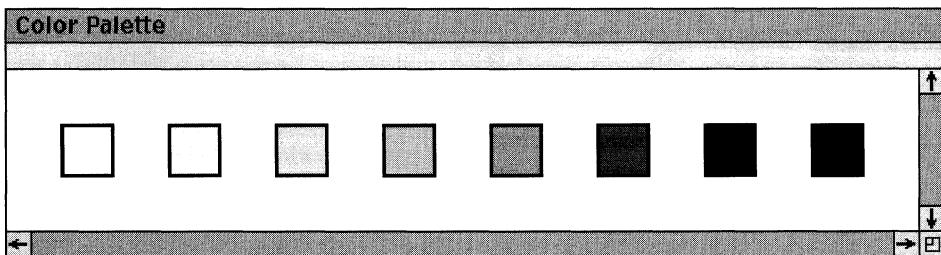
## **Creating Special Templates**

### **How do I create a template document that includes a color palette?**

Let's assume that you already have a template document that you have stored in your *Create* cabinet. Open the *System5* cabinet, and in your template document perform the following steps:

1. Open your document template.
2. Move the mouse cursor into the document name box, hold down the menu button, and execute *Misc*→*Palette*→*Colors*.

*The default color palette appears in an open window, as shown in Figure 1.*



*Figure 1*

3. Select one of the colors and execute *Copy*.
4. Move the mouse cursor after the last color in the open window and execute *Paste*.

*The selected color box is copied at the position of the mouse cursor. If you can't see the copy, resize the Color Palette window to be bigger.*

5. Select the newly copied color box and execute *Edit*.

*The color sliders appear on the desktop, as shown in Figure 2. If the color you are editing is a gray shade, then cyan, magenta, and yellow are all set to zero.*

6. Move the mouse cursor on top of the magenta color slider on the left side of the color ruler and click the select button.

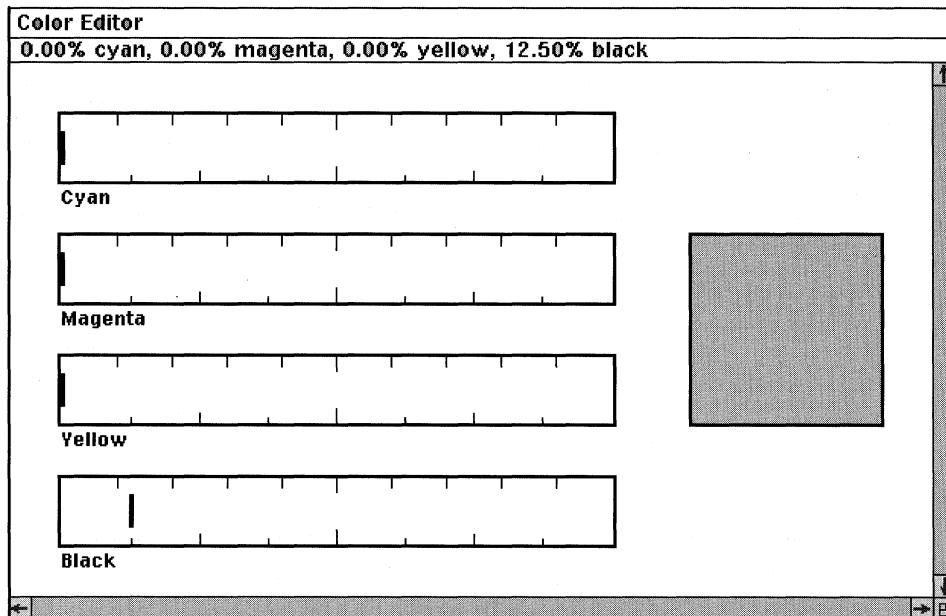
*The color slider extends the entire height of the color ruler. This means that the color slider is selected.*

7. While the color slider is selected, hold down the menu button and execute *Move→Slide*.
8. Move the mouse cursor to the right until the color slider is exactly in the middle of the color ruler, and click the select button.

*Notice that the color in the box on the right changes to reflect the amount of magenta you have added via the color slider.*

9. Hold down the menu button and execute *Deselect*.

*The magenta color slider is deselected.*

*Figure 2*

10. Move the mouse cursor on top of the cyan color slider on the left side of the color ruler and click the select button.

*The cyan color slider is selected.*

11. While the color slider is selected, hold down the menu button and execute *Move→Slide*.
12. Move the mouse cursor to the right until the color in the box on the right turns a medium purple.
13. Hold down the menu button and execute *Deselect*.

*The cyan color slider is deselected.*

14. With the mouse cursor in the open *Color Editor* window, hold down the menu button and execute *Apply*.

*The new color is added to the default colors in the Color Palette window.*

15. With the mouse cursor in the open *Color Editor* window, hold down the menu button and execute *Close*.
16. With the mouse cursor in the open *Color Palette* window, hold down the menu button and execute *Apply*.

*The new palette is added to the document.*

17. With the mouse cursor in the open *Color Palette* window, hold down the menu button and execute *Close*.

*The Color Palette window closes.*

You can use the method described in the steps above to add as many colors as you want to your template document. Once you have created the palette you want, close and save the document. Since the document is stored in your *System5/Create* cabinet, your color palette will be included in any new documents that you create from that template.

### **How do I create a template document that includes a custom autonumber stream?**

If you have a template document in your *Create* cabinet, then simply open it and add the custom autonumber stream (information on creating custom auto-number streams in Chapter 4). Then every time you create a new template document (from the *Create* desktop menu), the custom autonumber stream will be available to you from within the document.

If you don't have a template document in your *Create* cabinet, then create a document, add the custom autonumber stream to it, and store the new document in your *Create* cabinet.

### **How do I make and use a table of contents template?**

If you've worked with Interleaf's table of contents feature, you already know that Interleaf formats the table of contents based on the format properties of the incoming components. This can sometimes make for an *interesting* table of contents. The result is that you have to reformat the table of contents documents to look the way you want. Instead of reformatting every time you generate a new table of contents, reformat once, and save a copy of the reformatted document as a table of contents template. That way, you can use the template to reformat your table of contents document (every time you create a new table of contents).

To create a table of contents template, perform the following steps:

1. Make a copy of the table of contents document (the one that gets created when you execute *Book→TOC*) and call it *TOC Template*.

*Big warning here! Never, never, never name your table of contents template the same name as your table of contents document (the one that gets created as a result of executing Book→TOC). Every time you create a new table of contents document, Interleaf automatically writes over the old one. If, therefore, you name your table of contents template document the same name as your table of contents document, your template will be overwritten the next time you generate a new table of contents.*

2. Open the *TOC Template* document.
3. Reformat the components in the *TOC Template* document to your liking. Make sure that you execute *Global Apply→Confirm* when you change any of the components. This will update the master definition for the components.
4. In the component bar, select all of the components and execute *Cut*.

*All of the text in the TOC Template document is deleted.*

5. If you like, create a new *title* component at the top of the document. In the text area of the new *title* component, type:

### **Table of Contents**

6. If you like, create a new *ruling* component immediately below the *title* component (for the steps necessary to create a ruling component refer to Chapter 4.)

*At this point, the only components visible are title and rule.*

7. Close and save the *TOC Template* document.

*Now whenever you generate a new table of contents, you can copy the TOC document into a copy of the TOC Template and unify all of the components with the component masters in the TOC Template. Doing this will cause the TOC components to reformat themselves according to the TOC Template.*

8. Open the *System5* cabinet.
9. Open the *Create* cabinet.
10. Open the *Templates* folder.
11. Cut the *TOC Template* document from the desktop and paste it into the open *Templates* folder.

*Recall that if you add the template documents to the System5/Create cabinet, you can access those templates from the Create menu.*

12. Generate a new table of contents for your book.
13. Create a new *TOC Template* document by executing *Create*→*TOC Template*.
14. Open the newly created *TOC Template* document.
15. Cut the new table of contents document from the desktop.
16. Move the component caret below the *rule* component in the component bar of the open *TOC Template* document, and execute *Paste*.

*All of the TOC components are pasted into the TOC Template document. In order to reformat all of the components, you must change all of the newly pasted components to match the component masters in the TOC Template. For example, let's assume you want to make the titleTOC components that you pasted in match the titleTOC component master in the template.*

17. In the *TOC Template*, move the mouse into the component bar and execute *Select*→*All of*→*titleTOC*.

*All of the titleTOC components are selected.*

18. While all of the *titleTOC* components are selected, execute *Change*→*titleTOC*.

*All of the titleTOC components reformat to match the master property sheet of the titleTOC component in the template.*

19. Repeat steps 17 through 18 for all of the remaining components in the *TOC Template* document (not counting the *title* and *ruling* components).

*The table of contents has been reformatted according to the TOC Template component masters.*

### **How do I make an indented outline template?**

If you have a template document in your *Create* cabinet, then simply open it and add the components that create the indented outline (the steps to create an indented outline in Chapter 4). Then every time you create a new template document from the *Create* desktop menu, the indented outline components will be available to you.

If you don't have a template document in your *Create* cabinet, create a document, add the indented outline components to it, and store the new document in your *Create* cabinet.

## **Creating Custom Calendar Documents**

### **How do I create a monthly calendar document?**

Interleaf 5 has a number of sample documents readily available to you. These sample documents can be used as is or customized to fit your specific needs. One of the sample documents that is quite handy to use is the *Calendar* document.

The *Calendar* document contains a large frame in which a calendar is drawn. The calendar represents a generic month. It is up to you to modify the calendar document to make it specific to the month you want.

To create a *Calendar* document, perform the following steps:

1. Move the mouse cursor to the desktop (make sure that nothing is selected), hold down the menu button, and execute *Create*→*Samples*→*Calendar*.

*A Calendar document appears on your desktop.*

2. Open the *Calendar* document.

*Notice that the Calendar document has multiple dates in each square. This is so that you can select the correct date sequence for the month you want.*

*Notice also that the name of the month is "Month." This is so you can change the name to the month you want.*

3. Select the text *Month* at the top of the document and press the *Delete* (or *Back Space*) key until the characters in the microdocument have all been deleted.

*The name of the month is in a microdocument called “month.”*

4. In place of the text you deleted, type:

### **January**

*You have just changed the name of the calendar month.*

*Let’s assume that this calendar is for January 1994. In this case, January 1 falls on a Saturday. This means that you want to delete all dates that do not correspond with the first of the month falling on a Saturday.*

5. Select the 1 in the first Sunday box at the top of the calendar.

*Notice that all of the dates that correspond with the first of the month falling on a Sunday are also selected. All of these dates are grouped together.*

6. Hold down the menu button and execute *Cut*.

*All of the dates that correspond with the first of the month falling on a Sunday are deleted.*

7. Select the 1 in the first Monday box at the top of the calendar.

*Once again, notice that all of the dates that correspond with the first of the month falling on a Monday are also selected. All of these dates are grouped together.*

8. Using the extend button, *extend-select* the 1 in the first Tuesday box at the top of the calendar.

*All of the dates that correspond with the first of the month falling on a Monday and Tuesday are selected.*

9. Using the extend button, *extend-select* the 1 in the first Wednesday, Thursday, and Friday boxes at the top of the calendar.

*All of the dates that correspond with the first of the month falling on any day of the week other than Saturday are selected.*

10. Hold down the menu button and execute *Cut*.

*All of the dates that correspond with the first of the month falling on a any day other than Saturday are deleted.*

*You have just created a calendar for January 1994.*

11. Close and save the document.

### **How do I create all the months of the year and store them as templates?**

First let's look at how you store the *months* documents as templates in the *Create* cabinet.

1. On your desktop, rename the *Calendar* document to *January*.
2. Open the *System5* cabinet.
3. Open the *Create* cabinet.
4. In the *Create* cabinet, create a folder, rename it to *1994*, and open it.
5. Cut the *January* document from your desktop and paste it into the open *1994* folder.
6. Move the mouse cursor to the desktop, hold down the menu button and execute *Create*→*1994*→*January*.

*A new copy of the January document is created on your desktop. Now, whenever you want, you can create a clean copy of the January calendar from the desktop pulldown menus.*

Next, let's look at how you create documents for the rest of the months in the year.

1. Create another *Calendar* document by executing *Create*→*Samples*→*Calendar*.
2. Using the steps outlined in the previous question, create documents for February through December.
3. Store each of the new month documents in the *1994* folder in the *Create* cabinet.

*Now, whenever you want, you can create a clean calendar document for any month of the year simply by accessing the Create→1994 menu.*

### **How do I modify the *Calendar* document for months that have fewer than 31 days?**

This seems like a paradox, doesn't it? When you select a calendar day you want to delete, such as 29, 30, or 31, for the month of February, then all of the days of the month become selected. This is because all of the days for any date sequence are grouped together. But when you execute *Misc→Ungroup* the dates in the sequence don't become ungrouped. Why?

Because the date sequences in the *Calendar* document are group-locked; meaning that you can't ungroup the dates unless you turn off the *grouping* lock. To turn off the *grouping* lock and delete the unwanted dates, perform the following steps:

1. Select the date sequence you want to ungroup, hold down the menu button, and execute *Edit→Locks→Clear→grouping*.

*The dates can now be ungrouped.*

2. Select any date and execute *Misc→Ungroup*

*The dates are now ungrouped so that you can select individual dates.*

3. Select the individual dates you want to delete and execute *Cut*.

*Only the selected dates are deleted.*

An alternative to ungrouping the dates is to select the dates when they are grouped and execute *Edit→Content*. This puts you into a subedit that has all of the dates ungrouped. Cut the dates you want to delete and then execute *Close*. This takes you out of the subedit and keeps the remaining dates grouped together.

### **What can I do with a Calendar template (other than stick it on my wall)?**

Since the *Calendar* document is in a frame, you can annotate the calendar with graphics and microdocuments. For example, let's assume that you want to use the January calendar as part of a projected schedule for a new project. You can use microdocuments, text strings, and graphics to annotate the calendar such that it looks like the one shown in Figure 3.

# January

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3 <b>Begin Project</b>	4	5 Kick-off meeting 2:30 Room 1640	6	7	8
9	10 First Review	11 	12	13	14 Begin Editing Changes 	15
16	17	18	19 Second Review	20 	21	22
23	24   <b>Ski Vacation</b>  	25	26	27	28	29
30	31					

Figure 3

# **6. Manipulating Font Properties**

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Let's face it. Having access to multiple fonts is the best thing to hit the desktop since wordwrap. Fonts allow you to make the words on a page stand out and become visually more expressive. There's no getting around it, fonts are fun to play with.

This fact in itself is good and bad. Fonts are easy to manipulate, but in the wrong hands they can turn even a well-written document into a eyesore. Sometimes writers (with the best of intentions) get a little too carried away with all of the font features offered by desktop publishing products. The next thing you know, the Technical Pubs Department ends up with a masterfully written document that's extremely hard to read. If you happen to inherit such a document, and it is your responsibility to clean it up and make it presentable again (using Interleaf, of course), this chapter is for you. Fortunately, Interleaf makes it easy to manipulate fonts without changing the text.

And as an added bonus, if you combine Interleaf's filter technology (see Chapter 16) with the techniques presented in this chapter, you can use Interleaf to clean up any font mess in documents created by just about any other desktop publishing package.

## **Changing Text**

### **How many ways are there to bold or italicize text?**

Basically there are four methods you can use to bold or italicize text: function keys, pulldown menus, the document header, or the component property sheet.

#### ***Function Keys***

Block-select the text and then

- Press the *F4* key to bold the selected text.

- Press the *F5* key to italicize the selected text.

*The above function key definitions are for Sun UNIX and DOS. The function keys may vary between other operating system platforms. Use the Keyboard Display to find how the function keys are mapped for your system.*

## Pulldown Menus

Block-select the text and then

- Execute *Fonts→Bold→On* to bold the selected text.
- Execute *Fonts→Italic→On* to italicize the selected text.

## Document Header

Block-select the text and then

- Click the select button in the *Bold* box of the document header, as shown in Figure 1, to bold the selected text.

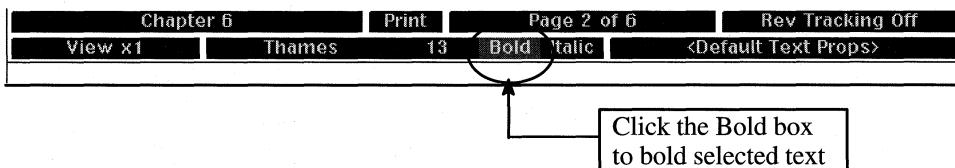


Figure 1

- Click the select button in the *Italic* box of the document header, as shown in Figure 2, to italicize the selected text.

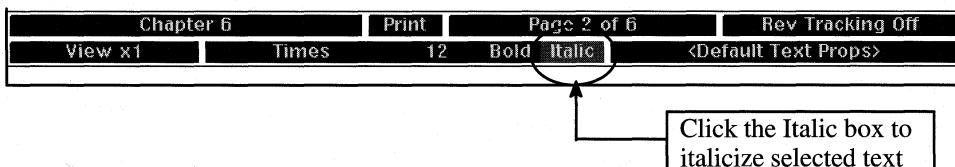


Figure 2

## Component Property Sheet

Open the component's property sheet, select the *Bold* box to bold the component's text or the *Italic* box to italicize the component's text (as shown in Figure 3), execute *Apply*, and close the property sheet.

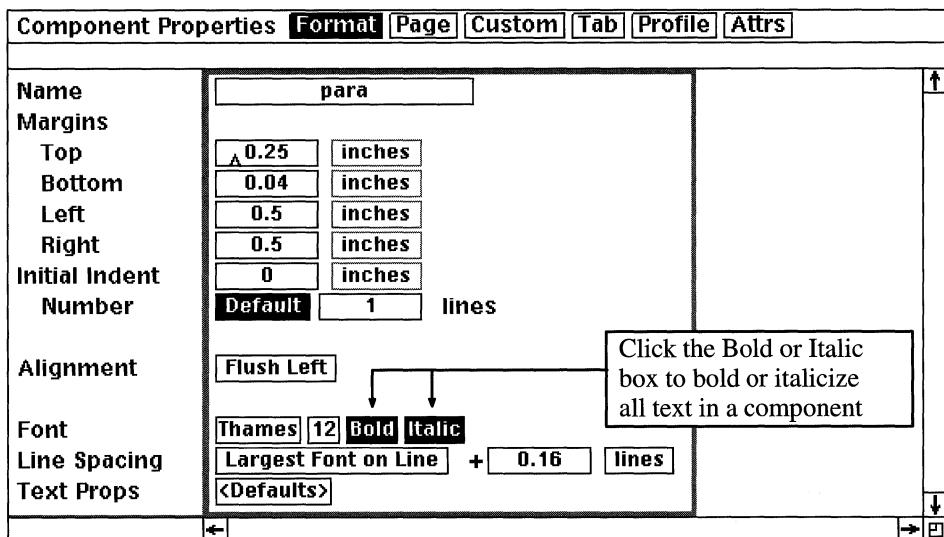


Figure 3

When you use a component's property sheet to bold and/or italicize text, all of the text in the component becomes bold and/or italic. If, therefore, you wish to bold or italicize only a small piece of text in a component, then you would use one of the first three methods described previously.

No one way to bold or italicize text is better than another. It's all a matter of preference on your part. If you are upgrading from products that were initially function key driven, such as WordPerfect, then you may want to use the function keys to change the font face. If you like the idea of pulldown menus (as in Microsoft Windows), then you may want to use the *Bold* and *Italic* boxes in the document header. Or, if you are seasoned Interleaf user and have a deep affection for the popup menus (like me), then you'd probably be most comfortable executing *Fonnts→Bold* and *Font→Italic* from the text area of the document. The nice thing about Interleaf is that it lets you perform the same function in many different ways.

## How many ways are there to change the font type and/or size of a block of text?

Basically there are three methods you can use to change the font type and size of text: pulldown menus, the document header, or the component property sheet.

### Pulldown Menus

Block-select the text and then

- Execute *Fonts→Family→(pick a font type)* to change the font type.
- Execute *Fonts→Size→(pick a font size)* to change the font size.

### The Document Header

Block-select the text and then

- Move the mouse cursor into the font family box of the document header, as shown in Figure 4, hold down the menu button, and select a font type.

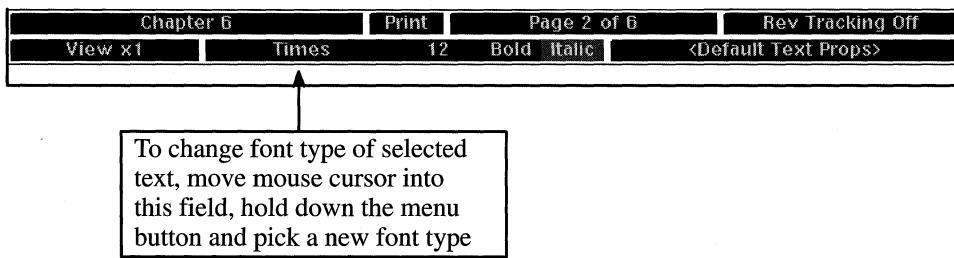


Figure 4

- Move the mouse cursor into the font size box of document header, as shown in Figure 5, hold down the menu button, and select a font size.

### Component Property Sheet

Open the component's property sheet, move the mouse cursor into the *Font Family* box, as shown in Figure 6, hold down the menu button, and select a font type. Execute *Global Apply→Confirm*, and close the property sheet.

When you use a component's property sheet to change the font type of text, all of the text in the component changes accordingly. If, therefore, you wish to change the font type or size of only a small piece of text in a component, then you would use one of the first two methods previously described.

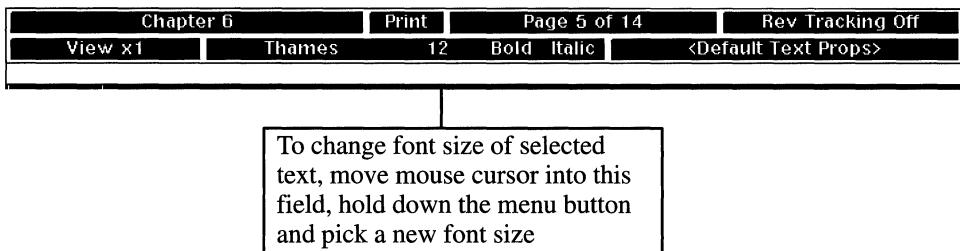


Figure 5

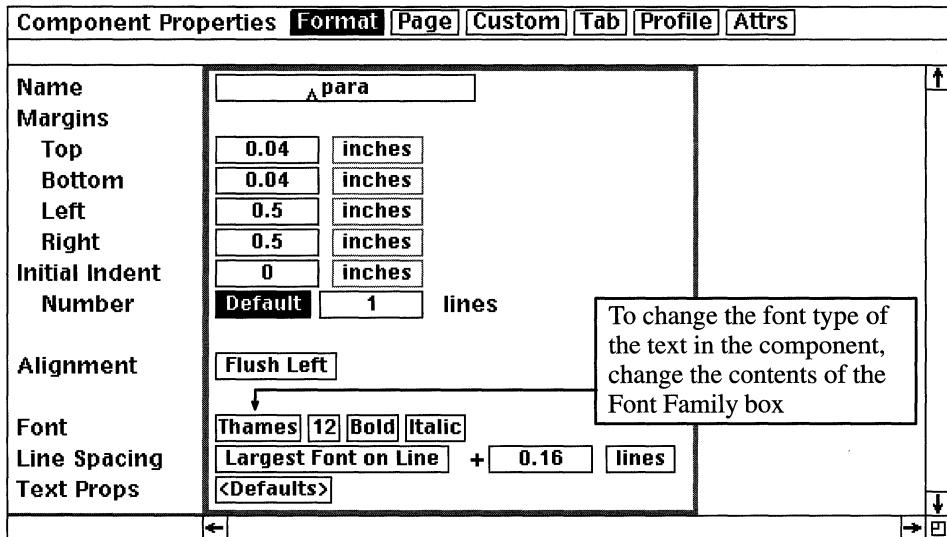


Figure 6

As with making text bold, no one way to change text type or size is better than another. It's just a matter of preference. If you like pulldown menus, then you may want to use the font family and size boxes in the document header. Or if you are an seasoned Interleaf user and are comfortable with the popup menus, then you'd probably want to use *Fonts→Family* and *Font→Size* from the text area of the document. The nice thing about Interleaf is that it lets you perform the same function in a variety of ways.

## What's the easiest way to copy a font type from one block of text to another?

The easiest way to do something is always a matter of opinion. But because I am a pretty lazy person by nature, you can rest assured that my way is usually the easiest (until someone even lazier than me figures out a better solution).

For me the easiest way to copy a font type is to select the block of text you want to change and then execute *Fonts→Pickup* from the text area. For example, let's assume that you have two blocks of text as shown in Figure 7, and you want the first occurrence of the word *shopping* in the *para* component to match the font type and size used in the *big para* component.

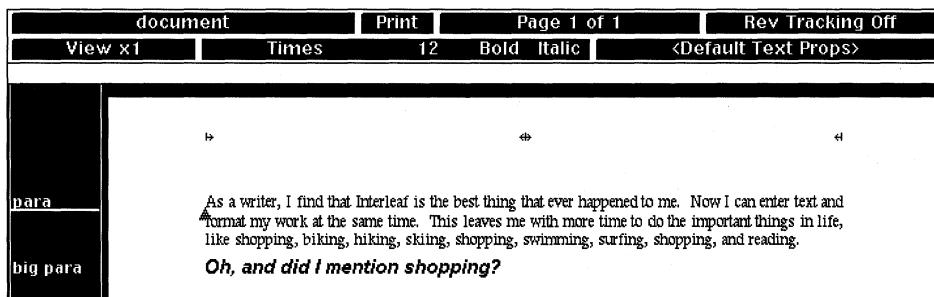


Figure 7

In this case, all you have to do is select the first occurrence of the word *shopping* in the *para* component, point the mouse cursor to any of the text in *big para*, hold down the menu button and execute *Fonts→Pickup*. The selected text in *para* component will copy ("pick up") the font type and size that you are currently pointing to with the mouse cursor, as shown in Figure 8.

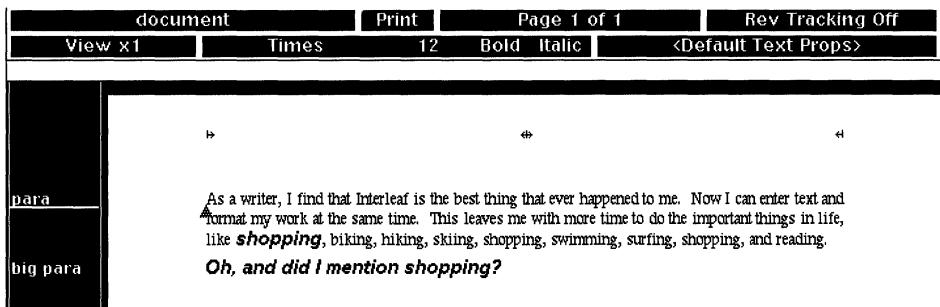


Figure 8

## How do I make the font type of a selected piece of text consistent with the font used in the rest of text in the component?

Select the block of text that you wish to change (include the spaces on each end of the block of text) and execute *Fonts→Current*.

You may have already noticed that when you cut or copy a block of text from one component to another, the pasted text retains its previous font properties. For example, if you cut Helvetica text from one component and paste it into a second component whose default text type is Courier, the pasted text remains Helvetica (even though the rest of the text in the component is Courier). In this case, you may want to use the *Fonts→Current* command to make the pasted text consistent with the rest of the text in the component.

## How do I control kerning of text?

Kerning is controlled through the *Kern* pulldown menu item in the *<Defaults Text Props>* box in the header of the document, as shown in Figure 9, and via the *Text Props* box at the bottom of any component property sheet, as shown in Figure 10.

In either case, Interleaf 5 offers two types of kerning: pair kerning and track kerning.

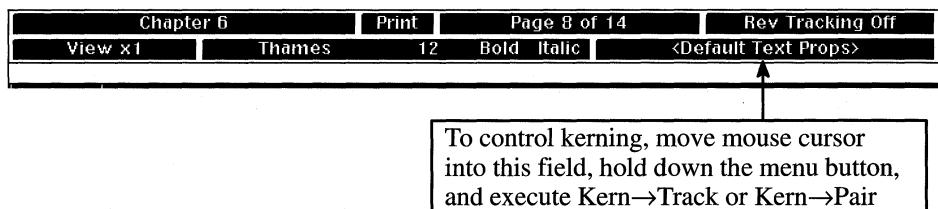


Figure 9

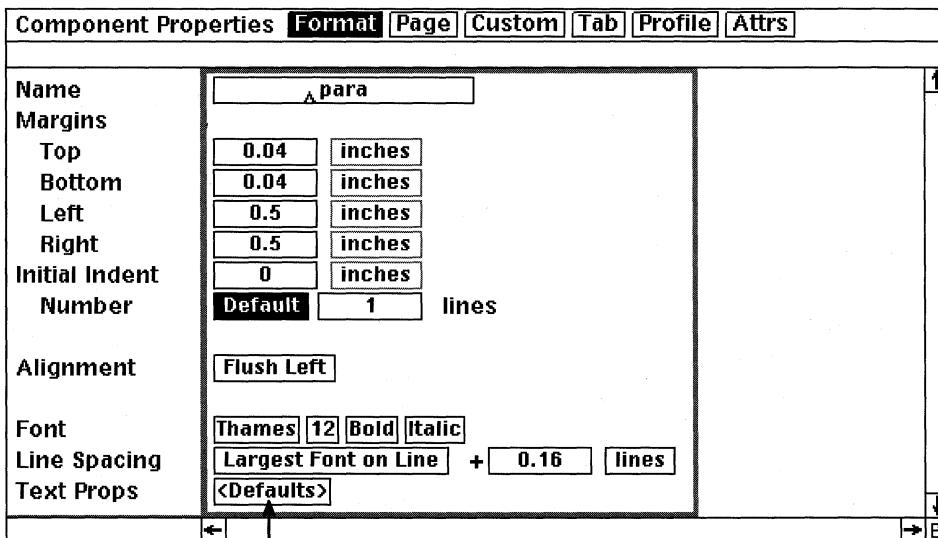


Figure 10

## Pair Kerning

Pair kerning reduces the space between specific pairs of characters. Pair kerning is a toggle; it's either on or off for a selected block of text. When pair kerning is turned on, certain pairs of characters are printed closer together, such that the spacing of all the letters in a word appears uniform.

For example, when the text *Yak* appears in a Swiss font, the letter pair *Y* and *a* appear farther apart from one another than the rest of the letters in the text string, as shown in Figure 11. This is because, by default, each letter has an imaginary box around it that defines the space in which the letter is printed. For some letters, such as *W*, *V*, and *Y*, the imaginary box forces the next letter to the right to appear a little farther away than desired. When pair kerning is turned on, however, the software automatically tightens these special letter pairs so that they do not appear too far apart, as shown in Figure 11.

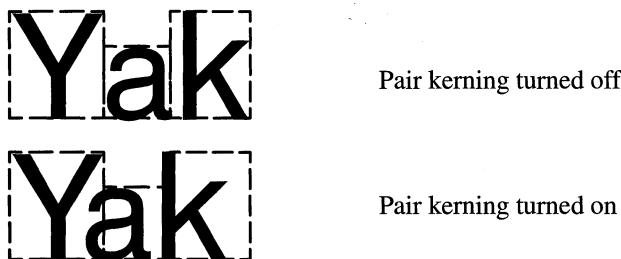


Figure 11

To invoke pair kerning, select the block of text for which you want pair kerning activated, move the mouse button up to the *<Default Text Props>* box in the upper righthand corner of the document header, hold down the menu button and execute *Kern→Pair→On*. Special pairs of letters in the selected text will be tightened.

If you want the text in an entire component pair kerned, open the component's property sheet, move the mouse cursor into the *Text Props* box, as shown in Figure 10, hold down the menu button and execute *Kern→Pair→On*. Execute *Apply*, and close the property sheet. Special pairs of letters in the component text will be tightened.

## Track Kerning

Track kerning uniformly reduces or increases the amount of space between characters in a selected block of text. In Interleaf there are three *tight* settings (T1, T2, T3) and three *loose* settings (L1, L2, L3). T1 is the tightest kern setting you can pick and L3 is the loosest kern setting you can pick. Default text (track kerning off) is exactly in between T3 and L3, as shown in Figure 12.

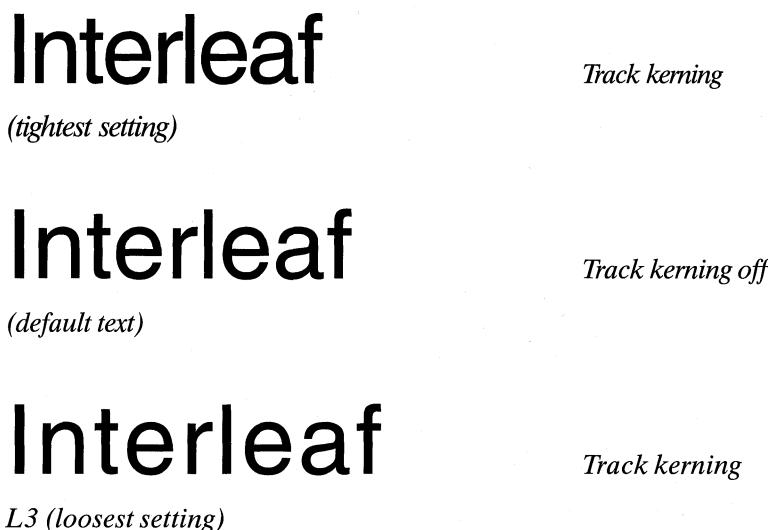


Figure 12

To invoke track kerning, select the block of text for which you want pair kerning activated, move the mouse button up to the *<Default Text Props>* box in the upper righthand corner of the document header, hold down the menu button and execute *Kern→Track→(pick a setting: T1, T2, T3, L1, L2, L3)*. The characters in the selected text will tighten or loosen, depending on which setting you pick.

If you want the text in an entire component track kerned, open the component's property sheet, move the mouse cursor into the *Text Props* box, as shown in Figure 10, hold down the menu button and execute *Kern→Track→(pick a setting: T1, T2, T3, L1, L2, L3)*. Execute *Apply*, and close the property sheet. All of the characters in the component text will tighten or loosen, depending on which setting you pick.

If you execute *Kern→Track→Tighter*, Interleaf tightens the selected text by one setting (for example, if the text is already kerned at T1, selecting *Kern→Track→Tighter* will bump the kern setting to T2.) Similarly, if you execute *Kern→Track→Looser*, Interleaf loosens the selected text by one setting (for example, if the text is already kerned at T2, selecting *Kern→Track→Looser* will bump the kern setting to T1.)

## Tools for Changing Text Properties

### How can I remember which function keys control which text properties?

At first, it is hard to remember that on a Sun-UNIX system, F4 bolds text, F5 italicizes text, F6 underlines text, and so on. After a while, the function keys that you use the most will become second nature to you. In the meantime, to help you learn, you can create an Interleaf function key template and physically attach it to your keyboard. Then every time you need to use a function key to change a text property, simply glance at your keyboard for reference.

### How do I create an Interleaf function key template?

The nice thing about the Interleaf function key template is that you can leave it on your desktop, or print it and physically place it above the function keys on your keyboard.

To view the document functions associated with the function keys, perform the following steps:

1. Open a document (any document).
2. Move the mouse cursor into the View box of the document header, as shown in Figure 13, hold down the menu button and execute *Keyboard*.

*The Keyboard Display appears on the desktop.*

The *Keyboard Display* describes the functions that are mapped to every key and key sequence. Because you invoked the *Keyboard Display* from an open document, the map shows the document functions associated with each keystroke that can be used in an open document.

The *Keyboard Display* will vary between operating systems. For example, the *Keyboard Display* for the PC will not look like the *Keyboard Display* for the Sun.

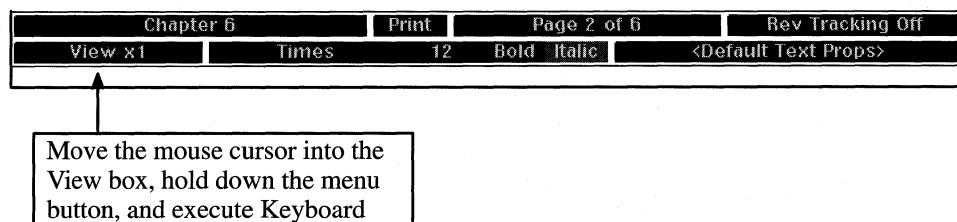


Figure 13

If you are using a Sun UNIX system, the *Keyboard Display* displays as shown in Figure 14.

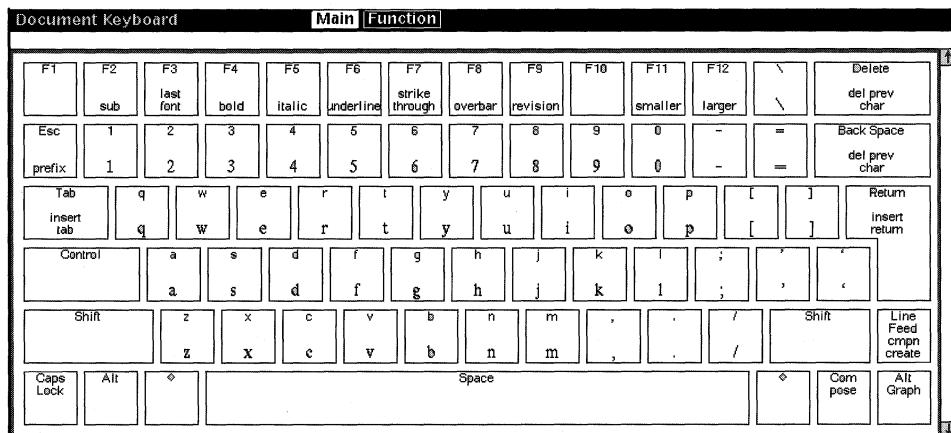


Figure 14

To create a template for just the function keys (the “F” keys at the top of the keyboard), simply resize the *Keyboard Display* window such that only the function keys are visible, as shown in Figure 15.

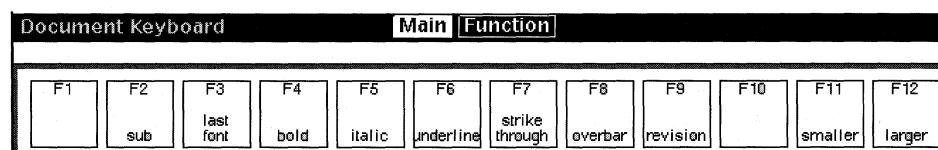


Figure 15

Once the *Keyboard Display* has been resized, you can move the map off to the side of your desktop, keeping it open for reference as needed. You can still type text into a document while the *Keyboard Display* is open (it's not like a property sheet that you have to close before you can continue editing your document).

To create a hardcopy of the abbreviated *Keyboard Display*, you must create a screen capture of the map, and then print it. To create a screen capture on the Interleaf desktop, perform the following steps:

1. Make sure your function key template (the abbreviated *Keyboard Display*) is not obscured at all by other windows.
2. Press the *Ctrl-z* key sequence.

*A “User interrupt received” stickup window appears.*

3. Select the *Window Capture* button from the stickup window.

*The stickup disappears, and is replaced by an animated bounding box.*

4. Hold down the menu button and execute *Move*.
5. Move the bounding box such that the function key template is centered in the middle of the bounding box.
6. Hold down the menu button and execute *Size*.
7. Resize the bounding box to fit snugly around the function key template. (You may need to execute *Move* again to center the template in the middle of the bounding box after the bounding box has been resized.)
8. Once you fit the bounding box snugly around the function key template, click the select button.

*Everything inside of the bounding box is stored in a Mona Lisa image file, which is copied to the Clipboard.*

9. Move the mouse cursor to the desktop and execute *Paste*.

*The Mona Lisa image file containing the screen capture of the function key template is copied to your desktop.*

10. Open the *Mona Lisa* image file.

*Notice that everything captured inside of the window capture bounding box is saved. If you like, you can use Interleaf's image editor to crop any images outside of the Function Key template (refer to Chapter 12 for information on how to use the image editor).*

11. With the mouse cursor still in the open *Mona Lisa* image file window, hold down the menu button and execute *Print*.

*The image file of the function key template is sent to the printer.*

12. Close and save the *Mona Lisa* image file.

When the function key template prints, you can tape the template on your keyboard above the function keys, giving you another quick reference option.

### **Are the function keys the same between operating systems?**

Unfortunately no. However, many of the common ones are the same. For example, F4 bolds text and F5 italicizes text on both the Sun UNIX and DOS versions of the Interleaf software. To find out exactly which text property functions your function keys are mapped to, simply look at the *Keyboard Display*. The *Keyboard Display* you see is specific to the operating system on which you are running Interleaf.

### **Can I block-select text across page boundaries and globally change the font characteristics of the selected text?**

Yes. You use the *Mark* command. Place the text caret at the beginning of the block of text you wish to select, and execute *Mark*→*Set*. Move the text caret to the end of the block of text you wish to select and execute *Mark*→*Select*. All of the text between where you set the mark and the current position of the text caret will be selected. While the text is selected, move the mouse cursor up to the font size box in the document header, as shown in Figure 16, hold down the menu button and select a new font size from the resulting menu. The font size of all of the selected text will change to match the size you selected from the menu.

To change the font type, move the mouse cursor up to the font family box in the document header, as shown in Figure 17, hold down the menu button and select a new font type from the resulting menu. The font type of all of the selected text will change to match the type you selected from the menu.

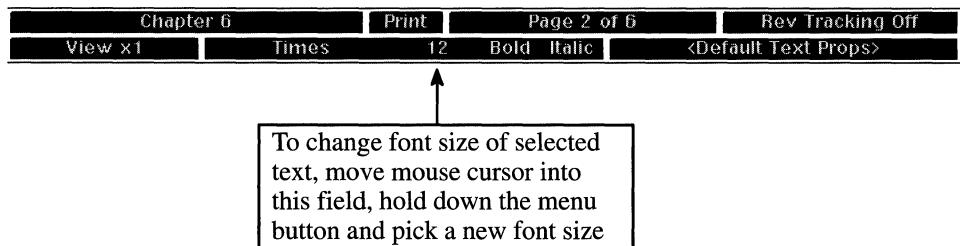


Figure 16

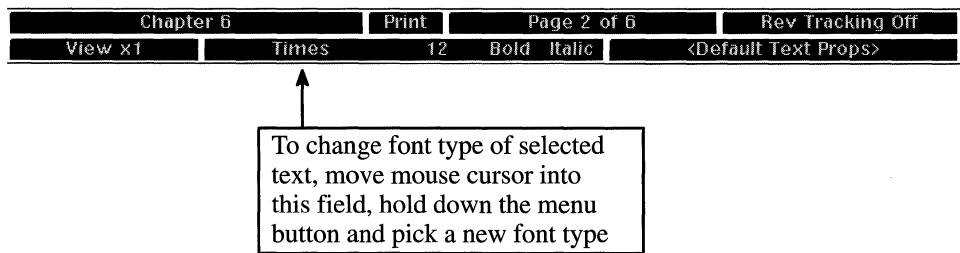


Figure 17



# **7. Controlling Page Layout**

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Page layout is what gives a document added spark. Studies have shown that when the same information is presented in two different documents, the document with the more interesting layout is the one people remember most. Not only that, but people retain more of the information they read in a document that has an attractive layout. This alone is reason enough to give a fair amount of thought to the page layout of your documents.

So what is page layout? (I thought you'd never ask!)

Page layout is the overall format in which the information in your document is presented. You want to choose a layout that best conveys your ideas. For example, if your document consists of more than its fair share of fine print and detailed drawings, you may want to create a layout that includes a lot of white space as contrast. If you have an abundance of sequential data, display the data as a list, an outline, or a table. Horizontal drawings lend themselves to a landscape layout, making your graphics easy to read. (Whatever you do, don't distort horizontal drawings by trying to squish them into an 8.5" x 11" page.)

The point of a page layout is to get your ideas across to the reader as efficiently as possible. A good layout is one which allows the reader to peruse the document and obtain key points without having to search for pertinent information.

## **Portrait vs. Landscape**

### **How do I change page layout from portrait to landscape?**

Page layout is changed from the document's page property sheet. To change page layout, follow these simple steps:

1. Open the page property sheet of the document you wish to change.
2. On the *Basic* portion of the page property sheet, there are two page layout boxes (*Landscape* and *Portrait*), as shown in Figure 1.

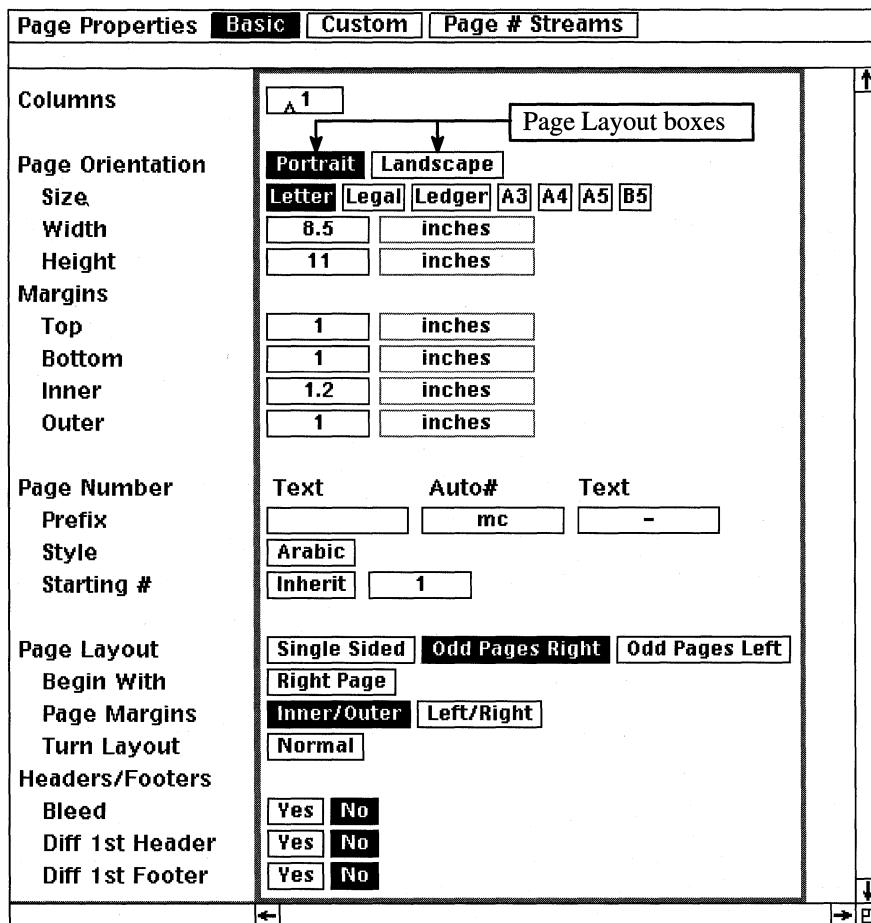


Figure 1

3. Select the box that corresponds to the default layout you wish to use.
4. Execute *Apply* and close the property sheet.

*Every page in the document will be in the layout mode you selected from the page property sheet.*

## Can I mix layout modes (portrait and landscape) within the same document?

If you mean, can you have some pages in a document be in portrait mode and some pages be in landscape mode, the answer is no (not within the same document). But the good news is you can mix page layout modes within documents in the same book. If, therefore, you are creating a document that has portrait and landscape pages mixed, then you need to split the document into smaller documents within the same book. Each time the layout changes, you must start a new document (in the book). This is due to the fact that a single Interleaf document cannot have multiple page layout modes.

## How do I change the page layout for all of the documents in a book?

There are two ways you can this.

1. You can individually change the layout of each document in the book, or
2. You can change the page layout in the book's catalog, and then export *Page Properties* from the catalog to all of the documents in the book.

Needless to say, option 2 is much more efficient, especially if you have a lot of documents in the book. (To execute option 2, however, you must have the Book-Catalogs feature of Interleaf, which is a purchasable option.)

For more information on how to use book catalogs, refer to Chapter 8.

# Controlling Page Configuration

## How do I increase or decrease the page size of my document?

Page size is controlled from the document's page property sheet. To change page size, follow these simple steps:

1. Open the page property sheet of the document you wish to change.
2. On the *Basic* portion of the page property sheet there are two page size boxes (Width and Height), as shown in Figure 2.
3. Click the select button into the Width box and enter your desired Width. (By default the unit of measurement is in inches.)

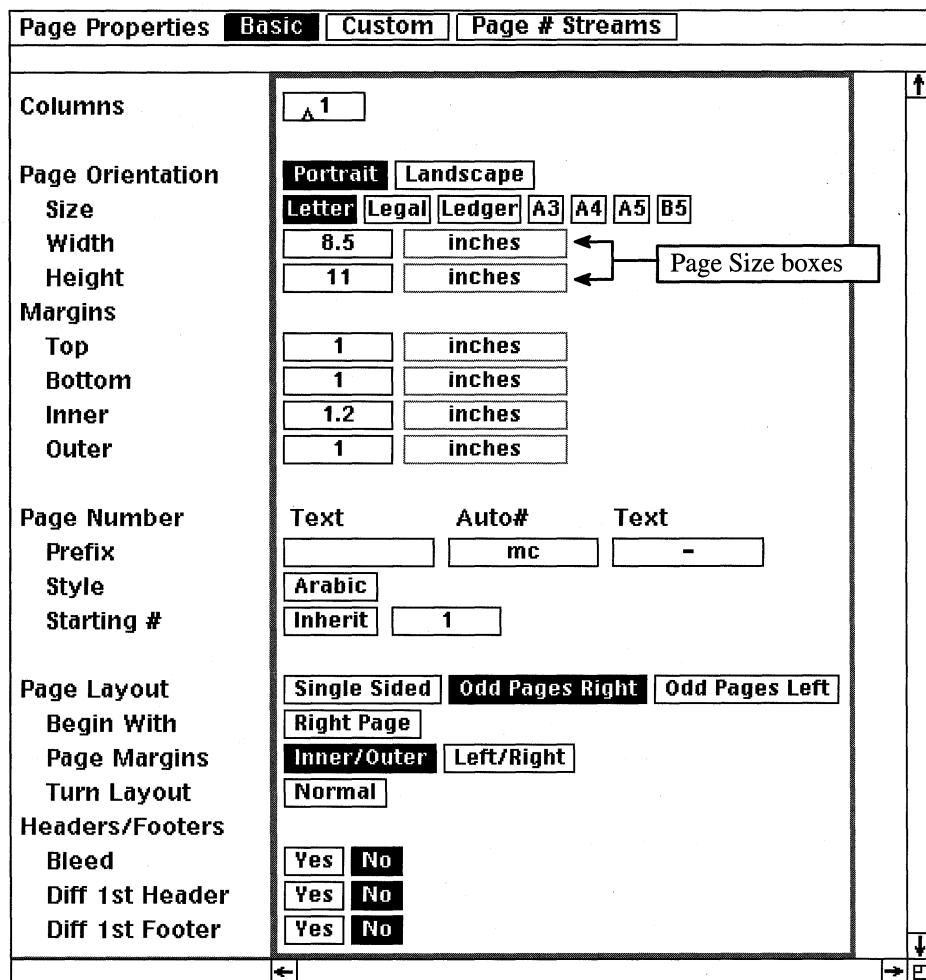


Figure 2

4. Click the select button into the Height box and enter your desired height in inches.
  
5. Execute *Apply* and close the property sheet.

*Every page in the document will be the size you entered in the page property sheet.*

**If I decrease the page size of my document, what do the pages look like when the document prints?**

If you decrease your page size and you print on paper that is larger than your specified page size, your hardcopy output will include crop marks, which indicate what the actual page size is. For example, if you change your single-sided page size from 8.5" x 11" to 5" x 8", and you print the document on 8.5" x 11" paper, your document will print in the upper lefthand corner of the the paper, with 5" x 8" crop marks in the lower righthand corner.

**How do I create a double-sided document?**

Once again, you need to access the document's page property sheet. By default, Interleaf documents are single-sided. To change a document's layout to double-sided, open the *Basic* portion of the document's page property sheet and select the *Odd Pages Right* or *Odd Pages Left* box, as shown in Figure 3.

The *Odd Pages Right* option ensures that all odd pages will appear on the right side of the open book, as shown in Figure 4. Similarly, the *Odd Pages Left* option puts the even pages of a book on the right side of the open book, as shown in Figure 4.

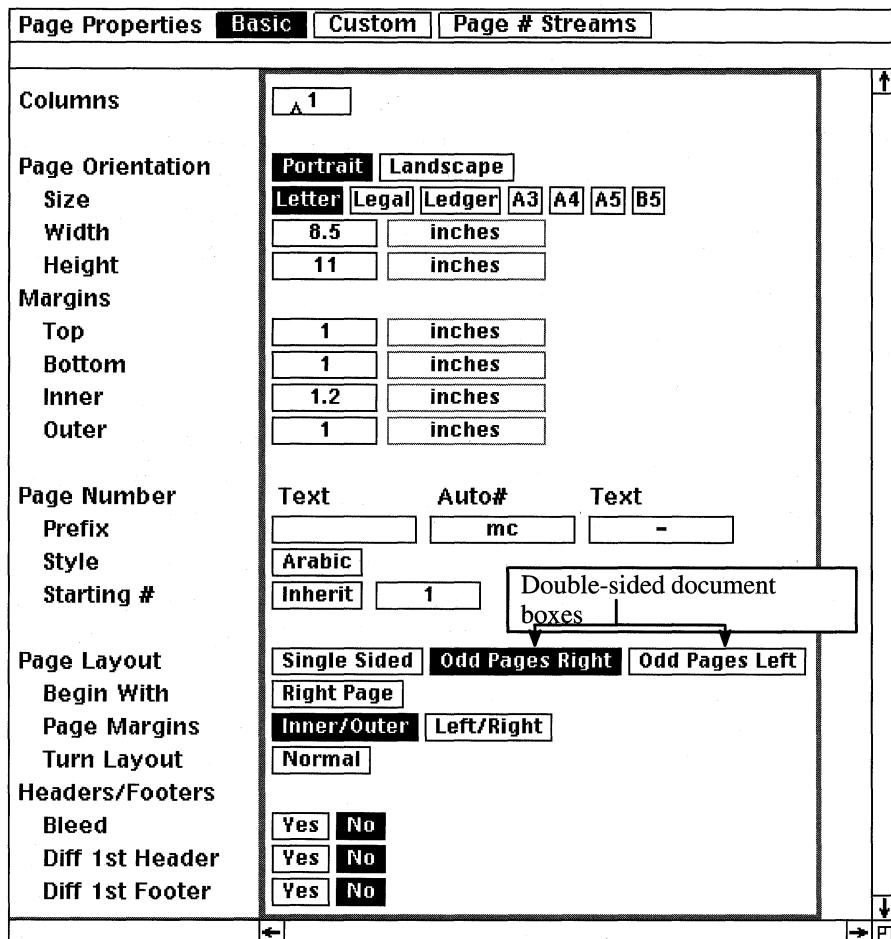
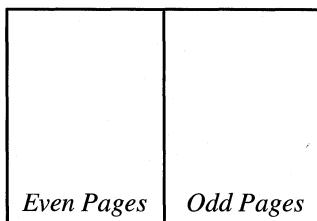


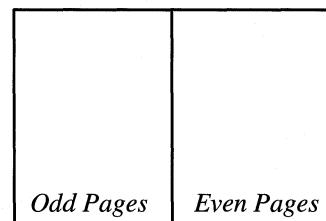
Figure 3

Open Book



Odd Pages Right Selected

Open Book



Odd Pages Left Selected

Figure 4

## Controlling Page Margins, Headers, and Footers

### How do I change the size of my page margins?

Even though this may seem like an easy question for a seasoned Interleaf user, you'd be surprised how many times I get asked it. I think this is because a lot of Interleaf users use templates and therefore forget how to change the page margins (since they don't do it very often).

Page margin size is controlled from the document's page property sheet. To change the left, right, top, and/or bottom page margins, follow these simple steps:

1. Open the page property sheet of the document you wish to change.
2. On the *Basic* portion of the page property sheet, there are four page margin boxes (left, right, top, and bottom), as shown in Figure 5.
3. Click the select button in the Page Margins box associated with the margin you wish to modify and enter your desired margin size.
4. Execute *Apply* and close the property sheet.

*Every page in the document will have the margins you defined in the document's page property sheet.*

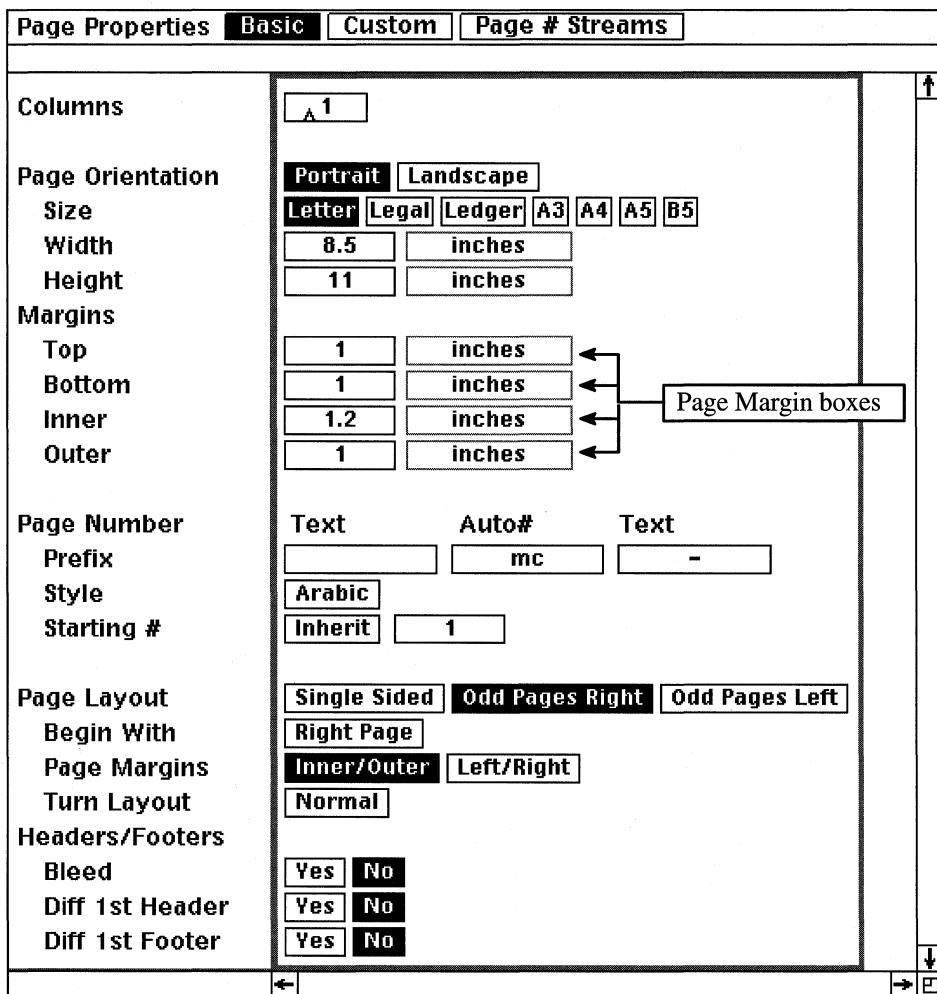


Figure 5

**Can I define multiple margin sizes, for the same margin, within the same document?**

If you mean, for example, can you give pages 1 through 5 a 0.5" left margin while pages 6 through 10 have a 1.0" left margin, the answer is no. You cannot have multiple page margins, for the same margin, within the same document. You can, however, have multiple page margin sizes within the same book. In other words, document 1 in the book can have a 1" left margin, while document

2 has a 0.5" left margin, and document 3 has a 0.25" margin. (Same goes for all of the other page margins: right, top, and bottom.)

Or, if you specify the document as double-sided (by selecting *Odd Pages Right* or *Odd Pages Left* on the page *Basic* portion of the page property sheet), then all of the odd pages will have the same margin settings, while all of the even pages have the same margin settings. In a double-sided document, odd and even pages do not have to, and usually don't, have the same margin settings. This is because the inner margin in a double-sided document is usually larger to allow for book binding. (Creating double-sided documents is discussed in further detail later in this chapter.)

If you are creating a document that varies the same margin, then you need to split the document into smaller documents within a book. Each time the margin size changes, you must start a new document (in the book). This is due to the fact that a single Interleaf document cannot have multiple margin sizes for the same margins (in other words, the left margin cannot dynamically change within the same document).

**How do I make the header and/or footer area extend beyond the left and right page margins, without increasing the size of the left and right page margins?**

Horizontally extending the header and/or footer beyond the left and right page margins is a technique known as bleeding. Bleeding is controlled from the document's page property sheet. To bleed the header and footer, follow these simple steps:

1. Open the page property sheet of the document you wish to change.
2. On the *Basic* portion of the page property sheet, there is one *Bleed* box at the bottom of the property sheet, as shown in Figure 6.
3. To bleed the header and footer areas, click the select button in the *Yes* box associated with *Bleed*.
4. Execute *Apply* and close the property sheet.

*Every page in the document will bleed both the header and footer areas all the way to the left and right edges of the page.*

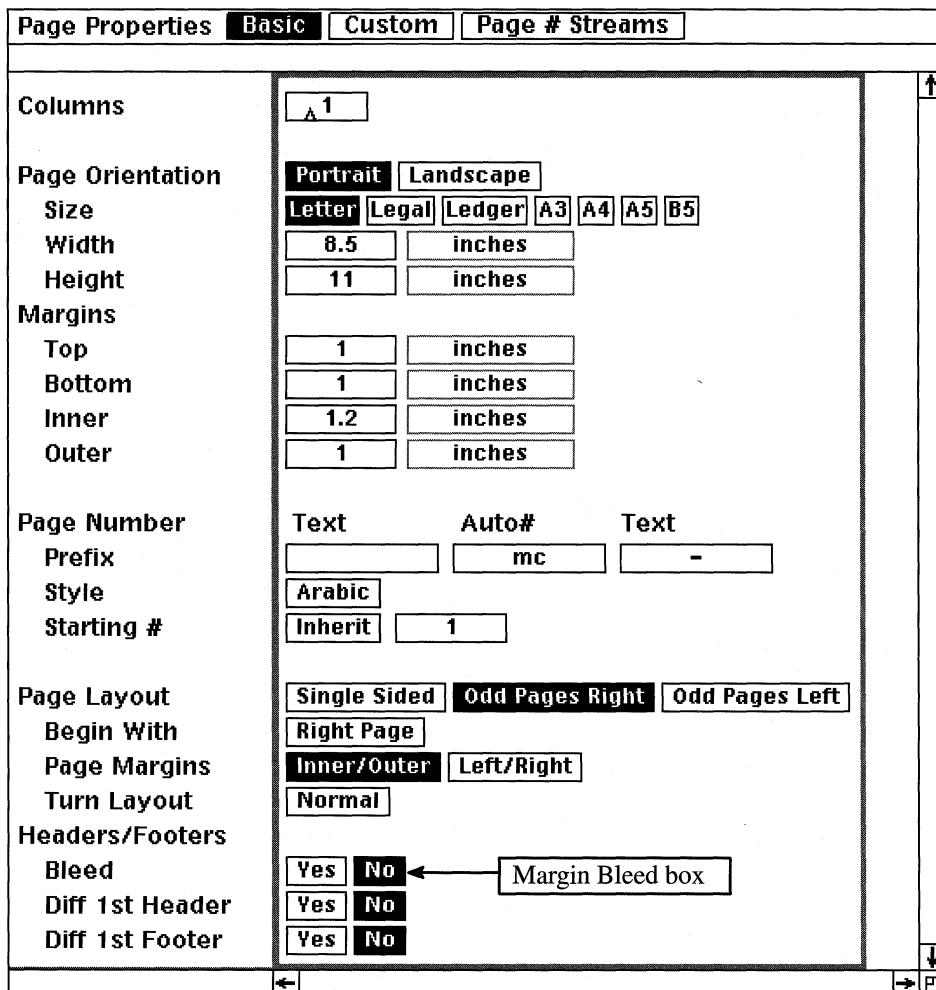


Figure 6

It's important to note that pages printed on any laser printer can print only to 1/4" from the left and right edges of the page. This is because laser printers reserve at least 1/4" on each side of the paper (color laser printers require more) to allow for the track feeders used by the laser printer to automatically push the paper through. All other hardcopy devices (plotters, inkjet printers, dot matrix printers, etc.) can print all the way to the edge of the paper.

### **How can I create multiple headers and footers within the same document?**

Interleaf being the flexible product that it is, there are a number of ways to accomplish this. The method you use depends upon the effect you're trying to achieve.

If you want a different first header and footer on just the first page of your document, then you simply open the *Basic* portion of the page property sheet of the document and select the *Yes* boxes of the *Different First Header* and *Different First Footer* fields, as shown in Figure 7. These options are mutually exclusive, meaning that you can have a different first header *or* a different first footer within the same document. You don't have to have both if you only want one.

If your document is divided into sections (such as chapters), and you want a different header and footer in each section, then it would be best to make each section a different document in a book. Documents in a book inherit certain characteristics from each other such as page numbers and autonumbers; however, by default each document in a book may maintain its own header and footer information. On the other hand, you can allow documents in a book to share header and footer information through the use of catalogs. (Catalogs are discussed later in this chapter.)

If you wish to use different text from each page as call-outs in the headers and/or footers, you can use variable content components, as outlined in the next question.

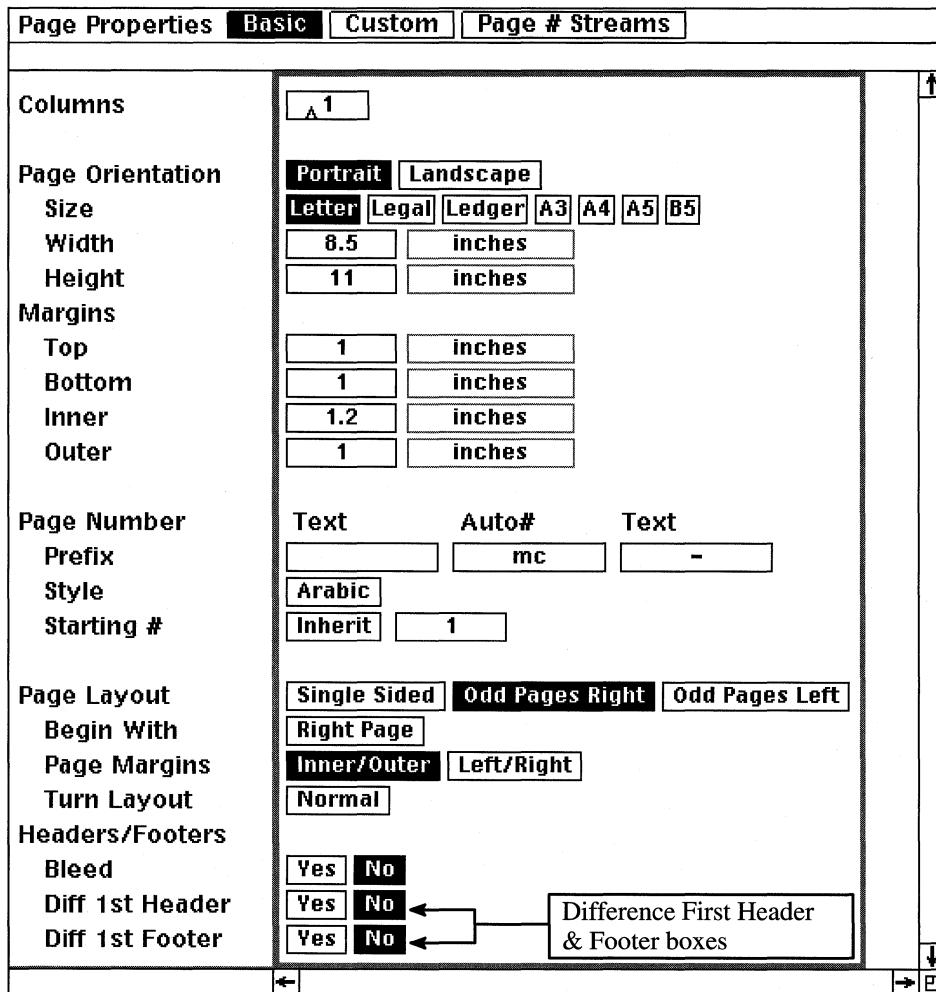


Figure 7

### How do I reference component text in the header or footer?

This is actually a very common application. We've all seen documents in which the header or footer references the first (or last) section title on every page. In this case, the text reference in header (or footer) must change with every page. This seems contrary to how Interleaf headers and footers work, for we all know that the entire contents of the header and footer frames appear on

every page of a document (with the exception of the first page, if *Different First Header* or *Different First Footer* is turned on).

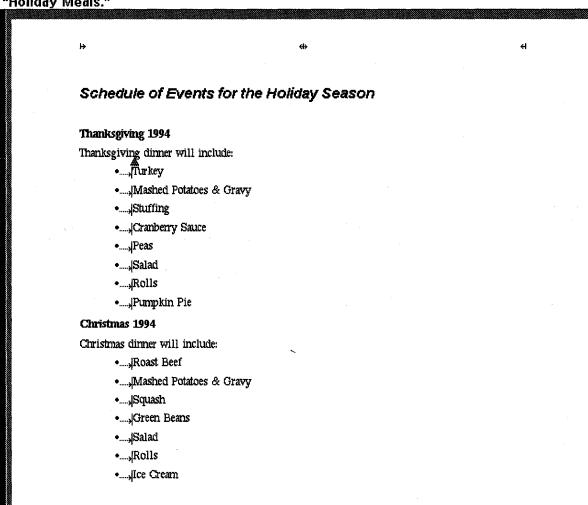
Fortunately, there is an easy way to reference text in an Interleaf document. The trick is to use Variable Content components. The easiest way to explain this process is with an example.

Let's assume that you are working with a document that contains the two pages shown in Figure 8. Let's also assume that you want the header frame to reference the text shown in the first *subhead* component on each page. As you can see, the text in the first *subhead* component on page 1 is *Thanksgiving 1994*, and the text in the first *subhead* component on page 2 is *New Year's Eve 1994*. Therefore, you want the software to *automatically* put the text *Thanksgiving 1994* in the header on page 1 and the text *New Year's Eve 1994* on page 2. Here are the steps you would take to accomplish this task:

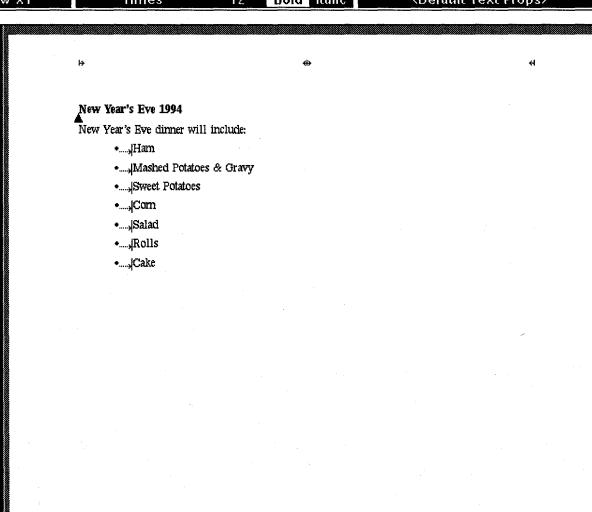
1. Turn on Variable Content components with the *Profile Tool*.
2. Create a microdocument in the header frame of the document.
3. Open the property sheet for the microdocument.
4. On the *Custom* page of the property sheet, select the *On* box in the *Variable* field (at the bottom of the property sheet).
5. Change the *Type* box to *First on Page*.
6. Change the *Component* box to *subhead*.
7. Execute *Apply* and close the property sheet.

*The contents of the subhead component will appear in the microdocument in the header.*

Let's look at each one of these steps in further detail. We will execute this example on a document called *Holiday Meals* (which looks like the document shown in Figure 8). If you wish to execute the steps below as you read along, copy the the *Holiday Meals* document (found on the companion disk that comes with this book) to your Interleaf desktop. Otherwise, apply the following steps to your own document.

Holiday Meals		Print	Page 1 of 1		Rev Tracking Off
View	X1	Times	12	Bold Italic	<Default Text Props>
<b>Opened "Holiday Meals."</b>					
					
<b>Schedule of Events for the Holiday Season</b>					
<b>head</b>					
<b>subhead</b>					
para					
bullet					
<b>Thanksgiving 1994</b>					
para					
Thanksgiving dinner will include:					
bullet					
<b>Christmas 1994</b>					
para					
Christmas dinner will include:					
bullet					

Page 1

Holiday Meals		Print	Page 2 of 2		Rev Tracking Off
View	X1	Times	12	Bold Italic	<Default Text Props>
					
<b>subhead</b>					
<b>para</b>					
<b>New Year's Eve 1994</b>					
para					
New Year's Eve dinner will include:					
bullet					

Page 2

Figure 8

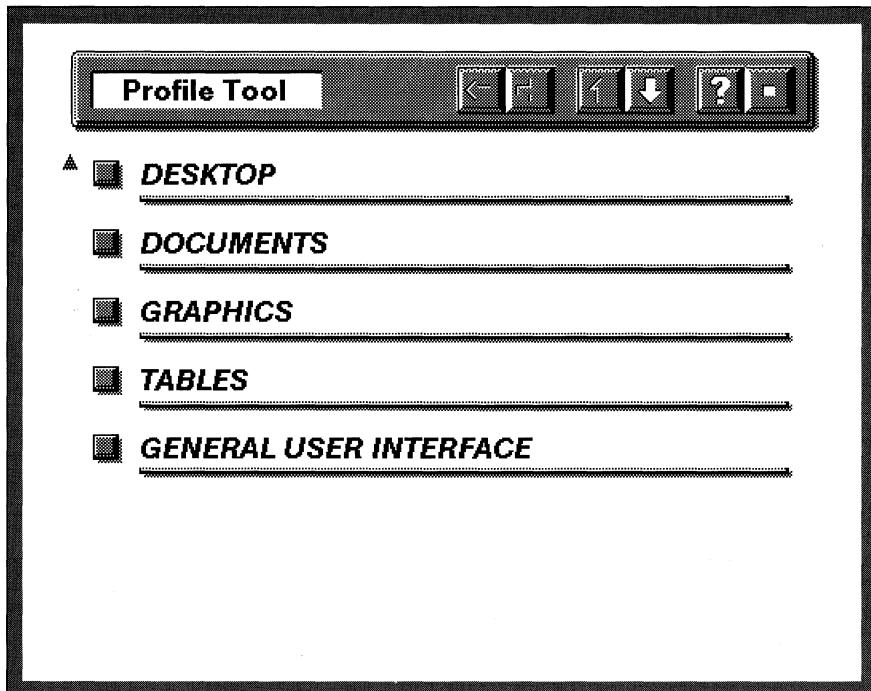
## **Use the Profile Tool to Turn on Variable Content Components**

Variable Content components is a feature that you must activate using the *Profile Tool*.

1. With nothing selected on the desktop, execute *Custom→Tools→Profile Tool*.

*The Profile Tool Window appears on your desktop, as shown in Figure 9.*

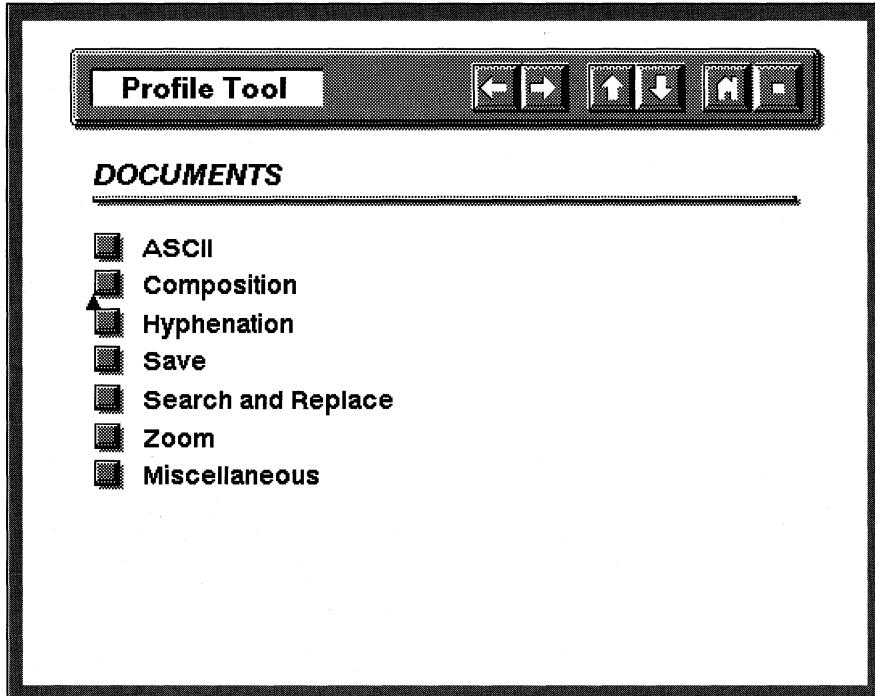
*If the Profile Tool does not appear as an option under Custom→Tools, then the Profile Tool has not been installed on your desktop with the Tool Manager. To find out how to install the Profile Tool, refer to Chapter 2.*



*Figure 9*

2. In the *Profile Tool* window, select the *Documents* button.

*The Documents window appears, as shown in Figure 10.*



*Figure 10*

3. In the *Documents* window, select the *Composition* button.

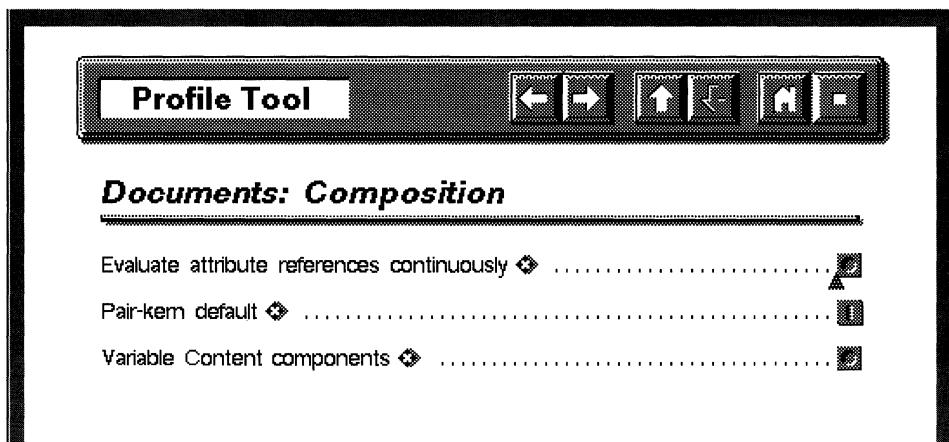
*The Documents:Composition window appears, as shown in Figure 11.*

4. Click the select button in the box associated with the *Variable Content components* entry.

*The contents of the box changes from 0 to 1. This means that the Variable Content components feature will be activated when you execute Load.*

5. With the mouse cursor inside the *Profile Tool* window, hold down the menu button and execute *Load*.

*The changes that you made in the Profile Tool window are loaded on to your desktop. This means that you now have access to Variable Content components.*



*Figure 11*

*If you wish to use Variable Content components the next time you log on to Interleaf, you must also execute Save in the Profile Tool window. If you do not save your Profile Tool changes, any modifications that you make during this session will be erased from memory when you exit the Interleaf desktop. To learn more about saving changes to your Profile Tool, refer to Chapter 2.*

6. Close the *Profile Tool* window.

*If you did not save your Profile Tool changes, a stickup window will appear warning you that you have not saved. If you wish to continue anyway, select the Confirm button from the stickup window.*

### ***Create a Microdocument in the Header Frame***

1. Open the document in which you wish to add the text reference in the header.

*In this example, we will assume that the open document is the one shown in Figure 8.*

2. Open the header frame.
3. In the header frame execute *Create→Misc→Microdoc→micro:→caption*.

*A micro:caption microdocument appears. We are using micro:caption for the sake of this example. You can actually use any microdocument in the header or frame.*

4. Size the microdocument to be about 1.5" wide.
5. Reselect the microdocument and execute *Misc*→*Align*→*to Frame*→*Right*.
6. Reselect the microdocument and execute *Misc*→*Align*→*to Frame*→*T/B Center*.

*The microdocument vertically centers itself on the right side of the header frame.*

7. Reselect the microdocument and execute *Edit*→*Content*.

*The microdocument opens.*

### ***Change Microdocument to a Variable Content Component***

1. Select the *micro:caption* component in the component and execute *Props*.

*The property sheet for the microdocument opens.*

2. Select the *Custom* box at the top of the property sheet window.

*The Custom window opens, as shown in Figure 12.*

3. At the bottom of the property sheet, select the *On* box in the *Variable* field.

*Two new fields, a Type field and a Component field, appear in the window, as shown in Figure 13.*

4. Keep the *Type* field contents as *First on Page*.
5. Move the mouse cursor into the *Component* field, hold down the menu button, and select the *subhead* component.

*With these settings, the microdocument references the text in the first subhead on the page. Since this microdocument is in the header frame, the microdocument in the header will reference the first subhead component on each page. This means the content of the microdocument in the header will vary with every page.*

Component Properties		Format	Page	Custom	Tab	Profile	Attrs						
Hyphenation		Off	<input type="button" value="1"/>	<input type="button" value="2"/>	<input type="button" value="3"/>	<input type="button" value="4"/>	Normal	<input type="button" value="6"/>	<input type="button" value="7"/>	<input type="button" value="8"/>	<input type="button" value="9"/>	Full	
Wordspace	Optimum	Default											
		<input type="button" value="A"/> 1 times natural wordspace											
Track-Kern Spaces		Yes	No										
TOC Doc Name													
Page# Stream		<input type="button" value="chap_page"/>											
Content													
Prefix		Yes	No										
Shared		Yes	No										
Read-Only		Yes	No										
Variable		On	Off										
		<input type="button" value="←"/>											

Figure 12

Component Properties		Format	Page	Custom	Tab	Profile	Attrs						
Hyphenation		Off	<input type="button" value="1"/>	<input type="button" value="2"/>	<input type="button" value="3"/>	<input type="button" value="4"/>	Normal	<input type="button" value="6"/>	<input type="button" value="7"/>	<input type="button" value="8"/>	<input type="button" value="9"/>	Full	
Wordspace	Optimum	Default											
		<input type="button" value="1"/> times natural wordspace											
Track-Kern Spaces		Yes	No										
TOC Doc Name													
Page# Stream		<input type="button" value="page"/>											
Content													
Prefix		<input type="button" value="No"/>											
Shared		<input type="button" value="No"/>											
Read-Only		<input type="button" value="Yes"/>											
Variable		On	Off										
Type		<input type="button" value="First on Page"/>											
Component		<None>											
		<input type="button" value="←"/>											

Figure 13

6. Execute *Apply*.

*Look what happens! The microdocument in the header now contains the text found in the first subhead component on page 1 (which is “Thanksgiving 1994”).*

7. Go to page 2.

*Look at the contents of the microdocument in the header on page 2. It contains the text, “New Year’s Eve 1994.” This is because the first subhead component on page 2 contains the text “New Year’s Eve 1994.”*

*Because the microdocument in the header is now a Variable Content component, the text in the header will appear different on every page. If a subhead component does not exist on a page, the microdocument in the header will be empty for that page.*

## Customizing Page Number Streams

### How do I create a custom page number stream for all of the documents in my book?

In Chapter 4, I explained how you can put a custom page numbering stream in the footer of a document. If you have several documents in a book, and you want all of the footers to use the same custom page numbering stream, then you need to define the page numbering stream in the book’s catalog, and export page properties from the catalog.

The first thing you need to do is create the catalog (if one does not already exist) or modify the existing catalog (if you already have one). For the sake of this example, we’ll assume that you already have an existing catalog, and we’ll simply modify it by adding a custom page numbering stream. The custom page numbering stream we’ll add is chapter-page (the same one discussed in Chapter 4).

1. Open the catalog.
2. Open the page property sheet of the catalog.
3. Move the mouse cursor to the top of the open property sheet, and click the select button in the *Page # Streams* box.

4. Following the steps outlined in Chapter 4, create a custom page numbering stream for chapter-page.

*Recall that the autonumber used in the custom page numbering stream must be present somewhere in the text area of the catalog document.*

5. Close the property sheet.

Now that you've defined the custom page numbering stream you wish to export, you must tell the catalog that you wish to export the custom page numbering stream to all of the documents in the book. To accomplish this, you select the *Page Props* export box on the catalog's object property sheet.

6. Move the mouse cursor into the *Name* box at the top of the document header, hold down the menu button, and execute *Props*.

*The object property sheet for the catalog opens.*

7. In the *Exports* field, click the select button in the *Page Props* box.

*This tells the software that you wish to export page properties from the catalog, which includes the custom page numbering stream.*

8. Execute *Apply*.

9. Close the property sheet.

10. Close and save the catalog.

*The chapter-page custom page numbering stream is exported from the catalog to all of the documents in the book.*

### **How do I number my document pages “page x of y,” where x is the current page number and y is the last page number of the document?**

It's always been a mystery to me why Interleaf provides an attribute for *page x of y* page numbering in tables, but not one for pages in a document. Not one to give up, I use the following set of steps when I want to provide *page x of y* page numbering in the footer or header frame of a document. This procedure is rather lengthy; therefore you should save this in a template document and store it in your *Create* cabinet so that you don't have to go through it every time you need this special page numbering.

For your convenience a document template with *page x of y* page numbering has been added to the companion disk that comes with the book.

The principle of this procedure is quite simple: create an autonumber that always appears on the last page of your document, and then reference that autonumber in a microdocument in the footer frame. On the autoreference property sheet, change the autoreference style from *Auto #* to *Page #*. That way the last page number always appears in the microdocument in the footer.

Given that, the first step in this procedure is to create a component that will always appear on the last page of your document.

1. Open the document in which you want the *page x of y* numbering to take place.
2. Create a new component called *last page*. Make its properties match those shown on the property sheet in Figure 14.

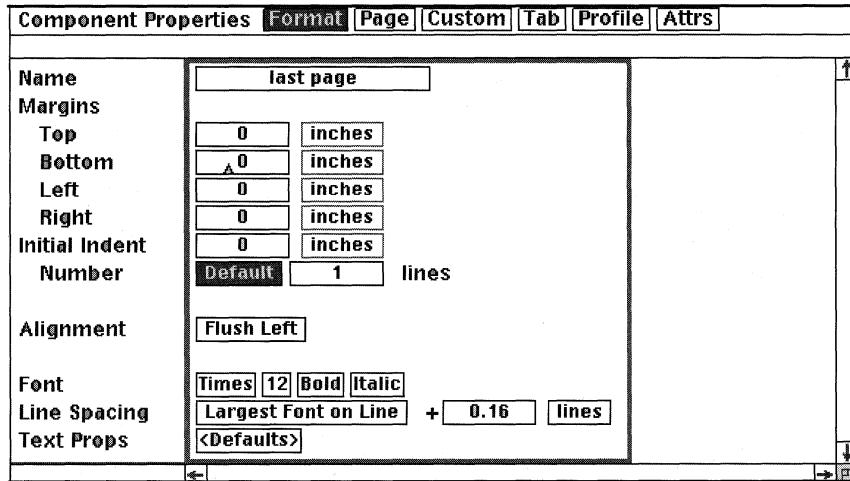


Figure 14

3. Move the mouse cursor into the *Page* box at the top of the property sheet and click the select button.

*The Page portion of the property sheet opens.*

4. Click the select button in the *No* box associated with the *Allow Page Break Before* field.

*You select this option so that the last page component will never end up on a page by itself.*

5. In the open property sheet, execute *Apply*.

*A stickup window appears, informing you that you are about to create a new component master.*

6. Select *Confirm* from the stickup window.

*The stickup disappears.*

The next step is to create an autonumber in the text area of the *last page* component.

7. In the text area of the new component create a *list* autonumber.
8. While the autonumber is still selected, hold down the menu button and execute *Props*.

*The property sheet for the autonumber opens.*

9. Go to the *Token* page of the autonumber property sheet (if you are not there already), and in the *Stream* field, change the autonumber stream name to *last page*, as shown in Figure 15.

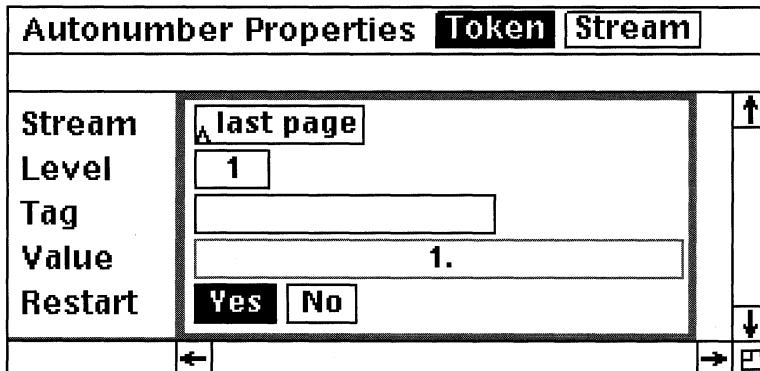


Figure 15

10. Go to the *Stream* page of the autonumber property sheet and remove all characters in the *Suffix* field, as shown in Figure 16.
11. Make sure the rest of the *Stream* page of the autonumber property sheet resembles the one shown in Figure 16.
12. In the open property sheet execute *Apply*.

*A stickup window appears, asking if you want to rename the current autonumber stream to last page or create a new autonumber stream.*

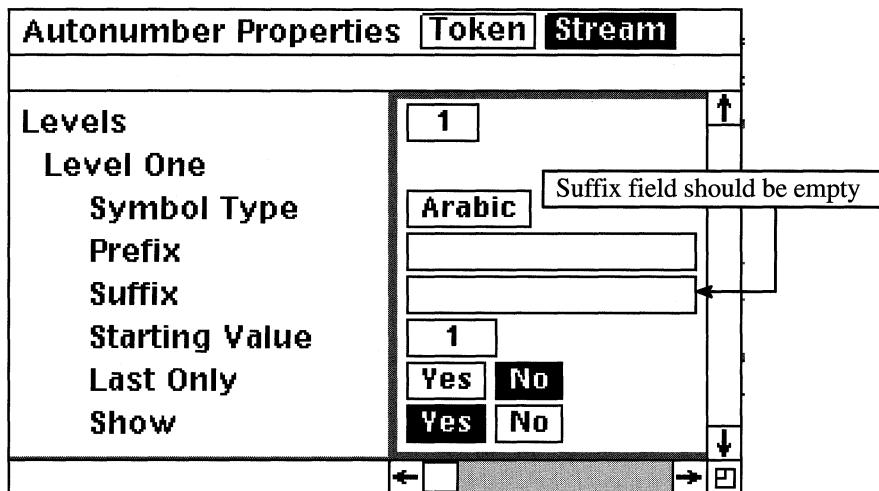


Figure 16

13. Select *Create* from the stickup window.

*The stickup window disappears.*

14. Close the property sheet.

You have just created an autonumber in the text area of the *last page* component. You will now use this autonumber to reference the last page number in a microdocument in the footer frame.

15. Open the footer frame.
16. In the open footer frame, create a microdocument and align it to the right side of the frame.
17. Open the newly created microdocument and type:

### Page

18. Press the space bar once and execute *Create→Ref→Page #→page*.

*A page number token depicting the current page number appears in the microdocument.*

19. Close the microdocument and the footer frame.

20. Select the *last page* autonumber that you previously created and execute *Misc→Autoref*.

*A reference to the autonumber is created on the clipboard.*

21. Open the microdocument in the footer frame.
22. Position the text caret immediately to the right of the page number token, press the space bar once, and type:

**of**

23. Press the space bar again and execute *Paste*.

*The reference to the autonumber is pasted in the microdocument.*

*Right now the autonumber is referenced in the footer; but what you really want to reference is the page number on which the autonumber exists.*

24. While the autoreference is still selected, execute *Props*.

*The autoreference property sheet opens, as shown in Figure 17.*

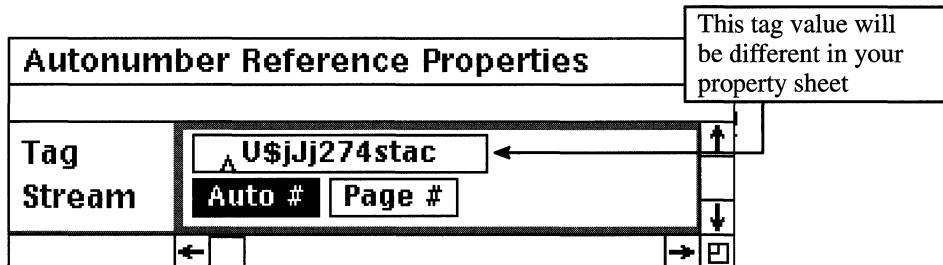


Figure 17

*Your Tag field will contain different contents, since the software randomly generates tag values when you execute *Misc→Autoref*.*

25. In the open property sheet, select the *Page #* box, as shown in Figure 18.
26. Execute *Apply* and close the property sheet.

*Notice that the autoreference in the microdocument no longer references the autonumber, but the page number on which the autonumber is placed.*

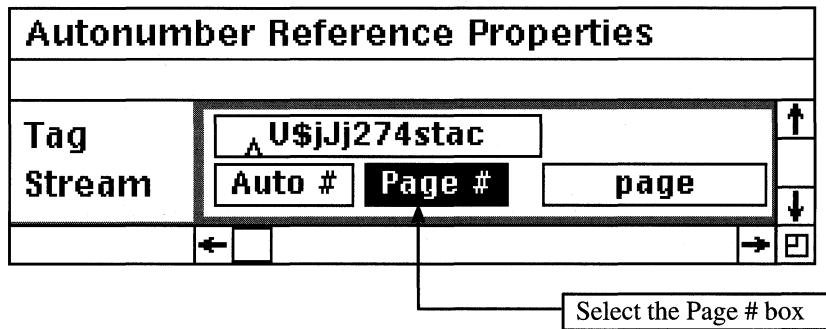


Figure 18

27. Close the autoreference property sheet.
28. Close the microdocument and the footer frame.

*As long as the last page component is on the last page of the document, the autoreference in the footer frame will reference the last page of the document.*

This seems like a handy device, except that it's a little annoying seeing that autonumber on the last page of the document. In addition, the autonumber takes up room in the text area. It'd be nice if we could hide the autonumber and make the contents of the *last page* component so small that it hardly takes up any room. That's exactly what the next set of steps entails.

29. Select the autonumber in the text area and execute *Props*.

*The property sheet for the autonumber opens.*

30. On the *Stream* page of the autonumber property sheet, select the *No* box in the *Show* field, as shown in Figure 19.
31. Execute *Apply* and close the property sheet.

*Notice that the autonumber is no longer visible in the text area. It's still there, you just can't see it.*

32. Select the *last page* component from the component bar, and execute *Props*.
33. Go to the *Format* page of the property sheet, if you are not there already.

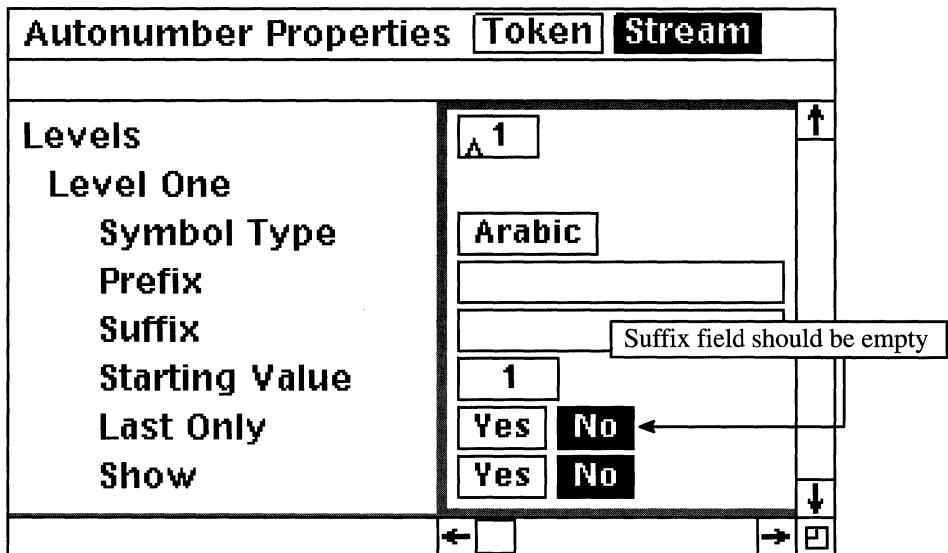


Figure 19

34. Change the font size to 2, as shown in Figure 20.

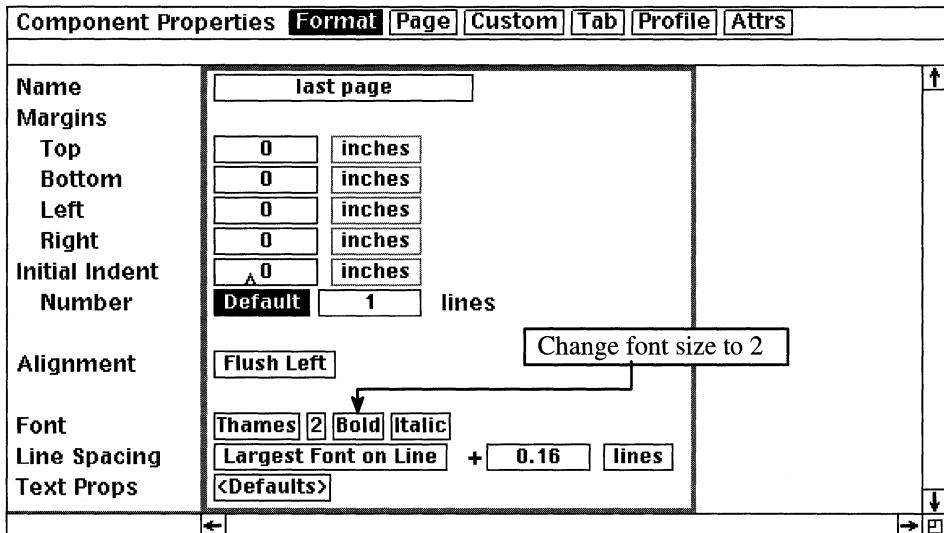


Figure 20

35. Execute *Global Apply→Confirm* and close the property sheet.

*The content in the last page component is now sized to 2-point size. This ensures that the invisible autonumber in the last page component takes up very little space in the document.*

Be aware that this procedure works only if you make sure that the *last page* component is always somewhere on the last page of the document. It's a good idea, therefore, to always make the *last page* component the last component in the document. Make it a rule of thumb to never enter any components after the *last page* component.

**Are there any other ways to create a page token in the header or footer?**

Yes. You can use text strings instead of microdocuments. Create a text string anchor, and while it is selected, press *Exc-p* or *Esc-#*. The page token for the current page will appear at the position of the text string anchor. Since the text string is in the header or footer, the appropriate page token will appear on every page.

## **8. Getting the Most Out of Books**

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The document assembly tools associated with Interleaf books comprise some of the most powerful features of the Interleaf software. Other desktop publishing packages may say that they have a *catalogs* feature, but these attempted duplicates do not really perform the same as Interleaf books and catalogs; they simply use the same terminology as Interleaf, but not the same functionality.

Besides allowing you to create consecutive page numbers and autonumbers across documents in a book, you can use Interleaf book and catalog features to do the following:

- Add a consistent layout to all documents in a book
- Add multiple layouts to selected documents or pages in a book
- Create a table of contents
- Create a book index
- Create an index for multiple volumes (books) in a series

This is only the tip of the iceberg. It's been my experience, unfortunately, that even intermediate Interleaf users do not take full advantage of all that Interleaf books and catalogs have to offer. This is due to the fact that users are usually under extreme deadlines when producing a large document; they use Interleaf any way they can just to get the job done, overlooking many handy features that would make life much easier.

In this chapter I will explain when and why you would want to assemble your documents in a book, and then I'll give you a few tips on how to make maintaining the book much easier. I'll also show you how to create table of contents and index documents in the most efficient manner.

## Taking Advantage of Books

### What is the advantage of storing documents in a book?

Unlike documents in other containers, documents in a book inherit some properties from one another. Most notably, page numbers and autonumbers flow consecutively across documents in a book. For example, if the first document in a book ends on page 10, the next document in the book begins on page 11. Similarly, if the last autonumber in a document ends with 20, the first autonumber in the next document begins with 21 (as long as we're talking about the same autonumber stream in each document.) Consequently, when you are creating a document that has chapters, and the page numbers flow across all of the chapters, it would be advantageous to make each chapter a document in a book. Or, if all of the figure labels that you use in a book must be numbered consecutively across all of the chapters in the book, then it would again be useful to make each chapter a separate document in the book.

Books also allow you to create special documents that cannot be created in other containers. A table of contents or an index document can only be created for documents in a book. You cannot put documents in a drawer, for example, and create a table of contents for all of the documents in the drawer. Therefore, if your final document must include a table of contents and/or an index, you must put the document in a book (either as a whole, or broken down into smaller chapter documents).

Other special documents that can only be created in books are those that have multiple page layouts. For example, let's assume that you have a 10-page report that's in portrait layout mode (8.5" x 11"). Page 9 of the report, however, must be in landscape mode (11" x 8.5"). Since this document has more than one page layout, it must reside in a book. The moral of the story is this: Any document that has a mixed page layout has to be created in a book.

Another strong argument for using books is the availability of catalogs. Catalogs can only be used in books. Catalogs allow you to standardize the layout and text format of all the documents in a book. For example, if your book has 15 chapter documents, naturally you want to make sure that all of the chapter headings look identical, all of the font styles and sizes for the text are consistent, and all of the page number styles are the same. You could accomplish this by editing the format of each document, but for 15 chapters, this would be tedious. Instead, books allow you to create a catalog where all the layout and format of the book is defined in one place. Any layout or formatting modifications are automatically exported to all of the documents in the book. It's like

one-stop shopping. The appearance of the book is defined in one spot, no matter how many documents you have in the book.

**What if I already have one large document that I want to divide up into chapters in a book? How do I split a document into smaller documents?**

One way is to use the *A-Page* feature. The *A-Page* feature was originally designed to allow the user to insert pages between existing pages without making the total page count increase. (I know this sounds impossible, but government agencies do it all the time; they love the *A-Page* feature.) The new pages that are inserted are called *A-Pages* because alphabetic characters are used to increment the page count (they are also sometimes referred to as *change pages*, *point pages*, and *revision pages*). For example, if you have a 10-page document and you want to insert three pages between pages 5 and 6, the new pages would be inserted as page 5a, 5b, and 5c, leaving the highest page number in the document still page 10. (Amazing, but true!)

So how can you use this feature to split up your document?

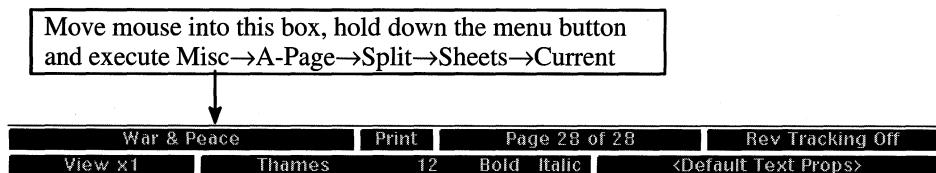
The way the *A-Page* feature works is that it splits the document at the point in which you want to insert pages. For example, if you want to insert pages between pages 5 and 6 in a 10-page document, then the *A-Page* feature splits the existing document into two smaller documents. The first document contains pages 1 through 5 and the second document has pages 6 through 10.

Knowing this, let's assume that you have a 50-page document that you want to split into two smaller chapter documents, and each chapter has 25 pages. To accomplish this, follow these easy steps:

1. Copy the document into a book.

*Uh-oh. Did I forget to mention this? The A-Page feature works only in a book. You cannot split documents when they reside in any other container.*

2. Open the document and go to page 25.
3. While the text caret is on page 25, move the mouse cursor into the document name box in the document header, as shown in Figure 1, hold down the menu button and execute *Misc*→*A-page*→*Split*→*Sheets*→*Current*.



*Figure 1*

*The document splits into three documents. The first document contains pages 1 through 24, the second document contains page 25, and the third document contains pages 26 through 50.*

4. Close and save all three documents.
5. Select the first two documents (pages 1–24 and page 25) and execute *Book→A-Page→Join*

*The selected documents are joined into one.*

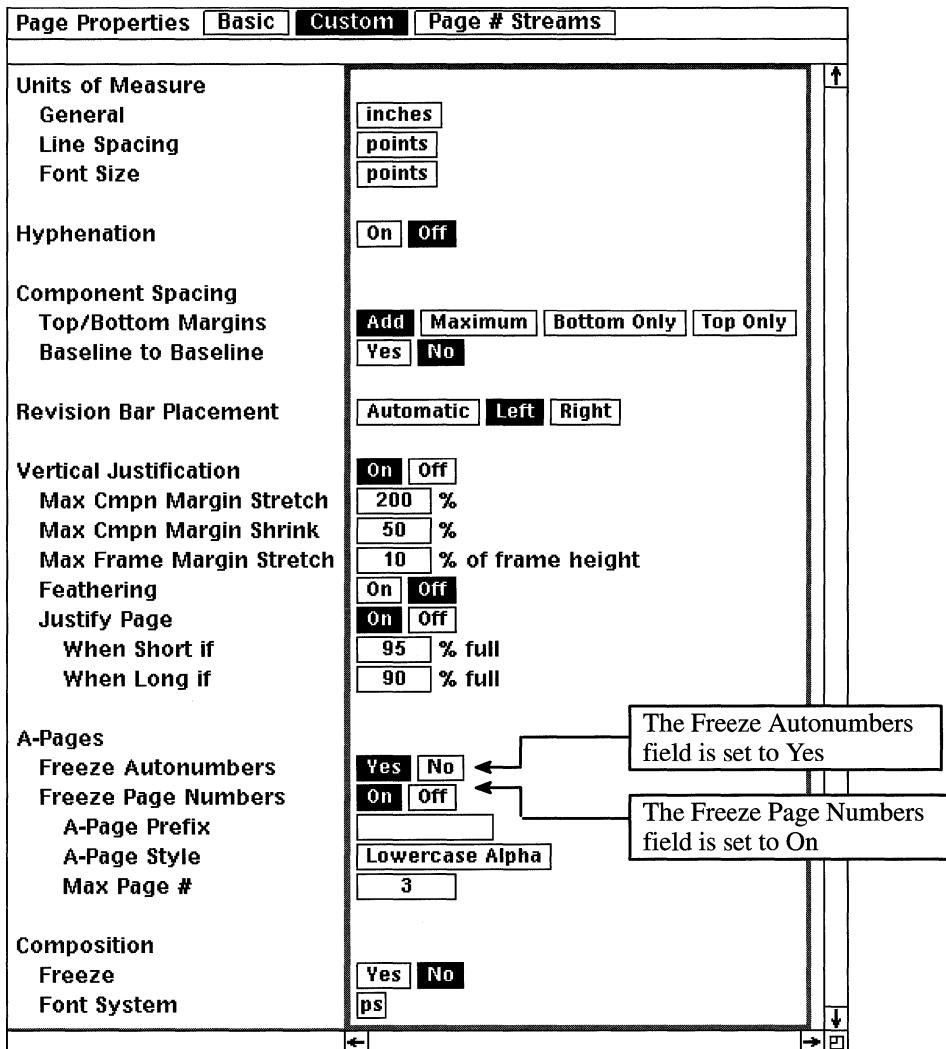
6. Rename the first document to *Chapter 1*, and the second document to *Chapter 2*.

At this point it might look like you're done, but not quite. When you split documents with the *A-Page* feature the autonumbers and page numbers in the split documents are frozen. This is because the *A-Pages* feature is not supposed to let autonumbers increment or the total page count to increase, even if you insert new information. Therefore, when you split a document, the autonumbers and page numbers in each resulting document are frozen (limited) to the current highest autonumber and page number. But in your case, you want autonumbers and page numbers to increment when required. Therefore, you need to "unfreeze" autonumbers and page numbers. To accomplish this, follow these easy steps:

7. Open *Chapter 1*.
8. Open the *Page Props* sheet.

9. Click the mouse cursor into the *Custom* box at the top of the property sheet.

*The Custom sheet opens, as shown in Figure 2.*



*Figure 2*

*Notice that the Freeze Autonumbers and Freeze Page Numbers fields are both activated.*

10. Click the select button in the *No* box in the *Freeze Autonumbers* field, as shown in Figure 3.
11. Click the select button in the *Off* box in the *Freeze Page Numbers* field, as shown in Figure 3.

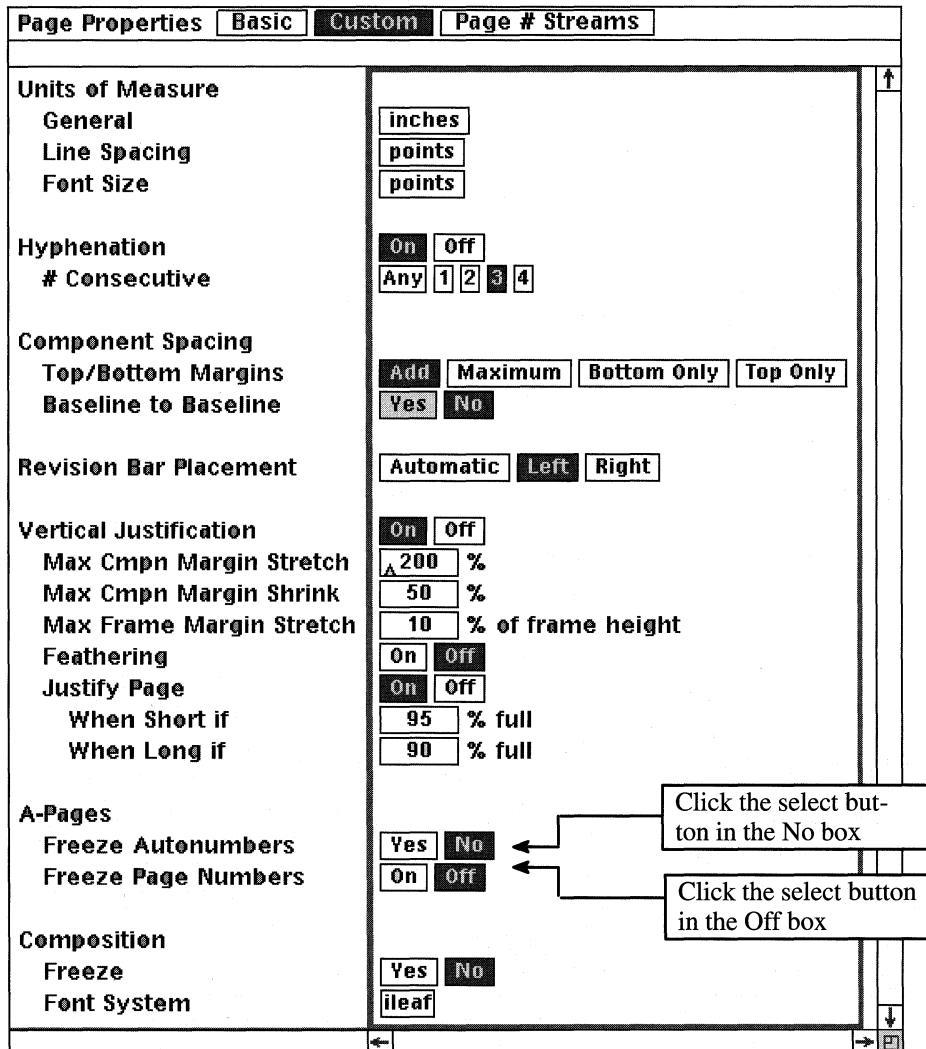


Figure 3

12. Execute *Apply* and close the property sheet.

13. Repeat steps 7 through 12 for each chapter 2.

*That's it! Now your larger document has been split into multiple smaller documents.*

If don't have the *Book→A-Page* option in your pulldown menus it's due to one of two reasons:

- You don't have your document in a book, or
- Your site has not purchased the *A-Page* option.

Yes, it's true. *A-Page* is part of *Revision Management*, which is a purchasable option. What this means to you is this: If your company did not buy the *Revision Management* option to Interleaf, you can't use *A-Page*. In that case, you will have to use the following cut and paste method to split your large document into multiple smaller documents:

1. Open a large document.
2. Move the component caret to where you want to split the document and execute *Select→to End*.
3. While the components are selected, create *Cut* from the component bar.
4. Move the mouse cursor to the desktop (outside of the document) and execute *Paste*.

*A document icon named 'from <doc name>' is created on the desktop. This document contains the components you cut from the first document.*

5. Rename the newly pasted document icon.

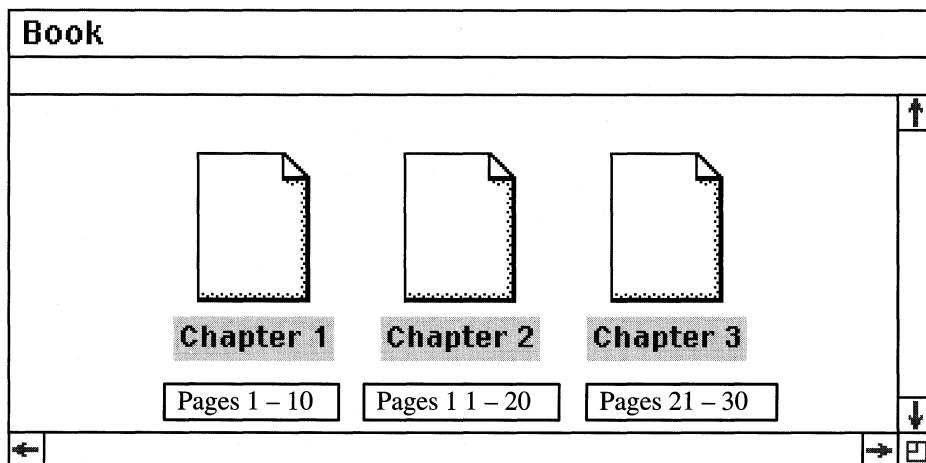
*You do not have to create a new document in which to paste previously cut components. When you cut components, they carry with them pages properties, object properties, etc., everything a document needs to stand alone.*

*If, however, you are still interested in purchasing the Revision Management option contact your local Interleaf sales rep or Interleaf VAR.*

### **How does Interleaf know the order in which to number the document pages in my book?**

The position of the document icons in the book window determine the page numbering and autonumber sequencing. Interleaf reads the documents from

left to right, top to bottom, in the open book window. So, for example, if you have three documents, ten pages each, labeled Chapter 1, Chapter 2, and Chapter 3 in an open book window, as shown in Figure 4, Chapter 1 will start on page 1 and end on page 10, chapter 2 will start on page 11 and end on page 20, and chapter 3 will start on page 21 and end on page 30. This is not because of the document names, but because of the document positions in the book window. Chapter 1 is the leftmost and topmost document in the window, therefore, it starts on page 1. Chapter 2 is immediately to the right of Chapter 1, therefore Chapter 2 inherits its first page number from the last page number of Chapter 1. For the same reason, Chapter 3 inherits its first page number from the last page number of Chapter 2 (and so on, if there are more documents in the book).



*Figure 4*

If you reposition the chapter documents in the book so that they are in the order shown in Figure 5, then Chapter 2 will start on page 1 and end on page 10 (because Chapter 2 is now the leftmost, topmost document in the book), Chapter 3 will start on page 11 and end on page 20 (because it will inherit its first page number from the last page number of Chapter 2), and Chapter 1 will start on page 21 and end on page 30 (because it will inherit its first page number from the last page number of Chapter 1).

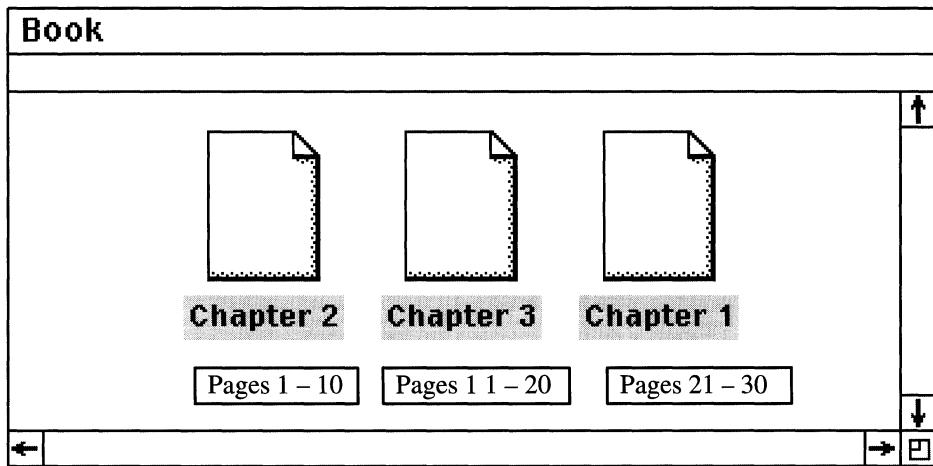


Figure 5

### How do I make sure Interleaf is interpreting my book documents in the right order (without opening each document to check)?

Since the order of the icons in the book determines the page numbering and autonumber sequencing for the entire book, you want to make sure that Interleaf is interpreting the icons in the right order. If your icons are bunched up, as shown in Figure 6, the software may be confused as to which icon is supposed to come first, second, third, and so on. If the software misinterprets the icon order, your page numbering and autonumber sequencing will be wrong.

To ensure that you and Interleaf agree on the icon order in a book, select all of the documents in the book, hold down the menu button and execute *Book→Line Up*. This will line the icons up in the window left to right, top to bottom, in the order in which the software thinks they should be. If this is not the right order, you can select individual icons and move them around in the book window until they are in the correct order. After you get the icons where you want them, select them all again, hold down the menu button and execute *Book→Sync* (you can also use *Custom→Misc→Resave*). This will internally re-number the pages and autonumbers in the documents to coincide with the new icon order.

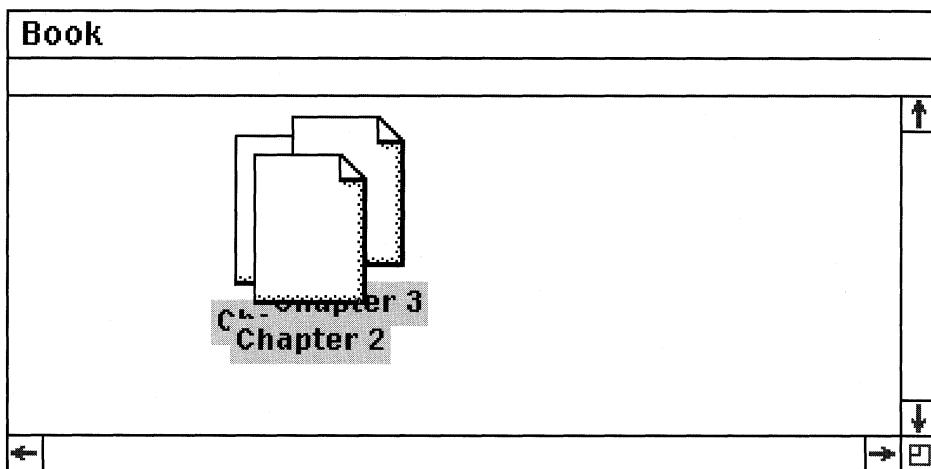


Figure 6

### Can I turn the inherit feature off for documents in a book?

Yes. If you want any document in your book to start on page 1 (regardless of where the document is positioned in the book), then perform the following steps:

1. Open the document whose page numbering you wish to modify.
2. Open the document's page property sheet.
3. In the open property sheet, click the mouse button in the *Inherit* box, as shown in Figure 7, and execute *Apply*.

This turns the page numbering inherit feature off *for this document only* (notice that the *Starting Page #* box now contains a 1). In the book, the document immediately to the right of this document will still inherit its starting page number from the last page number of this document. So, for example, if this document ends on page 5, the document immediately to its right will begin on page 6, and so on.

### What if I want every document in my book to start on page 1? Is there a way I can turn the page number inherit feature off globally for all documents in a book?

The only way you can turn inherit off for every document in a book is to turn inherit off on every page property sheet for every document in the book. Page

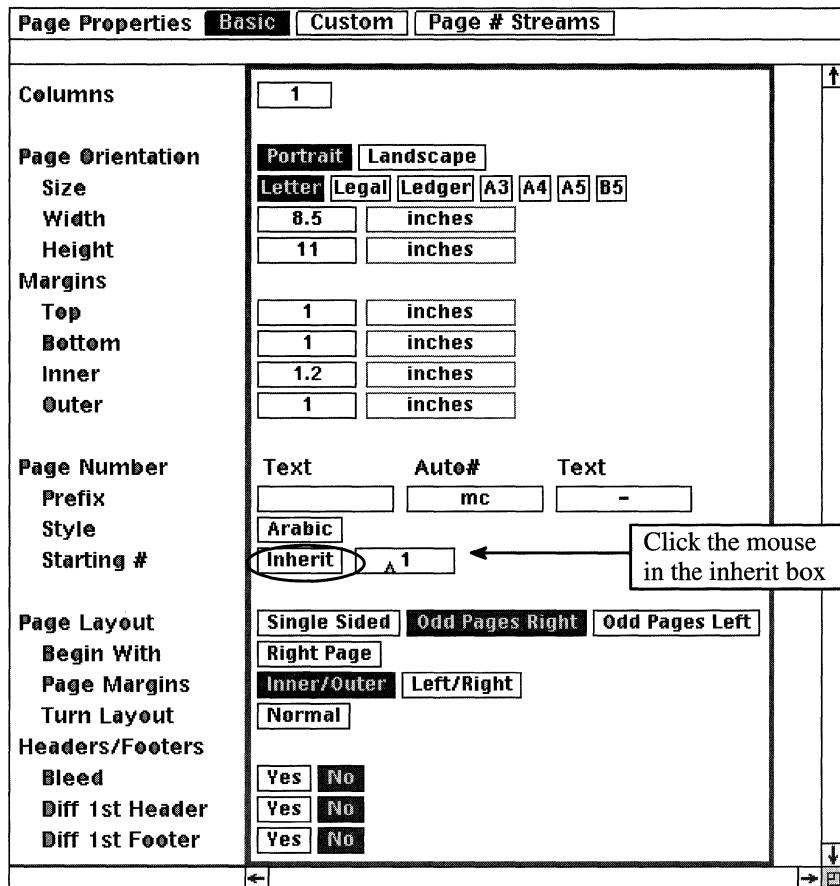


Figure 7

number inherit modifications cannot be exported from a catalog's page property sheet, even if you select the *Page Props* export box from the catalog's object property sheet.

The good news, however, is that you can create a chapter template that has inherit turned off on the page property sheet. If you begin each new chapter by using this template, you'll never have to worry about explicitly turning inherit off for each document in the book.

### How many documents can I store in a book?

As many as you want. Your only limitation is disk space. There is no hard-coded value that puts a cap on the number of documents you can have in a book.

**Is there a limit on the number of book documents (from the same book) that I can have open at one time?**

Yes, but you can change the limit. By default, you can have only four documents from the same book open at the same time. I find this limit rather annoying, but fortunately, this is a default that Interleaf allows you to modify.

To increase the number of documents in a book you can have open at one time, perform the following steps:

1. Invoke the *User Profile Tool* from the desktop by executing *Custom→Tools→Profile Tool*, or if you have a profile icon in your *Profile Drawer*, select the profile icon and execute *Open*.

*If you cannot access the User Profile Tool through the Custom→Tools menu, that means that the Profile Tool is not installed on your desktop. To install the User Profile Tool on your desktop, refer to Chapter 2.*

*The Profile Tool window appears, as shown in Figure 8.*

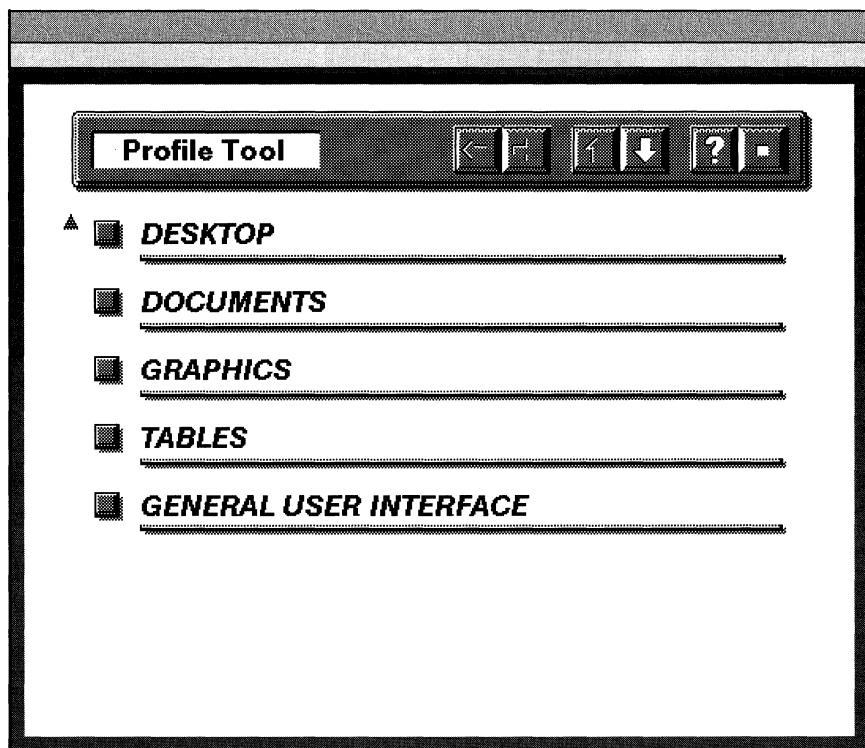
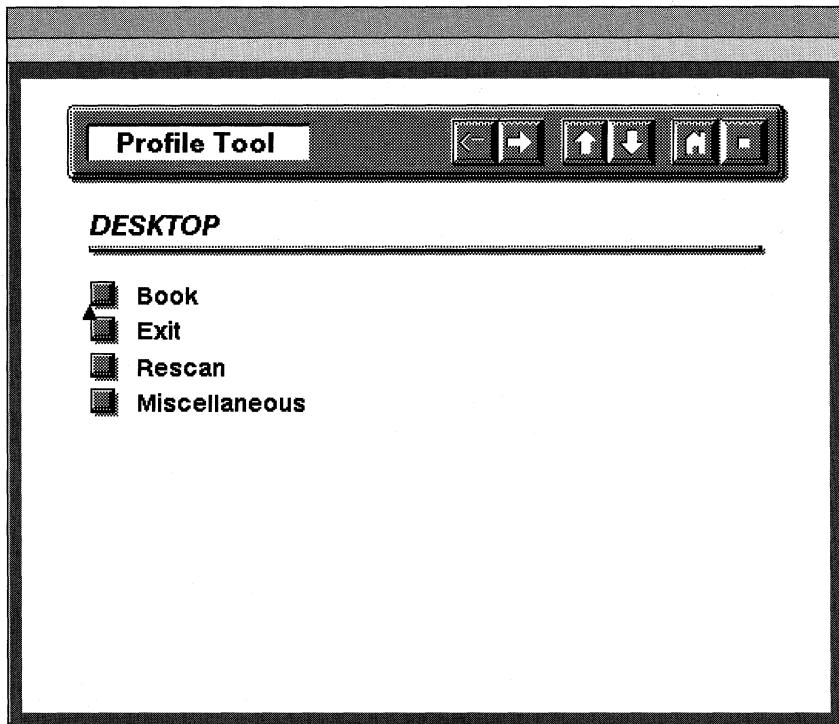


Figure 8

2. Select the *Desktop* button.

*The Desktop window appears, as shown in Figure 9.*



*Figure 9*

3. Select the *Book* button.

The Desktop Book window appears, as shown in Figure 10.

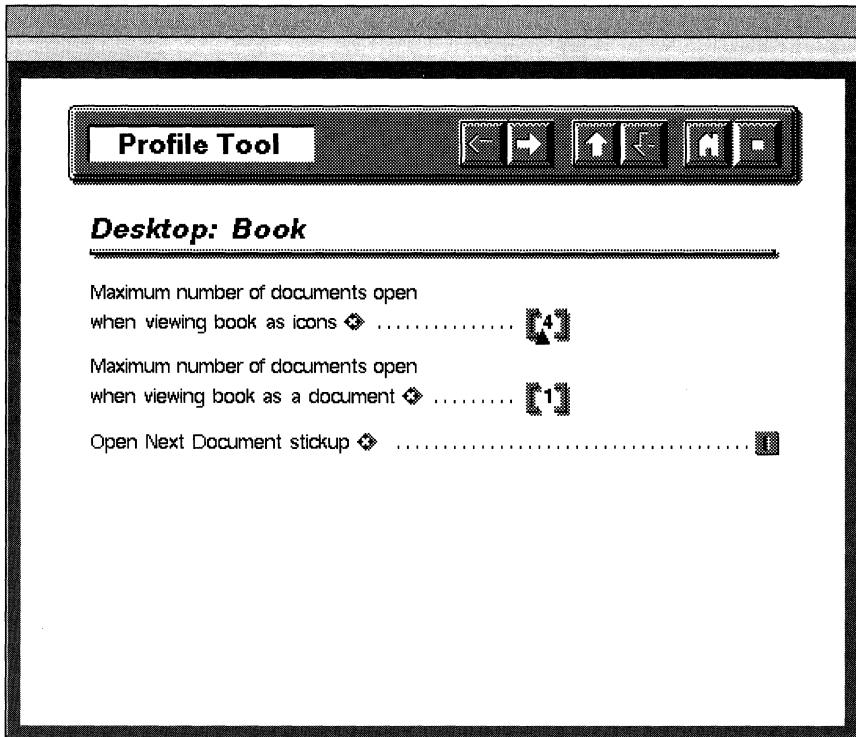


Figure 10

4. Change the value in the *Maximum number of documents open when viewing book as icons* field from 4 to the number you want, and execute *Load*.

*Your change is loaded onto your desktop.*

*If you wish to save this change between sessions, then you must also execute "Save" in the open Profile Tool window. "Save" permanently saves your changes in your profile icon. (For more information about the profile icon, refer to Chapter 2.)*

## Adding Catalogs for Consistent Style

### What is a catalog, and why would I want to use one?

A catalog is a special type of Interleaf document that defines the format and layout for all the documents in a book. For this reason, you can think of a catalog as a global style sheet for many documents. A catalog, however, can only be used in a book; it cannot be used in other containers, such as cabinets, drawers, or folders. If, therefore, you want all of the documents in a book to have a consistent look (for example, running headers, footers, global component styles, global table styles, etc.), then you must export those formats from a catalog.

It is important to note that catalogs are part of a purchaseable Interleaf option. Catalogs do not automatically come with the base Interleaf product.

### Exactly what kinds of things can I export from a catalog?

In Interleaf 5 there are seven export fields on a catalog object property sheet, as shown in Figure 11.

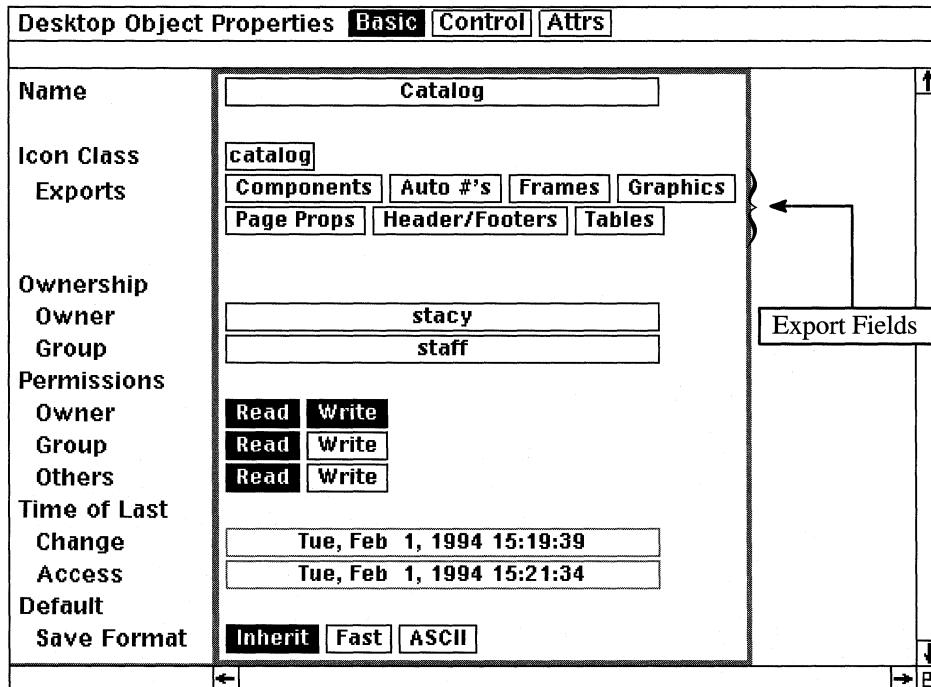


Figure 11

These exports are component properties, autonumber streams, frame properties, named graphic objects, page properties, headers and footers, and table properties. To export a particular set of properties or objects, you click the mouse on the export field you wish to activate and then execute *Apply*.

**Components:** If you select this export field, you can define component master definitions in the catalog and then access those component masters from within any document in the same book that contains the catalog.

**Auto#’s:** If you select this export field, you can define autonumber stream master definitions in a catalog and then access those autonumber streams from within any document in the same book that contains the catalog.

**Frames:** If you select this export field, you can define frame master definitions in a catalog and then access those frame masters from within any document in the same book that contains the catalog.

**Graphics:** If you select this export field, you can define named graphic objects in a catalog and then access those graphic objects from within any document in the same book that contains the catalog.

**Page Properties:** If you select this export field, you can define page properties (for example, page margin size, single-sided or double-sided pages, custom page number streams, etc.) in a catalog and then export those page properties to all documents in the same book that contains the catalog. This way, the layout of all your documents in your book is consistent.

**Headers/Footers:** If you select this export field, you can define header and/or footer content in a catalog and then export that content to all documents in the same book that contains the catalog. This way, the information in your headers and footers is consistent throughout all documents in your book.

**Tables:** If you select this export field, you can define table master definitions in a catalog and then access those table masters from within any document in the same book that contains the catalog.

### Where do catalogs come from? How do I make one?

A brand new catalog starts out as a regular document. To make a new catalog, create a new document (or you can use an existing document), and then perform the following steps:

1. Select the document and execute *Props* (you do not have to open the document).

*The document's object property sheet opens.*

2. Move the mouse cursor into the document Icon Class box, as shown in Figure 12, hold down the menu button, and select catalog from the list of menu items.

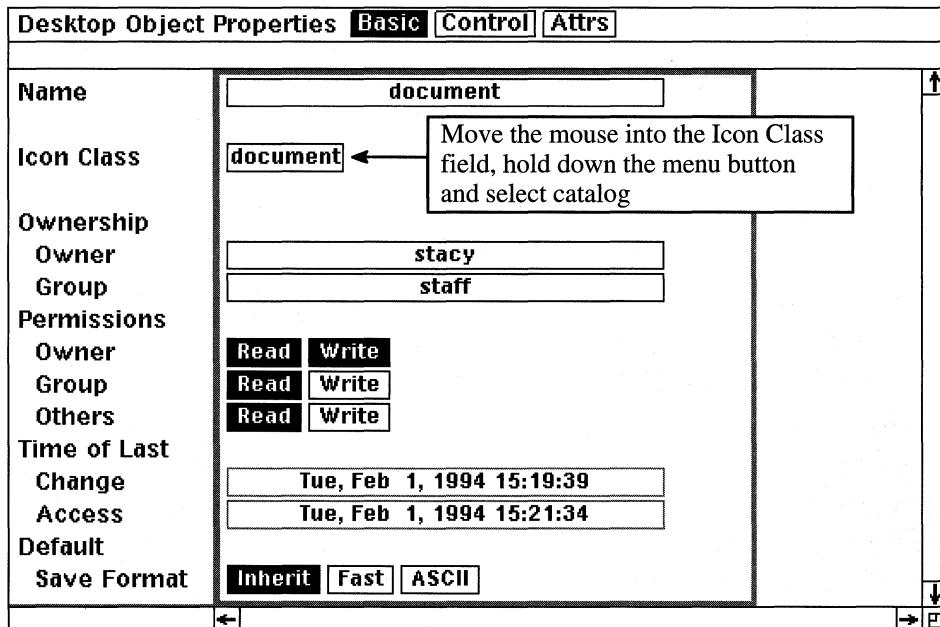


Figure 12

*Notice that you now have the export fields you need to export information from the catalog to the documents in the book.*

3. Execute *Apply*.

*A warning stickup window appears.*

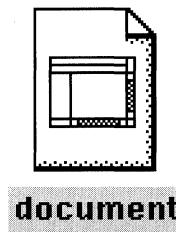
*By default, none of the exports are initially turned on. If you execute Apply without selecting an export field, Interleaf issues a warning stickup. It's not imperative that you turn on exports at the time that the catalog is created. What I usually do is leave the exports off until I'm ready to use them, and then go back and turn on the ones that I need.*

4. Select *Confirm* from the stickup.

5. Close the property sheet.

*You have just changed the object class of this icon from document to catalog.*

*Notice that the icon has changed form. It now looks like the icon shown in Figure 13.*



*Figure 13*

### **Do I have to be in a book to create a catalog?**

No. But you have to put the catalog in a book before the software will export anything from the catalog.

### **Can I rename a catalog icon?**

Sure. You rename a catalog the same way you rename any other document: either from the desktop (by deleting the icon name, and then typing in a new one), or by entering a new name in the *Name* box of the catalog's object property sheet.

### **Exactly where does the catalog go in the book window?**

The catalog must be to the left or above all of the documents that are to receive its exports, as shown in Figure 14.

In Figure 14, only Chapter 1, Chapter 2, and Chapter 3 receive exports from the catalog (because these documents are to the right of the catalog). Any documents to the left of the catalog will not receive the catalog's exports. For example, the *T. of Contents* document, as shown in Figure 14, will not be affected by the *Catalog* catalog. This is because the *T. of Contents* document is to the left of the catalog. Only documents to the right of the catalog will receive the catalog's exports.

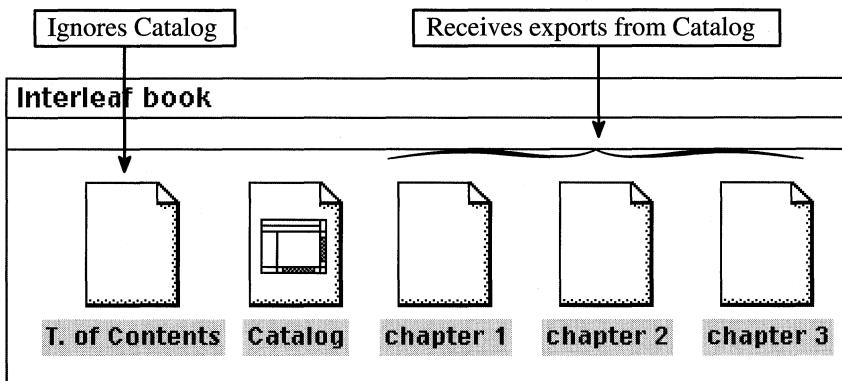


Figure 14

### How do I define exportable properties in a catalog?

Now that you know how to create a catalog, you need to know how to define the information you wish to export. In other words, you need to know how to put information in the catalog.

Entering exportable information into a catalog is as easy as editing a document. Just follow these easy steps:

1. Select the catalog and open it, just as you would any other document.

*Notice that the inside of a catalog looks just like the inside of a document.*

2. Within the open catalog, define any component masters, frame masters, named graphic objects, table masters, page properties, and header/footer information that you wish to export to the documents in the book. Whenever you make changes to objects in the catalog make sure you execute *Global Apply→Confirm* (instead of *Apply*) from the open property sheet.
3. When you are ready to export, open the catalog's object property sheet, select the export box(es) you want, execute *Apply*, and close the property sheet.

*The properties and objects that you defined in the catalog are exported to the documents in the book.*

Turning the exports on from the object property sheet (step 3) is required only when you set up the catalog for the first time. If you add a new exportable object to a catalog (such as a new component), you do not have to reselect the export button for that object if the export button has already been selected. For example, if the *Components* export button is already turned on, and you add a new component called *subhead* to the catalog, you do not have to reselect the *Components* export button from the catalog's object property sheet.

It is also important to note that if you make a change to an exported object in a catalog (such as a component, frame, etc.), you must execute *Global Apply→Confirm* from the object's property sheet (in the catalog). For example, let's assume that you make a change to the *Title* component in the catalog, and the *Title* component is exported to all documents in the book. In order for all documents in the book to receive the changes, you must execute *Global Apply→Confirm* from *Title* component's property sheet in the catalog.

### **If I enter text in the text area of my catalog, will that text be exported to the documents in my book when I export component properties?**

No, not unless the catalog component that contains the text is defined as an initial content or shared content component. Another exception is text in the prefix of a prefix component, which is exported. If the component is just a basic component, however, only the component properties are exported, not the actual component text.

### **Can I have more than one catalog in a single book?**

Yes. In fact, some people create a different catalog for each group of properties they export (although I think that's a bit of overkill). Still others create separate catalogs based on the type of objects they export: a *Graphics* catalog (only the *Frames* and *Graphics* exports are turned on), a *Layout* catalog (only *Page Props* and *Headers/Footers* exports are turned on), and an *Objects* catalog (only the *Components*, *Auto#*'s, and *Tables* exports are turned on), as shown in Figure 15.

Other sites have created catalogs based on groups of documents. For example, they might have a catalog that defines the format defaults for the front matter of a book, a second catalog that defines what the body (chapters) of the book look like, and a third catalog that dictates the format of the end matter (appendices, indices, glossaries, etc.), as shown in Figure 16.

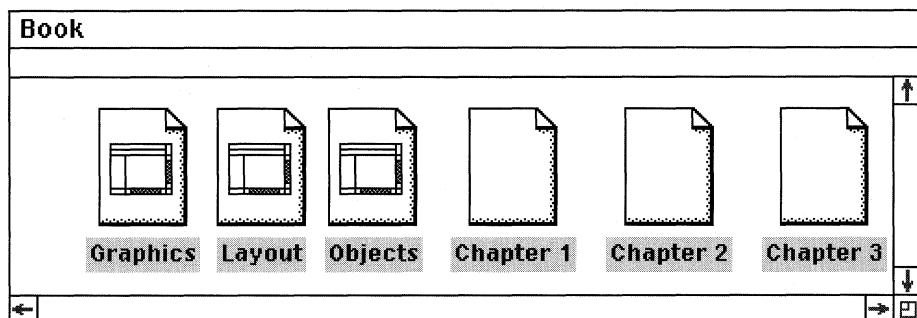


Figure 15

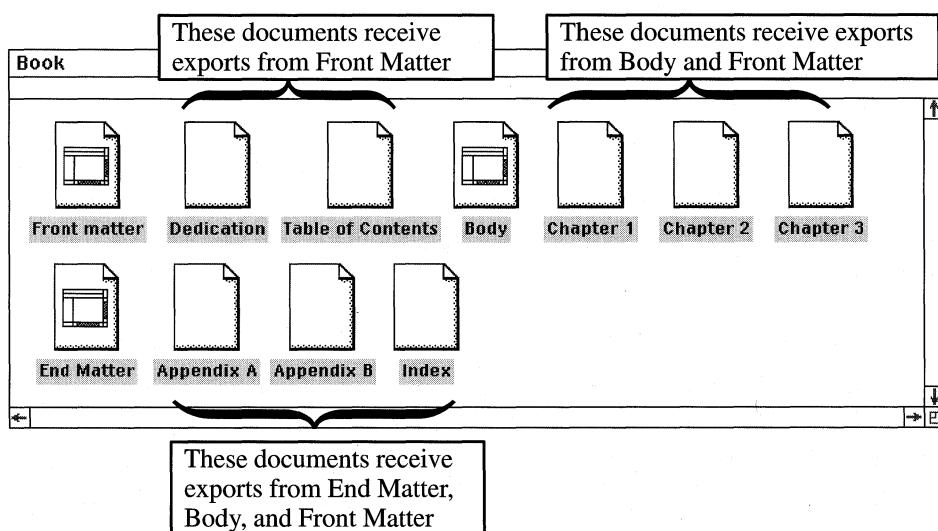


Figure 16

If you have multiple catalogs in a book, a document in the book takes the exports from the first catalog it encounters to the left or above. For example, in Figure 16, if *Appendix A* contains *para* components, and the *End Matter* catalog and the *Body* catalog both contain *para* components (and both catalogs are exporting component properties), *Appendix A* will import the *para* master definition from the *End Matter* catalog. This is because *End Matter* is the closest catalog to *Appendix A*'s left.

If the document can't find all of the exports that it needs, then it continues searching to the left until it finds another catalog. Again, looking at Figure 16, if *Appendix A* has a *title* component and the *End Matter* catalog doesn't have a *title* component to export, but the *Body* catalog does, then *Appendix A* will import the properties for the *title* component from the *Body* catalog.

### I've set up a catalog, yet the properties that I've defined in my catalog are not exporting to the documents in my book. Why?

It could be a number of things. Before you start tearing your hair out or yelling at the people on the hotline, try these things first.

- Check to make sure that you've selected the right export boxes on the catalog's object property sheet. You'd be surprised how many times I've created named graphic objects (for example) in my catalog, and then forgot to turn on the *Graphics* export box on the catalog's object property sheet. The result, no graphics were exported to the documents in my book.
- Make sure that your catalog is in a book. Remember, catalogs work only in books.
- Make sure that the name of the object that you are exporting matches in both the catalog and the document. For example, if you define a component named *Title* in the catalog, and in the book's documents you use a component named *title*, the documents will not import the *Title* component properties from the catalog (because to the software *Title* and *title* are not the same thing). *Case counts!* (As well as spaces, underscores, and special characters.)
- If the documents are out of synch, weird things can happen (such as your documents ignore your catalog). In this case, select all of the documents in the book, including the catalog, and execute *Book→Sync*. On the resulting stickup window, select the *All* button. All of the selected documents will be synchronized. Sometimes this helps.

- Have the catalog and/or book documents been filtered or *idu-ed*? Once in a while (not every time) I experience what I call *catalog meltdown* when transferring books with catalog and documents from DOS to UNIX or when filtering documents from another source. When I get everything over to UNIX, the documents ignore the catalog, so if I make a change in the catalog, the documents don't update. To correct this problem, I select all of a particular component in an open document and execute *Change→<Catalog>→(Catalog name)→(Component Name)* from the component bar. As a result, all of the components of the same name use the catalog master definition.

### **Can a catalog be stored in a container other than a book?**

Absolutely. You can *store* a catalog in any type of container (cabinet, drawer, folder, book), but you can use a catalog only in a book. In fact, many sites create a drawer or a folder called *Catalogs* (or something equally telling), in which they store their catalog documents. Then whenever they need a catalog for a new book, they just open the drawer or folder and copy the desired catalog into the new book. (No sense recreating the wheel every time you start a new project, right?)

### **Can a catalog be stored as a template document in my *System5/Create* cabinet?**

Most definitely. In fact, if you create a *Catalogs* container and put it in the *Create* cabinet, all of the catalogs in that container will appear as menu items on the *Create→Catalogs* desktop menu. As a result, whenever you want to copy one of your catalogs into a new book, just execute *Create→Catalogs→(pick the catalog you want)*.

### **What's the difference between a catalog and a template?**

This drove me nuts when I first started learning Interleaf. Many people consider a template to be a catalog *only* (not any other type of document). But the Interleaf documentation and education classes refer to a template as *any* document that you use as a starting point for creating new documents. So if someone refers to an Interleaf template, you may have to clarify whether they mean a catalog or a non-catalog document.

## Creating a Table of Contents and Index

### How do you create a table of contents?

A table of contents can only be created for documents in a book. When you generate a table of contents, the result is a new TOC document in the book. If, therefore, the documents for which you want to create a table of contents are stored in a container other than a book, you must move those documents into a book.

Once the documents are in a book, you tag the text that you want to appear in the table of contents. This tagging process is actually done in the property sheet of the component that contains the text. After a component has been tagged, all of the text in that component appears in the table of contents when the table of contents is generated. For example, if you want all of the *title*, *head*, and *subhead* components in Chapter 1 to appear in the table of contents, perform the following steps:

1. Select the *title* component and open its property sheet.
2. Select the *Custom* box at the top of the property sheet.

*The Custom sheet opens, as shown in Figure 17.*

3. Move the mouse cursor into the *TOC Doc Name* box and enter the name you wish to give your table of contents document, as shown in Figure 18. (For the sake of this example, I've called the table of contents document *NewTOC*.)
4. Execute *Global Apply*→*Confirm*.

*If you execute *Apply*, only the text for this instance of the *title* component will be included in the table of contents. If you execute *Global*→*Confirm* the text in all of the *title* components in Chapter 1 will be included in the table of contents.*

5. Close the property sheet.
6. Repeat steps 1 through 5 for the *head* and *subhead* components. Be sure that you use the same table of contents name (in this case, *NewTOC*) in the *TOC Doc Name* field of each component property sheet.
7. Once all of the components in the documents are tagged, select the document and execute *Book*→*TOC*.

Component Properties		Format	Page	Custom	Tab	Profile	Attrs
<b>Hyphenation</b>	<input type="button" value="Off"/> <input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="Normal"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="Full"/>						
<b>Wordspace</b>	<input type="button" value="Default"/>						
<b>Optimum</b>	<input type="text" value="1"/> times natural wordspace						
<b>Track-Kern Spaces</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						
<b>TOC Doc Name</b>	<input type="text"/>						
<b>Page# Stream</b>	<input type="text" value="chap_page"/>						
<b>Content</b>							
<b>Prefix</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						
<b>Shared</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						
<b>Read-Only</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						

Figure 17

Component Properties		Format	Page	Custom	Tab	Profile	Attrs
<b>Hyphenation</b>	<input type="button" value="Off"/> <input type="button" value="1"/> <input type="button" value="2"/> <input type="button" value="3"/> <input type="button" value="4"/> <input type="button" value="Normal"/> <input type="button" value="6"/> <input type="button" value="7"/> <input type="button" value="8"/> <input type="button" value="9"/> <input type="button" value="Full"/>						
<b>Wordspace</b>	<input type="button" value="Default"/>						
<b>Optimum</b>	<input type="text" value="1"/> times natural wordspace						
<b>Track-Kern Spaces</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						
<b>TOC Doc Name</b>	<input type="text" value="NewTOC"/>						
<b>Page# Stream</b>	<input type="text"/>						
<b>Content</b>							
<b>Prefix</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						
<b>Shared</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						
<b>Read-Only</b>	<input type="button" value="Yes"/> <input type="button" value="No"/>						

Figure 18

*A table of contents document is generated. The name of the table of contents document is the same name you entered in the tag field on the component property sheets. In this case you entered NewTOC in the TOC Doc Name field of the component property sheet. Therefore your resulting table of contents document name will be NewTOC.*

8. Open the *NewTOC* document.

*Notice that the NewTOC includes all of the text from the components you tagged. Also notice that the component names are the same as the components that you tagged, except TOC has been appended to each component name.*

### **What if I want to create a table of contents for all of the documents in a book? Do I have to do the tagging for each document in the book?**

You can, but you don't have to. You can instead do the tagging in a catalog and then export the tagged component masters to all of the documents in the book. For example, let's assume that you want to tag all of the *title*, *head*, and *subhead* components in all 10 chapters in a particular book. Instead of opening all 10 chapters and doing the same tagging in each document, you can create a *title*, *head*, and *subhead* component in a catalog, enter the TOC tag on each component property sheet, and then export component properties from the catalog. The result: All of the *title*, *head* and *subhead* components for all of the documents in the book will be included in the table of contents when generated.

### **How does the software format the table of contents?**

That's a good question. From what I can tell, Interleaf formats the table of contents using some of the component properties brought in from the tagged components. This means that if, for example, the original tagged *subhead* component include tabbed text, the tabs are brought over into the table of contents. You can image how this can wreak havoc with the overall look of your table of contents. That's why it's a good idea to create a table of contents template and use it to reformat the table of contents that the software generates. (See Chapter 5 for more information on creating a table of contents template.)

### **If I already have a table of contents document and I generate a new one, what happens to the old one?**

If the newly generated table of contents has the same name as your old one, the software allows the new one to write over the old one without warning you. This could prove most disheartening if you just spent hours reformatting your

table of contents document. This is another reason why it's a good idea to create a table of contents template or catalog and use it to reformat the table of contents that the software generates. (See Chapter 5 for more information on creating a table of contents template.)

### **Can I create more than one table of contents for a single book?**

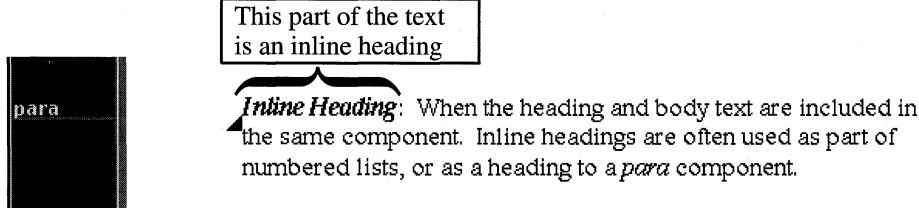
Absolutely. You can create as many table of contents documents as you want for a single book. For example, you can create a table of contents for text, one for figures, and one for tables. The secret is to create different TOC tags for different groups of objects: for example, give all of the text components that are to appear in the table of contents the same TOC tag (such as *TextTOC*), all of the figure labels the same TOC tag (such as *FigTOC*), and all of the table labels the same TOC tag (such as *TableTOC*). Then when you execute *Book→TOC* you will get three table of contents documents — *TextTOC* (which includes all of the tagged component text), *FigTOC* (which includes all of the tagged figure labels), and *TableTOC* (which includes all of the tagged table labels).

### **How can I tag a figure label for table of contents that exists inside a frame?**

Simple. Just make sure that the figure label is a microdocument (as opposed to a text string). A microdocument has a component property sheet on which you can specify a TOC tag, a text string does not.

### **How can I tag inline headings to be included in a table of contents?**

An inline heading is one in which the heading and body text are included in the same component, as shown in Figure 19.



*Figure 19*

This appears to present a problem in that if you tag the whole component, all of the text in the component will be included in the table of contents, when you only want the inline heading.

To overcome this problem, simply select the inline heading text (for example, the text *Inline Heading* in Figure 19) and convert it to an inline component by executing *Misc→Convert→to Inline→(pick the inline component you want)*. Once the text is in an inline component, you can select the inline component, open its property sheet, and enter a TOC tag in the *TOC Doc Name* field.

### How do you create an index?

An index can only be created in a book. You cannot create an index for documents stored in cabinets, drawers, or folders, or for documents sitting on the desktop. Any document for which you want an index for must be stored in a book.

To create an index entry, perform the following steps:

1. Move the text caret to the text in the document that you want to reference and, from the text area, execute *Create→Index*.

*Two things happen: A small gray index token appears at the position of the text caret, and the index property sheet automatically opens, as shown in Figure 20. The word “empty” appears in the first level in the index property sheet.*

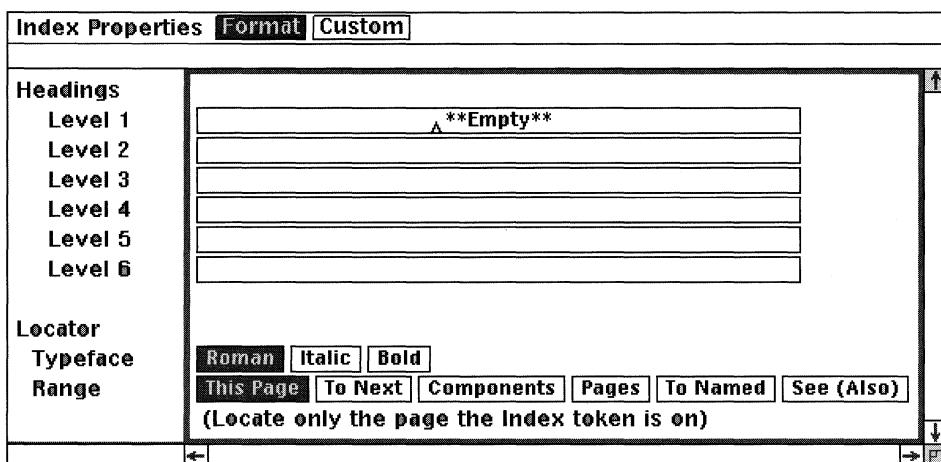


Figure 20

An index entry can have up to six levels. Each level is indented from the previous level. You can also specify if the page numbers are to be bold or italic by selecting one of the boxes in the *Typeface* field.

2. In the *Level 1* field, type the first level of how you want the entry to appear in the index. For example, if you are creating an index entry for text that states *Executive Summary*, and that's how you want it to appear in the index, then type *Executive Summary* in the *Level 1* box.
3. Select a range box from the *Range* field.

*The Range field specifies the page number range that the index entry is to cover. There are six Range field boxes, each describing a different type of page range.*

**This Page:** If you select the *This Page* range box, the page number in the index entry will be the page number on which the index token sits (also known as the current page).

**To Next:** If you select the *To Next* range box, the page number range for the index entry will include the current page and all the pages up to the next component.

**Components:** If you select the *Components* range box, the page number range for the index entry will include the current page and all the pages up to the number of components specified in the *Count* box. The *Count* box automatically appears when you select the *Components* box. You can specify any number you want in the *Count* box.

**Pages:** If you select the *Pages* range box, the page number range for the index entry will include the current page and all the pages up to the number of pages specified in the *Count* box. The *Count* box automatically appears when you select the *Pages* box. You can specify any number you want in the *Count* box.

**To Named:** If you select the *To Named* range box, the page number range for the index entry will include the current page and all the pages up to the component name specified in the *End At* box. The *End At* box automatically appears when you select the *To Named* box. You can specify any component you want in the *End At* box.

**See (Also):** If you select the *See (Also)* range box, no page number is displayed in the index entry. Instead, a reference is made to another

*index entry. You specify the reference in the large See (Also) box that automatically appears at the bottom of the property sheet when you select the See (Also) range box. You can specify any text or information you want in the large See (Also) box.*

4. When you have completed your index entry, execute *Apply* and close the property sheet.
5. Repeat steps 1 through 4 for all text in the book that you wish to reference in the index.
6. Close and save all documents in which you entered index tokens.
7. Select all of the document icons in the book and execute *Book→Sync* or *Custom→Misc→Resave*.

*This ensures that all of the summary files for all of the documents in the book are synchronized before you generate an index.*

8. Select the documents in the book and execute *Book→Index*.

*An index document is created. The entries in the index include all of the information that you entered on all of the index property sheets.*

### **What's the difference between normal index and a master index?**

Executing *Book→Index→Normal* creates an index for all selected documents in a book. The resulting index document includes entries with referencing page numbers, as shown in Figure 21.

## A

Autonumbers  
cross references. *See Autoreferences*  
multi level, 5-8  
single level, 5-7  
Autoreferences, 6

## B

Books, overview, 3

## C

Cabinets, overview, 3  
Catalogs, 9-12  
  exports, 9-11  
  icon type, 9  
The Clipboard, 3  
Creating Macros, 9-11  
Curriculum Format, Exercises, 3-7  
Curriculum Overview, 3-7  
  Class format, 3  
Customizing a document, 4-6  
Cutting and pasting, 3-6

## D

Documents, overview, 3

Drawers, overview, 3

## F

Folders, overview, 3

## G

Getting Started, 3-6

## P

The Page Property Sheet, 4

## R

Revision Tracking, 8

## S

Search & Replace, 10

## T

Tabs, 10-12  
  creating, 10  
  move, 10-12  
  scale, 10-12

Figure 21

Executing *Book*→*Index*→*Master* creates an index for all selected sub-books in a book. The resulting index document includes entries with referencing sub-book names and page numbers, as shown in Figure 22.

<b>A</b> Autonumbers cross references. <i>See</i> Autoreferences multi level: <i>Volume 1</i> 3-6 single level: <i>Volume 1</i> 3-5 Autoreferences: <i>Volume 1</i> 14	<b>D</b> Drawers, overview: <i>Volume 1</i> 1
<b>B</b> Books, overview: <i>Volume 1</i> 1	<b>F</b> Folders, overview: <i>Volume 1</i> 1 Frames: <i>Volume 2</i> 14-16
<b>C</b> Cabinet, System 5: <i>Volume 2</i> 12 Cabinets, overview: <i>Volume 1</i> 1 Catalogs: <i>Volume 1</i> 7-10 exports: <i>Volume 1</i> 7-9 icon type: <i>Volume 1</i> 7 The Clipboard: <i>Volume 1</i> 1 Creating Macros: <i>Volume 1</i> 7-9 Curriculum Format, Exercises: <i>Volume 1</i> 1-5 Curriculum Overview: <i>Volume 1</i> 1-5 Class format: <i>Volume 1</i> 1 Customizing a document: <i>Volume 1</i> 2-4 Cutting and pasting: <i>Volume 1</i> 1-4	<b>G</b> Getting Started: <i>Volume 1</i> 1-4 Graphics: <i>Volume 2</i> 14-16
<b>D</b> Dictionary Master: <i>Volume 2</i> 20 System: <i>Volume 2</i> 20 User: <i>Volume 2</i> 20	<b>H</b> Hyphenation: <i>Volume 2</i> 20-22
<b>P</b> The Page Property Sheet: <i>Volume 1</i> 2 The Profile Tool: <i>Volume 2</i> 15-17	<b>R</b> Revision Tracking: <i>Volume 1</i> 6
<b>S</b> Search & Replace: <i>Volume 1</i> 8 The Spellchecker: <i>Volume 2</i> 20-22	<b>T</b> Tabs: <i>Volume 1</i> 8-10 creating: <i>Volume 1</i> 8 move: <i>Volume 1</i> 8-10 scale: <i>Volume 1</i> 8-10

Figure 22

For example, let's assume you have a book called *Beekeeper's User Manual*. Inside this book are two other books called *Volume 1* and *Volume 2*, as shown in Figure 23.

Inside each volume is a series of documents. In this case, if you want to create a master index that includes volume number and page number entries, select the *Volume 1* and *Volume 2* book icons in the *Beekeeper User's Manual* window

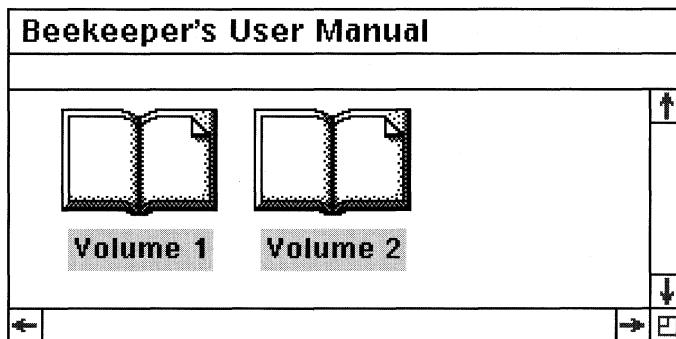


Figure 23

and execute *Book→Index→Master*. A master index is created that has volume and page entries.

On the other hand, if you want to create individual indexes for each book (*Volume 1* and *Volume 2*), then open each volume, select all of the documents in the book and execute *Book→Index→Normal*. A normal index is created that has page entries only, as shown in Figure 21.

### What's the *Book→Sync* command used for?

The *Book→Sync* command is used to synchronize the summary files in a book. Summary files (also called sync files) are the internal files the software uses to keep track of autonumber and page number streams and any other document-inherited information in books. Every time a document in a book is opened, its summary files are automatically updated to coincide with the rest of the summary files in the book.

If, however, you create a document outside of a book and then copy that document into a book, that document's summary files are inconsistent with the summary files for the rest of the documents in the book. This means that the autonumbers and page number streams in the new document are not "in sync" with the autonumbers and page numbers in the rest of the documents in the book. This can cause a lot of formatting problems, especially when creating a table of contents or index.

To remedy this situation, you can either open the document that you copied or select the new document and execute *Book→Sync* or *Custom→Misc→Resave* (either command will synchronize summary files). If you copy a lot of new documents into a book, using *Book→Sync* or *Custom→Misc→Resave* is much easier than individually opening all the new documents.

# **9. Printing a Document**

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Sad, but true. No desktop publishing product is worth its ink if it can't print a document on *my* printing device. I've used some (supposedly) very powerful desktop publishing and graphics packages, but if they produce output only on some weird device (or worse yet, on every type of device but mine), then the software is nothing but junk to me.

Fortunately for all of us, the printing functions in Interleaf are very good and very easy to use. And with the introduction of PostScript printers, Interleaf's printer support has grown immensely in the last few years. This is good news for all of us who work on multiple platforms, using multiple printing devices.

Even though printing in Interleaf is a simple task, there are a few conceptual questions that repeatedly come up regarding printing. This chapter addresses some of the more common questions that occur whenever you fire up a printer.

## **Printing Pages**

### **How do I print selected pages of an Interleaf document?**

There are two ways to do this: execute *Print→Current Page* or *Print→Range of Pages*.

#### **Using Print→Current Page**

If you only want to print a single page, an easy way is to use *Print→Current Page* as follows:

1. Open the document and move the text caret to the page you wish to print.
2. Move the mouse cursor into the *Print* box in the document header, as shown in Figure 1, hold down the menu button, and execute *Current Page→(pick a printer)*.

*The page that contains the text caret will be printed.*

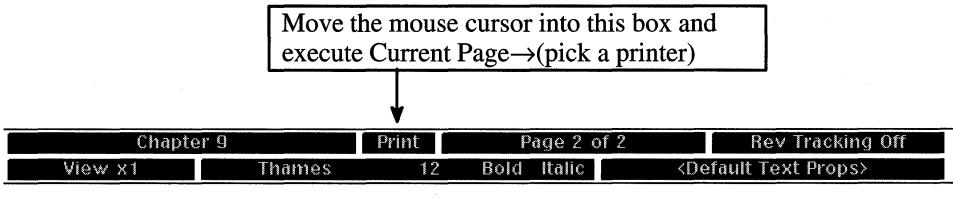


Figure 1

### ***Using Print→Range of Pages***

If you want to print multiple pages but not the whole document, then follow these simple steps:

1. Move the mouse cursor into the *Print* box in the document header, as shown in Figure 1, hold down the menu button, and execute *Range of Pages→(pick a printer)*.

*A stickup window appears, asking you to enter the first page in the range.*

2. Enter the first page in the range of pages you wish to print.

*A second stickup window appears, asking you to enter the last page in the range.*

3. Enter the last page in the range of pages you wish to print.

*A third stickup window appears, asking you to enter the number of copies to be printed.*

4. Enter the number of copies of the selected range of pages you wish to print.

*The stickup window disappears, and your job is sent to the printer.*

### **Can I print all odd or all even pages?**

No. When Interleaf prints a range of pages, the range must be contiguous.

However, my technical consulting company, Saffire Systems & Development, Inc., has developed an add-on Interleaf product called *The Desktop Buddy*®.

*The Desktop Buddy* is a collection of Interleaf desktop utilities that provides the user with several extended Interleaf desktop functions such as a word count, a window manager, print enhancements, and the iconizing of open documents. As part of the print utilities, *The Desktop Buddy* allows you to print all odd pages, all even pages, or a selected range of noncontiguous pages (for example, pages 7, 12, and 14). For more information on *The Desktop Buddy*, contact Saffire Systems & Development, Inc., P.O. Box 770, #368, Park City, UT, 84060, or call (801) 649-6778.

### Can I print a document without opening it?

Yes. Just select the document icon for the document you wish to print, hold down the menu button, and execute *Print*→*Document*→(pick a printer).

The only caveat regarding printing documents from the desktop is that you can't see any print messages occur. Print messages appear on the status bar of an open document, as shown in Figure 2.

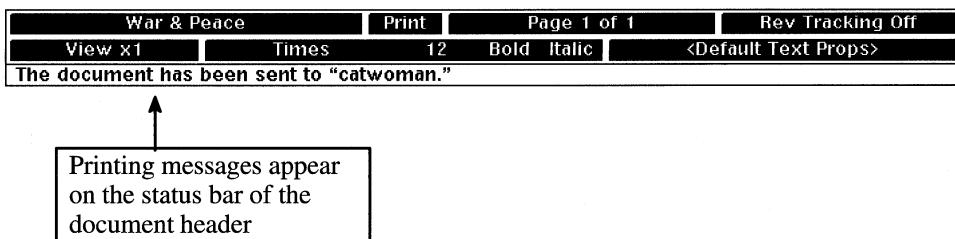


Figure 2

Similarly, it's tricky to use *Print*→*Current Page* from the desktop. Since the document is closed, you can't tell which page is the current page.

If, however, you want to print one page without opening the document, you can select the document and execute *Print*→*Range of Pages*, and make the starting page and ending page the same. For example, if you want to print page 9 of a document, execute *Print*→*Range of Pages*, and in the first page stickup enter 9, and in the last page stickup enter 9. Then only page 9 will be printed.

### Can I see how many pages a document has without opening it?

By default, no. And I must admit, as a writer, this is a feature that I truly need. Why? Because when I print a large document from the desktop, I'd like to know how many pages I'm sending to the printer. That way I have an idea of

how long the document will take to print. By default, the only way I can find out how many pages a document has is to open it.

However, the *Desktop Buddy* once again comes to the rescue. As explained earlier, *The Desktop Buddy* is a collection of Interleaf desktop utilities that provides the user with several extended Interleaf desktop functions such as a word count, a window manager, print enhancements, and the iconizing of open documents. One of the things the *Desktop Buddy* does is allow you to query a document's total number of pages by simply selecting the document icon. In other words, you don't have to open the document to see how many pages it has. For more information on *The Desktop Buddy*, contact Saffire Systems & Development, Inc., P.O. Box 770, Park City, UT, 84060, or call (801) 649-6778.

There is one more way to get the page count of a document without opening it, but it requires more effort on your part. If you're good at maintaining your documents, you can add an attribute to the object property sheet of the document (call it *pages*, for example), and assign the total page count of the document to the attribute on the *Attrs* portion of the object property sheet. That way, if you need to know the total page count of the document, you could select the document icon from the desktop (without opening it), and execute *Props*. Go to the *Attrs* portion of the property sheet, and look at the value assigned to your *pages* attribute. The only problem with this method is if your total page count increases, the attribute value on the object property sheet will not reflect the change. It's up to you to update the attribute with the document's total page count.

## Page Layout

### How do I turn off the header page when printing?

By default, Interleaf includes a header page for all print jobs. This is because most publishing systems are on a network where many seats use one printer. The header page is used to indicate the ownership of each print job that comes through. The information on the header page includes the name of the user who submitted the job, the name of the document being printed, the group name, and the time the job was submitted and printed.

If, however, you are not on a network (or you are on a very small network), a header page for print jobs is not really necessary. In this case, it's handy to turn the header page off, if for no other reason than to save paper.

To turn the header page off for print jobs, perform the following steps:

1. Open the document you are going to print.
2. Move the mouse cursor into the *Print* box in the document header, as shown in Figure 1, hold down the menu button, and execute *Props*.

*The print property sheet opens, as shown in Figure 3.*

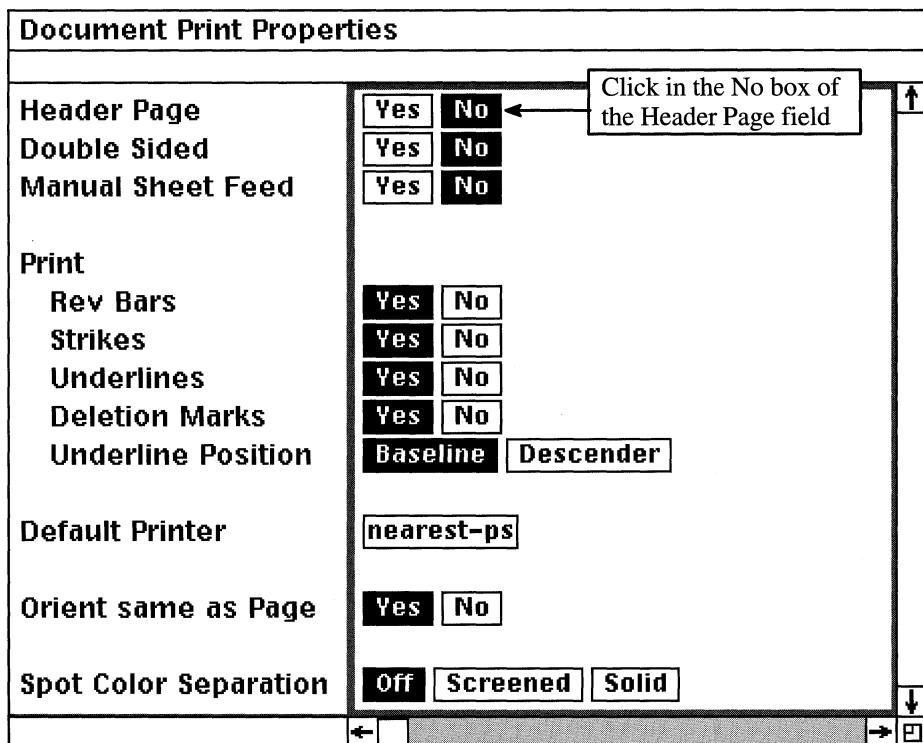


Figure 3

3. Click the select button in the *No* box of the *Header Page* field at the top of the property sheet, as shown in Figure 3.
4. Execute *Apply* and close the property sheet.

*Now when you print the document, the header page will be omitted.*

Turning off the header page for one document does not turn off the header page for other documents. By default, when you create a new document using the *Create→document* command, the new document will always have the header page turned on.

If you want to turn the header page off for the default document, then you need to create a new document template, turn off the header page, and store the new template in your *Create* cabinet (preferably under a name other than *document*).

If you want to turn the header page off for the network-wide default document, your systems administrator needs to modify the *document* icon in the *MasterDesktop*.

### **What's the difference between collated and uncollated pages when printing?**

Same difference as on a copy machine. If, for example, you want to print five copies of a 10-page document, *Print→Collated Copies* prints pages 1 through 10, five times. On the other hand, *Print→Uncoll. Copies* prints page 1 five times, page 2 five times, page 3 five times, and so on up to page 10 five times. Here's a little hint from me to you: if you don't mind sorting the pages of the document yourself, *Print→Uncoll. Copies* prints faster than *Print→Collated Copies*. I've actually timed it. (What a nerd, eh?)

### **Does Interleaf support European printer page layouts?**

Yes. Interleaf supports A3, A4, A5, and B5 page size printers. To change the page size to accommodate one of these types of printers, open the page property sheet of the document you want to print, select the desired box in the *Page Size* field, as shown in Figure 4, execute *Apply*, and close the property sheet. When printed, the document layout readjusts itself accordingly to fit on the selected paper size.

Page Properties		Basic	Custom	Page # Streams												
<b>Columns</b>	<input type="text" value="A1"/>															
<b>Page Orientation</b>	<input checked="" type="button" value="Portrait"/> <input type="button" value="Landscape"/> <input type="button" value="Letter"/> <input type="button" value="Legal"/> <input type="button" value="Ledger"/> <input type="button" value="A3"/> <input type="button" value="A4"/> <input type="button" value="A5"/> <input type="button" value="B5"/> <span style="float: right;">←</span>															
<b>Size</b>	<input type="text" value="8.5"/>	<input type="text" value="inches"/>	<input type="text" value="11"/>	<input type="text" value="inches"/>												
<b>Width</b>																
<b>Height</b>																
<b>Margins</b>	<table border="1"> <tr><td>Top</td><td><input type="text" value="1"/></td><td><input type="text" value="inches"/></td></tr> <tr><td>Bottom</td><td><input type="text" value="1"/></td><td><input type="text" value="inches"/></td></tr> <tr><td>Inner</td><td><input type="text" value="1.2"/></td><td><input type="text" value="inches"/></td></tr> <tr><td>Outer</td><td><input type="text" value="1"/></td><td><input type="text" value="inches"/></td></tr> </table>				Top	<input type="text" value="1"/>	<input type="text" value="inches"/>	Bottom	<input type="text" value="1"/>	<input type="text" value="inches"/>	Inner	<input type="text" value="1.2"/>	<input type="text" value="inches"/>	Outer	<input type="text" value="1"/>	<input type="text" value="inches"/>
Top	<input type="text" value="1"/>	<input type="text" value="inches"/>														
Bottom	<input type="text" value="1"/>	<input type="text" value="inches"/>														
Inner	<input type="text" value="1.2"/>	<input type="text" value="inches"/>														
Outer	<input type="text" value="1"/>	<input type="text" value="inches"/>														
<b>Page Number</b>	<input type="text" value="Text"/>	<input type="text" value="Auto#"/>	<input type="text" value="Text"/>													
<b>Prefix</b>	<input type="text" value="mc"/>															
<b>Style</b>	<input type="button" value="Arabic"/>															
<b>Starting #</b>	<input type="button" value="Inherit"/>	<input type="text" value="1"/>														
<b>Page Layout</b>	<input checked="" type="button" value="Single Sided"/> <input type="button" value="Odd Pages Right"/> <input type="button" value="Odd Pages Left"/> <input type="button" value="Right Page"/> <input type="button" value="Inner/Outer"/> <input type="button" value="Left/Right"/> <input type="button" value="Normal"/>															
<b>Headers/Footers</b>	<table border="1"> <tr><td><input type="button" value="Yes"/></td><td><input type="button" value="No"/></td></tr> <tr><td><input type="button" value="Yes"/></td><td><input type="button" value="No"/></td></tr> <tr><td><input type="button" value="Yes"/></td><td><input type="button" value="No"/></td></tr> </table>				<input type="button" value="Yes"/>	<input type="button" value="No"/>	<input type="button" value="Yes"/>	<input type="button" value="No"/>	<input type="button" value="Yes"/>	<input type="button" value="No"/>						
<input type="button" value="Yes"/>	<input type="button" value="No"/>															
<input type="button" value="Yes"/>	<input type="button" value="No"/>															
<input type="button" value="Yes"/>	<input type="button" value="No"/>															
	<span style="float: right;">←</span>															

Figure 4

## File Formats

### What is a *Printerleaf* file?

A *Printerleaf* file is represented on the desktop by a special icon, as shown in Figure 5. A *Printerleaf* file is a document that has already been prepared for printing. *Printerleaf* files cannot be edited; however, you can view a *Printerleaf*

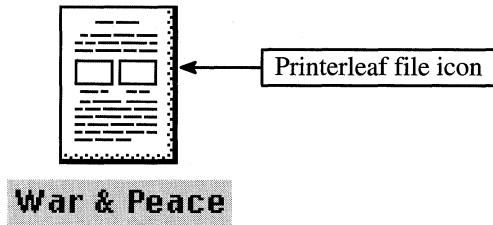


Figure 5

file online with WorldView (another Interleaf product). If you try to open a *Printerleaf* file, a stickup appears informing you that there is no known method of opening the selected icon. For this reason, you should never purge the original document after you have created a corresponding *Printerleaf* file. If you do, you will never be able to edit the document again because the *Printerleaf* file is not an editable version of the document.

So what good is a *Printerleaf* file? Because *Printerleaf* files have already been composed for printing, they print faster than regular documents. If, therefore, you have a document that is printed often (without modifications), it would be more efficient to repeatedly print the *Printerleaf* version of the document (rather than the editable version).

To create a *Printerleaf* file for a particular document, select the document icon and execute *Print*→*Document*→<*Printerleaf*>. The *Printerleaf* file icon will appear on your desktop. If a *Printerleaf* file already exists for the document, the software will write over the existing *Printerleaf* file when the new one is created. (You can also create a *Printerleaf* file from the pulldown menus of the *Print* box in the header of an open document.)

If you have *Printerleaf* files hanging around from older versions of Interleaf, such as TPS 4 or TPS 3, it's probably best to get rid of them and create new *Printerleaf* files using Interleaf 5. *Printerleaf* files are not necessarily upward or downward compatible due to changes in the printer interfaces between software versions.

### **Can Interleaf print output from a scanner?**

Depends on the scanner. If the scanner can save output in Interleaf graphics, image, or text format, then, yes, Interleaf can print it. Or if the scanner can save output in a format for which Interleaf has a filter, then, yes, Interleaf can filter and then you can use Interleaf to print the scanned output.

One scanning system, in particular, that works well with Interleaf is *ScanWorX*, developed by Xerox Imaging Systems. *ScanWorX* can save scanned images in Interleaf image or text format. If you save the scanned output as Interleaf text then not only can you print the results in Interleaf, but you can edit the scanned image as text in an Interleaf document. If you save the scanned output as an image file, you can use the Interleaf Image Editor to edit the scanned image. For more information on *ScanWorX*, contact Xerox Image Systems at 9 Centennial Way, Peabody, MA, 01960, or call (508) 977-2000, or contact your local Xerox Imaging Systems VAR.

### **Can I print documents created in other products from my Interleaf desktop?**

Yes, but first you have to use one of the Interleaf filters to convert the document from its present form into an Interleaf document. For example, you cannot directly print WordPerfect document from your desktop. You must use the WordPerfect filter to first convert the document from WordPerfect format into Interleaf format. Once the document is in Interleaf format, you can use Interleaf to print the document from your desktop. For a complete list of the Interleaf filters available, and to learn how to use them, refer to Chapter 16.

## **Interface Support**

### **Can I save an Interleaf document as a pure PostScript file?**

Yes. And the nice thing about this is that the resulting PostScript file can then be sent directly to a PostScript printer via the commands *lpr* (on UNIX) or *print* (on DOS), or it can be read by any other product that can input a PostScript file.

There are two ways to convert an Interleaf document into a PostScript file:

- Run the *pl2ps* filter program from a command tool window (on UNIX) or the *C prompt* (on DOS), or
- Add the *EPS* printer interface to the *Print* pulldown menu.

The first way can be done by any user from any desktop. The second option must be done by a system administrator (or anyone who can log into the system as *root* or *leafadm*). Since Option 1 is definitely easier to accomplish, let's start with that.

### ***Option 1: Using pl2ps to convert an Interleaf document into a PostScript file***

To convert an Interleaf document into a PostScript file, you must first save the document as a *printerleaf* file by selecting the document and executing *Print*→*Document*→<*Printerleaf*>.

*A printerleaf file icon appears with the same name as the document.*

After you've saved the document as a *Printerleaf* file, run the *pl2ps* filter. This is where it gets tricky. Don't look for this filter on the list of filters displayed by executing *Custom*→*Misc*→*Filter Setup*, because it's not there. Instead, you have to get out of the Interleaf desktop and into a command tool window (on UNIX systems) or back to the *C prompt* (on DOS systems), and execute the following command:

***pl2ps -i input\_filename -o output\_filename***

In the above command *input\_filename* is the actual name of the *printerleaf* file you want to convert, and *output\_filename* is the name you want to give the resulting PostScript file. (If you get the error message *command not found* when you execute the *pl2ps* filter, this means that a pathname has not been set to the */interleaf/ileaf5/bin* directory. Set this pathname and try again.)

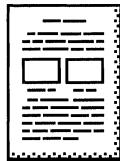
When you execute the above command, a warning message appears informing you that the PPD filename is missing, therefore the default NULL.PPD will be used. This is okay. A PPD (PostScript Printer Destination file) is an ASCII file that contains additional printing information for specific PostScript printers. Entering a PPD filename is optional when converting from Interleaf to PostScript. If you want to use a specific PPD file during the conversion, execute the *pl2ps* command as follows:

***pl2ps -i input\_filename -o output\_filename -ppd ppd\_filename***

For example, let's assume that you have an Interleaf document named *Report* sitting on your desktop, and you want to convert it to a PostScript file. To accomplish this, perform the following steps:

1. Select the *Report* document icon and execute *Print*→*Document*→<*Printerleaf*>.

A printerleaf file icon named Report appears on the desktop, as shown in Figure 6.



**Report**

*Figure 6*

2. Get out of Interleaf by either “iconizing” the desktop (on UNIX systems) or executing *ctrl-z* (on DOS systems).
3. Open a command tool window on UNIX systems or select the *DOS* button from the *User Interrupt* stickup window.
4. At the system prompt, change to your *desktop* directory.
5. In the *desktop* directory type *ls* (on UNIX systems) or *dir* (on DOS systems).

*The contents of the desktop directory are listed. Notice that all printerleaf files have an extension of .pl.*

6. At the system prompt, type:

**pl2ps -i Report.pl -o Report.ps**

*A warning message appears informing you that the PPD filename was missing, therefore the default NULL.PPD was used. Since we are not going to use a specific PPD file for conversion in this case, we will ignore this warning message.*

7. In the *desktop* directory execute one of the following commands:

**ls \*.ps**

*if you are on a UNIX system, or*

**dir \*.ps**

*if you are on a DOS system.*

*The Report.ps file, along with any other files that have a .ps extension, are listed. The Report.ps file is a pure PostScript file and can be read into any product that can accept PostScript (not encapsulated PostScript) as input. You can also send this file to any PostScript printer.*

8. Now let's print the file. In this case, let's assume the printer is on a UNIX network, and the name of the printer is *chico* (for DOS assume that the printer is connected to port LPT1). To print the *Report.ps* file, execute one of the following commands:

**lpr -Pchico Report.ps**

*if you are on a UNIX system, or*

**print Report.ps**

*if you are on a DOS system.*

### **Option 2: Creating Encapsulated PostScript files from the print pulldown menus**

Another option is to convert a document into an Encapsulated PostScript (EPS) file directly from the Interleaf desktop. Interleaf provides an EPS printer interface that converts a selected document into an EPS file. After the file is converted, the EPS file is represented on the Interleaf desktop by the icon shown in Figure 7 (assuming that, in this case, the EPS filename is *test*.).



**test**

*Figure 7*

To convert an Interleaf document into an EPS file, select the document icon from the desktop and execute *Print→Document→(pick the name of the EPS interface)*.

*An EPS icon appears with the same name as the selected document.*

For example, let's assume that the EPS printer interface is listed in the *Print* pulldown menu as *EPS*. Let's also assume that you had an Interleaf document named *Drawing1* sitting on your Interleaf desktop, and you wanted to convert it to an EPS file. To accomplish this, perform the following steps:

1. Select the *Drawing1* document icon and execute *Print→Document→EPS*.

*An EPS file icon Drawing1 appears on the desktop, as shown in Figure 8.*



**Drawing1**

*Figure 8*

*If an EPS printer interface does not appear as a menu item on the Print pulldown menu, then your systems administrator must add it for you. The EPS printer interface does not necessarily have to appear on the pulldown menu as "EPS" (as it does in this example). The systems administrator can give it any name when adding it to the Print pulldown menu. Check with your systems administer to find out the exact EPS printer interface name.*

If you want to print the *Drawing1* EPS icon in the above example, you would have to do so from outside of the Interleaf desktop (from a command tool window in UNIX or the *C prompt* in DOS). In other words, you cannot select the EPS icon and execute *Print→Document→(printer name)*. If you do, you will get an error message informing you that there is no way to print the icon.

To print the *Drawing1* EPS file, you must get out of the Interleaf desktop and execute one of the following commands:

**lpr -Pchico Drawing1.eps**

*assuming you are on a UNIX system and the printer name is chico, or*

**print Drawing1.eps**

*assuming you are on a DOS system and the printer port is LPT1.*

*If you list the EPS files from the system prompt (outside of the Interleaf desktop), you'll notice that all EPS files created with the Interleaf EPS printer interface have filenames that end with an .eps extension.*

One very important thing you should know about the EPS printer interface is that it only converts documents that consist of one page. For example, if the

*Drawing1* document mentioned in the previous example contained more than one page, you would get an error when you selected it and executed *Print→Document→EPS*.

### Which printers does Interleaf support?

Any printer that supports PostScript, and any Hewlett Packard printer that supports PCL printer description language.

### How do I add a printer to my document print menu?

This depends on which operating system you are running Interleaf.

#### For DOS

On DOS systems, you can add printers from your desktop by executing *Custom→Misc→Printer Setup*. To add a printer (on DOS systems only), follow these simple steps:

1. Move the mouse cursor to the desktop, make sure nothing is selected, and execute *Custom→Misc→Printer Setup*.

*The printer setup property sheet opens.*

2. With the mouse cursor in the property sheet, execute *Set Up New Printer* (*select the local printer that most resembles the printer you are adding*).

*The text string <New> appears in the Printer name field.*

3. Replace the <New> with the printer name that you want to appear on the *Print* menu.

4. If necessary, replace the entry in the *Model* field with the model name of the printer you are adding (you can simply type *Local* in the *Model* field if you are uncertain).

5. If your selection is a PostScript printer, move the mouse cursor into the *PPD* field, hold down the menu button, and select the PPD file that corresponds to your printer.

6. If you are using a PCL printer, select the *PCL* button in the *Printer Type Field*.

*The PCL Type field appears.*

7. If your selection is a PCL printer, move the mouse cursor into the *PCL Type* field, hold down the menu button, and select the PPD type that corresponds to your printer.
8. Execute *Apply*, and close the property sheet.

*Your new printer name will appear as a new menu item on the desktop Print menu.*

9. If you want to save your printer changes between sessions, then execute *Save→to File→Profile* in the open *Printer Setup* window.

## **For UNIX**

On Sun UNIX systems you don't add printers to your desktop menus; your systems administrator does. Printer support is added to the Interleaf desktop by running the *printer\_install* script, which must be done from *root* or *leafadm* (depending under which ID Interleaf was originally installed). If you need access to a new printer (such as *EPS*) from the Interleaf desktop *Print* pulldown menus, ask your systems administrator (nicely) to install it for you.

If, after the printer has been installed, you still don't see the new printer on your *Print* pulldown menu, exit the Interleaf desktop and reinvoke Interleaf. Your new printer name will appear as a menu item when you execute *Print→Document→(printers)*.



# **10. Dictionaries and Spellchecking**

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In a perfect world, no one makes mistakes. However, if you ever looked at the spelling in one of my documents, you would know immediately that this is not a *perfekt* perfect world. Fortunately for people like me, Interleaf provides a spellchecker.

The spellchecker is fairly straightforward to use, and at first glance, you might wonder, what questions anyone could possibly have about the spellchecker. But believe it or not, there are some things about the spellchecker (beyond what you see when you execute *Misc→Spelling*) that are helpful to know. Usually these questions involve the use of dictionaries and hyphenation, both of which are tied together with the spellchecker.

In this chapter, you'll learn how the spellchecker looks up words and how you can add your own words to the dictionary. You'll also learn the many places where hyphenation is controlled and how you can specify which words should (and shouldn't) be automatically hyphenated by the software.

## **Dictionary Types**

### **How many dictionaries does Interleaf use?**

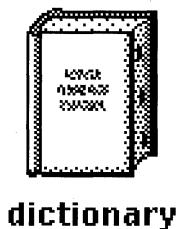
Interleaf uses anywhere from one to three dictionaries when spellchecking documents. These dictionaries include:

- The master dictionary
- The group (sometimes called system) dictionary
- The desktop (sometimes called user) dictionary.

The master dictionary is the internal dictionary that comes with Interleaf. Neither you nor your systems administrator are allowed to modify the master dictionary (only the gurus in Waltham who develop the software get that privilege).

The group dictionary is set up by your systems administrator. The group dictionary resides on the Interleaf MasterDesktop and is available to anyone on the network. You, as a user, cannot change the master dictionary; however, your systems administrator can.

The user dictionary is the one you get to play with. The user dictionary sits on your desktop and is available only to you when you check the spelling of a document. The icon for the user dictionary looks like the one shown in Figure 1.



**dictionary**

*Figure 1*

The name of the user dictionary varies slightly between operating systems. On UNIX desktops, for example, the user dictionary icon is named *dictionary*, and on DOS systems it's called *dict*. In any case, you must not rename the user dictionary and you must keep it on your desktop during spellchecking.

### **How does Interleaf know which dictionary to look in when it checks spelling?**

Good question. Since there are three dictionaries, what is the search order the software uses when looking up words?

When Interleaf checks spelling, it first looks in your user dictionary. If it can't find a particular word in the user dictionary, or if a user dictionary does not exist, the software looks in the group dictionary. If Interleaf can't find a particular word in the group dictionary, or if a group dictionary does not exist, the software looks in the master dictionary, which will always exist. If Interleaf can't find the word in the master dictionary, the software flags the word as a spelling error.

### **Is the user dictionary available to all documents on my desktop?**

Yes. All documents on your desktop refer to your user dictionary first (if one exists) during the spellchecking process.

## Creating Dictionaries

### How do I create my own user dictionary?

Interleaf creates the user dictionary icon on your desktop the first time you add a word to the dictionary during the spellchecking process. When the spell-checker encounters an error, one of the options available to you on the pull-down menu is *Misc→Spelling→Add to Dictionary* (to add the unrecognized word to the dictionary). If you select this option, and no user dictionary currently exists on your desktop, Interleaf creates one and adds the word to it.

Another way you can create a user dictionary is to first create a document, open its object property sheet, change its icon class from *document* to *dictionary*, and then execute *Apply*. This changes the selected desktop object from a regular document to a dictionary document. The dictionary document, in this case, is empty until you specifically add some words to it.

### How do I add words to an existing user dictionary?

There are two ways you can add words to your user dictionary:

- Select the *Misc→Spelling→Add to Dictionary* option from the pulldown menu when a spelling error is encountered, or
- Edit the user *dictionary* document

The user dictionary is simply a document with an object class of *dictionary*; in other words, it is a special type of Interleaf document. To add a word to the user dictionary using the editing process, perform the following steps:

1. Select the *dictionary* icon and execute *Open*.

*The dictionary document opens, revealing all of the words you have entered in your dictionary thus far. An example of the current status of my desktop dictionary (when opened) is shown in Figure 2.*

dictionary	Print	Page 1 of 1	Rev Tracking Off
View x1	Thames	12	Bold Italic <Default Text Props>
<b>paragraph</b>			
<b>Desktop Dictionary</b>			
words	A <sub>2</sub> au*tion*ber's <sub>2</sub> au*tore*f <sub>2</sub> au*tore*fence <sub>2</sub> au*tore*fence <sub>2</sub> s <sub>2</sub>	L <sub>2</sub> lisap <sub>2</sub>	swiss <sub>2</sub>
words	C <sub>2</sub> cli*part <sub>2</sub>	M <sub>2</sub> mi*cro*do*cu*me nts <sub>2</sub>	T <sub>2</sub> ta*ble*toc <sub>2</sub> te*chart <sub>2</sub> text*toc <sub>2</sub> toc <sub>2</sub> tps <sub>2</sub>
words	D <sub>2</sub> doc*de*cor <sub>2</sub> drop*sha*dow <sub>2</sub> drop*sha*dowed <sub>2</sub> Dymalski <sub>2</sub>	N <sub>2</sub> no*tag <sub>2</sub>	U <sub>2</sub> un*group <sub>2</sub> un*group*ing <sub>2</sub> unix <sub>2</sub>
words	F <sub>2</sub> fig*toc <sub>2</sub> fra*me*mak*er <sub>2</sub> front*page <sub>2</sub> full*page <sub>2</sub>	O <sub>2</sub> open*win*dows <sub>2</sub>	W <sub>2</sub> wid*gets <sub>2</sub> word*per*fect <sub>2</sub> worksta*tion <sub>2</sub>
words	H <sub>2</sub> hard*co*py <sub>2</sub> hel*vet*i*ca <sub>2</sub>	P <sub>2</sub> pa*ge*mak*er <sub>2</sub> pop*up <sub>2</sub> print*ter*leaf <sub>2</sub> pull*down <sub>2</sub>	R <sub>2</sub> re*in*voke <sub>2</sub> re*se*lect <sub>2</sub> re*se*lects <sub>2</sub> re*size <sub>2</sub> re*sized <sub>2</sub>
words	I <sub>2</sub> idu <sub>2</sub> in*chrul*er <sub>2</sub> in*line <sub>2</sub>	K <sub>2</sub> kern <sub>2</sub> kerne <sub>2</sub> kern*ing <sub>2</sub>	S <sub>2</sub> sa*fire <sub>2</sub> scan*worx <sub>2</sub> scratch*pad <sub>2</sub> Stacy <sub>2</sub>

Figure 2

Notice that the dictionary includes alphabet header characters for each alphabetized group of words. Interleaf automatically formats your dictionary like this whenever you update the dictionary by executing *Misc→Spelling→Add to Dictionary*.

2. Move the mouse anywhere into the component bar and create a new *words* component.

3. In the text area of the new *words* component, enter your new word.

*Enter the word in all lowercase if you want all occurrences (for example, uppercase, lowercase, or mixed case) of the word to be valid.*

*Enter the word with initial cap and the rest lowercase if you want the word to be valid only if it is initially capitalized.*

*Enter the word in all uppercase if you want the word as all caps (for example, an acronym) to be valid.*

4. End the word with a hard return by pressing the *Return* key.

*This step is very important. All words entered in the user dictionary must end in a hard return. This is what Interleaf uses as a delimiter. When spellchecking, Interleaf compares an unrecognized word with the words in your user dictionary. It knows when it comes to the end of a word when it encounters a hard return. If you forget to add the hard return, the new word will be ignored when spellchecking occurs.*

5. Close and save the *dictionary* document.

*If you added the word correctly, the spellchecker will not flag the new word as an error during spellchecking.*

### **Do I have to reformat the dictionary myself when I edit it?**

No. In fact, you can add new words anywhere you want in your dictionary, as long as they end in a hard return. And you do not have to create a new header character, if one does not already exist for the word you're adding. Furthermore, you can add multiple words (even if they don't start with the same letter) to the same *word* component, as long as each word entered ends in a hard return.

So how does the dictionary get reformatted?

The next time you execute *Misc*→*Spelling*→*Add to Dictionary*, the software automatically reformats the dictionary document by sorting the words alphabetically and adding alphabet header characters where needed.

For example, let's assume your user dictionary resembled the one shown in Figure 2, and then you added words to the dictionary, as shown in Figure 3. Notice, in Figure 3, that even though the new words are not added alphabetically, they all end in a hard return. Notice also that they're all part of the last *word* component in the dictionary, even though none of the new words begin with a *W*.

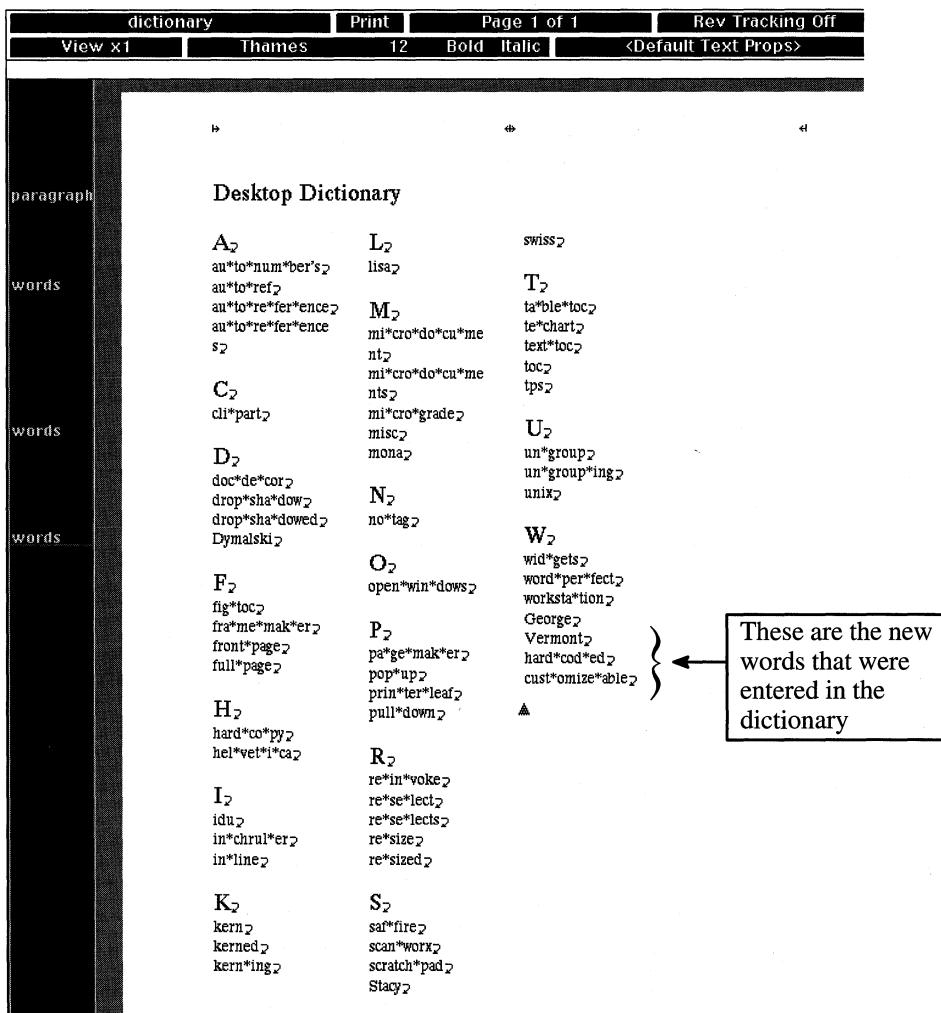


Figure 3

After you close and save the document, spellcheck another document and add a new word to the dictionary by executing *Misc→Spelling→Add to Dictionary*. At this point the software updates the user dictionary and reformats it, alphabetizing the words and adding header characters where necessary, as shown in Figure 4.

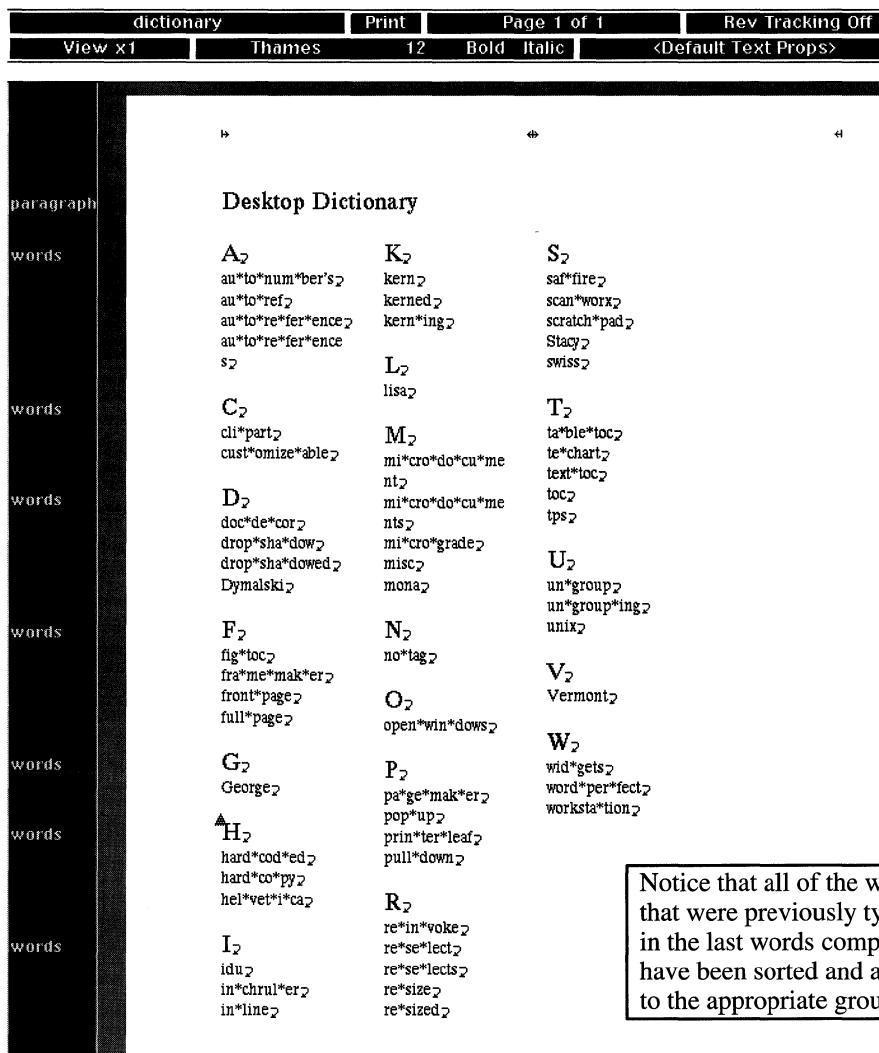


Figure 4

It is important for you to realize that the user dictionary is not updated (and thus reformatted) until you specifically execute *Misc→Spelling→Add to Dictionary*.

### Can I enter words with spaces in my user dictionary?

No. If you want to enter a name or phrase that contains spaces, simply enter all the words individually and end each in a hard return. For example, if you want to add the name *San Diego* to the user dictionary, then do it this way: add

the word *San*, followed by a hard return, and the word *Diego*, followed by a hard return. Do not enter *San Diego*, followed by a hard return. If you do, the software will add *San* to your dictionary, but not *Diego*.

### **How many user dictionaries can I create?**

As many as you want; however, you can only use one user dictionary at a time. For example, let's assume that you have three user dictionaries; one dictionary each for three different projects. All the acronyms for Project 1 are in *Dictionary 1*, all the acronyms for Project 2 are in *Dictionary 2*, and all the acronyms for Project 3 are in *Dictionary 3*. Let's also assume that you store all three dictionaries in a drawer labeled *Dictionaries*. Whenever you want to spellcheck a document used in Project 1, you would copy *Dictionary 1* from the *Dictionary* drawer, paste *Dictionary 1* to your desktop, and rename it to *dictionary* (on UNIX systems) or *dict* (on DOS systems). When spellchecking, Interleaf refers to the dictionary named *dictionary* (or *dict* for DOS systems) currently sitting on your desktop.

### **Why would I ever want to have more than one user dictionary?**

Mainly to improve performance during spellchecking. The spellchecker processes a document faster if it's allowed to sort through a smaller dictionary. If you have one huge user dictionary that has a zillion words in it, spellchecking will take longer than if you had a user dictionary with fewer words in it. Let's look at it this way — if you were sitting at your desk and you had to look up the word *hat* in a dictionary, it would take you longer to look up the word in a dictionary that contained 3,000,000 words than it would if you used a dictionary that contained 3,000 words because you would have to sort through more words in the larger dictionary.

## **Special Dictionary Functions**

### **How do I control hyphenation for the words that I add to my user dictionary?**

You may have noticed that the words in the user dictionary contain asterisks between some of the letters, as shown in Figure 4. The asterisks represent where the software puts the hyphenation points when the word was added to the dictionary. If you want to add, remove, or change the location of the hyphenation points of a particular word, you may do so simply by editing the word in the *dictionary* document. The rules of hyphenation, however, still apply to

the words you hyphenate in your user dictionary. (The rules of hyphenation are listed later in this chapter.)

### **Does Interleaf have a thesaurus?**

No. However, a company called Avalanche Development Company developed and sells a utility package for the Interleaf desktop called Proof Positive. Among other things, Proof Positive provides a thesaurus for the Interleaf desktop. Interestingly enough, Interleaf recently bought Avalanche Development Company, so Proof Positive's thesaurus may end up in a future release of Interleaf. (For more information on Avalanche Development Company's Interleaf utilities contact Avalanche Development Company at 947 Walnut Street, Boulder, CO, 80302, or call (303) 449-5032).

### **Does Interleaf have a grammar and punctuation checking facility?**

No. But as with the thesaurus, Avalanche Development Company's Proof Positive fills in the blanks here, too. Along with the thesaurus, Proof Positive provides a grammar and punctuation checking utility for Interleaf documents. But since Interleaf recently bought Avalanche Development Company (see previous question), we can only hope that some of Proof Positive's handy Interleaf desktop utilities will find a permanent home as part of the Interleaf software.

## **Spellchecking Special Areas of a Document**

### **Does the spellchecker check the spelling of text in a frame?**

Yes and no (don't you love those political answers?). The spellchecker checks the spelling of text in a microdocument but does not check the spelling of text strings or outline fonts (because text strings and outline fonts are simply graphics drawn to look like text). If, therefore, it is important that the text in your frames be checked for spelling, then put the text in a microdocument.

### **Does the spellchecker check the spelling of text in a table?**

Yes. Each cell in a table is individually spellchecked when you check the spelling of the entire document. The only time text in a cell is overlooked by the spellchecker is if the text is entered as a text string or outline font. (For information on entering graphics in a table cell, refer to Chapter 13.)

## Does the spellchecker check the spelling of text in the header and footer frames?

Yes and no (with answers like this, I could run for office!). When you execute the spellchecker from the text area of the document, the software does not look in the header or footer for spelling errors (even if the header or footer contains microdocuments). If, however, you have microdocuments in the header or footer that you want to check for spelling, then you must specifically open those microdocuments and spellcheck them individually. If you forget to do this, spelling errors in the header or footer may slip by.

## Controlling Hyphenation

### How do I control hyphenation within my document?

Hyphenation can be controlled at three levels:

- At the document level (affects all words in document)
- At the component level (affects only words in specified components)
- At the word level (affects individual words only)

### ***Hyphenation Control at the Document Level***

Hyphenation is controlled at the document level through the *Custom* portion of the page property sheet, as shown in Figure 5. By default, hyphenation is turned on for all words in a document. Furthermore, only three lines in a row can end in a hyphenation (hence, the box containing the value 3 is selected on the page property sheet, as shown in Figure 5.) If you wish to turn off hyphenation for all words in a document, simply select the *Off* box in the *Hyphenation* field and execute *Apply*.

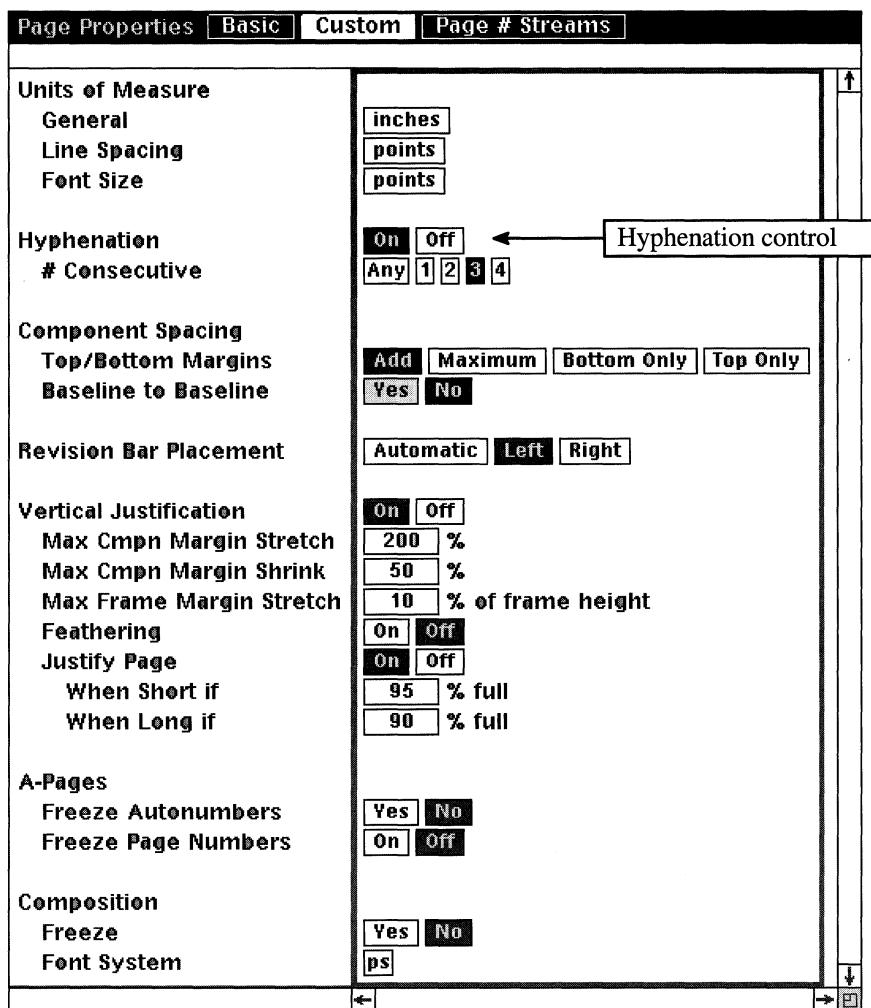
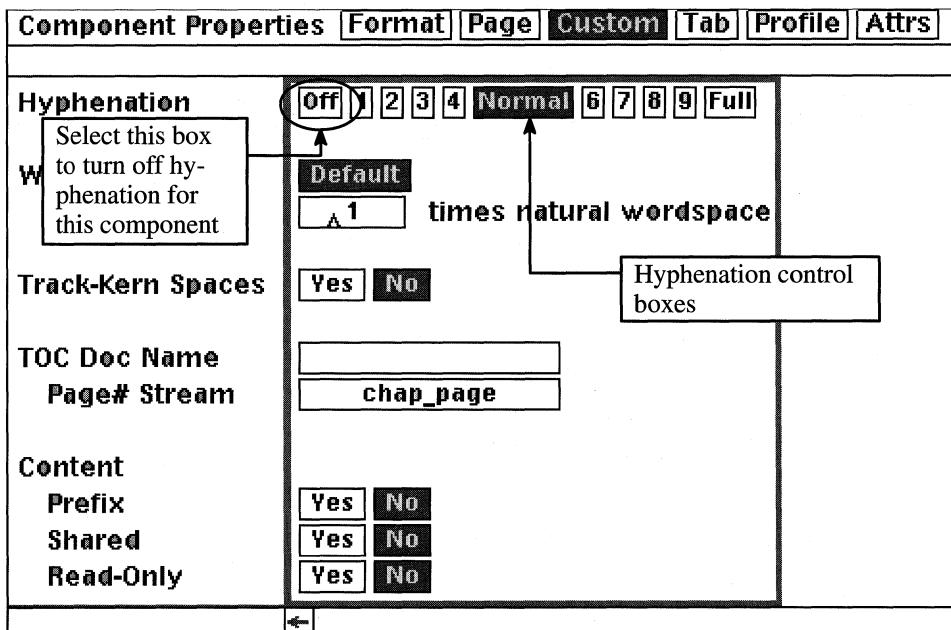


Figure 5

### ***Hyphenation Control at the Component Level***

To control hyphenation at the component level, you open the *Custom* portion of the component's property sheet , as shown in Figure 6. If you wish to turn hyphenation off for just this component, select the *Off* box on the right end of the hyphenation field, as shown in Figure 6, and execute *Apply*. As a result, any line in this component will not end in a hyphenated word. If you want all components of the same name to behave in this manner (for example, to turn off

hyphenation for all *Bullet* components), then you would turn off hyphenation and execute *Global Apply*→*Confirm* instead of *Apply*.



*Figure 6*

The number hyphenation boxes represent the number of lines in a row that can end in hyphenation. If, for example, you want no more than four lines in a row to end in hyphenation, then you select the *4* box. If you select the *Full* box, any number of lines in a row may be hyphenated.

### ***Hyphenation Control at the Word Level***

Controlling hyphenation at the word level doesn't require the use of any property sheets. To remove all hyphenation points from a single word, simply select the word, and execute *Misc*→*Hyphen*→*Clear*. All of the hyphenation points for that single instance of that word will be removed. In this case, if the word appeared hyphenated at the end of a line, the word would become "unhyphenated" and wrap (in its entirety) to the beginning of the next line.

If you would like to see a word's current hyphenation points before you remove them, position the text caret anywhere within the word, and execute

*Misc→Hyphen→Show.* The word will appear in the document's status bar, with bullets representing the current hyphenation points, as shown in Figure 7.

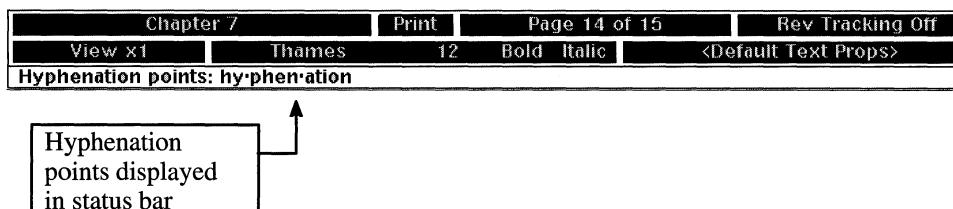


Figure 7

To remove a single hyphenation point from a word, place the text caret at the current position of the hyphenation point you wish to remove, and execute *Misc→Hyphen→Clear*. The hyphenation point at the position of the text caret will be removed, while all other hyphenation points in the word will be left unaltered.

To add an individual hyphenation point to a word, simply move the text caret to the position in the word where you wish to add the hyphenation point and execute *Misc→Hyphen→Set*. A new hyphenation point will be added at the position of the text caret.

### ***More on Controlling Hyphenation at the Word Level***

It is important to understand that changing hyphenation points in an individual word does not change the hyphenation points for all instances of that word in your document. For example, if you remove the hyphenation points in an instance of the word *development* that happens to appear hyphenated at the end of a line, *only that instance* of the word *development* is affected. The hyphenation points in all other instances of the same word in the document remain unaltered. If you wish to globally change the hyphenation points for a single word, then you must add the word to your user dictionary and modify the hyphenation points from within the *dictionary* document.

Adding and removing hyphenation points to individual words is helpful, however, there are a few rules that apply. For example, you cannot set a hyphenation point:

- After the first letter in a word
- Before the last letter in a word
- In a word with fewer than five characters

- Before a hyphen (-)
- Before an endash (–)
- Before an emdash (—)
- Before a slash
- Before an apostrophe

Furthermore:

- If you edit a word that has a manually set hyphenation point, that hyphenation point is automatically cleared.
- If you cut (or copy) a word containing a manually set hyphenation point, the hyphenation point is preserved when you paste (as long as you do not edit the word).

### **Can I change the hyphenation default that dictates the number of characters that can appear before or after the hyphen?**

Yes. By default Interleaf allows no fewer than two characters before the hyphen (in a word that will not fit at the end of a line) and no fewer than two characters after the hyphen. (This means that you cannot set a hyphenation point in a word such that a single character ends up at the end of a line, or a single character appears at the beginning of a line.) This default, however, can be changed using the *Profile Tool*.

To change the hyphenation default settings, perform the following steps:

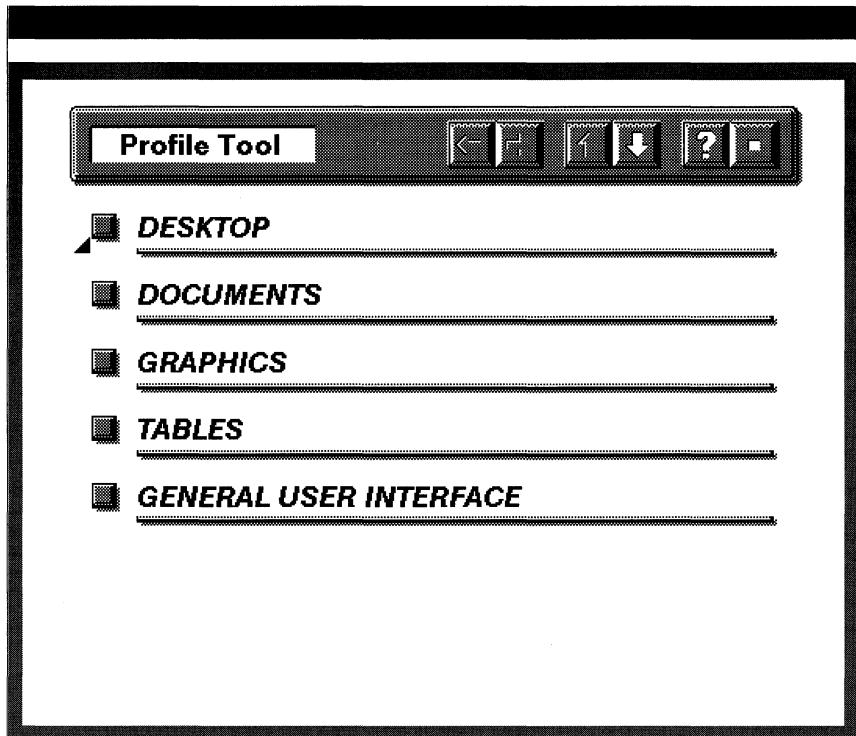
1. Invoke the the *Profile Tool* from the desktop by executing *Custom*→*Tools*→*Profile Tool*, or if you have a profile icon in your *Profile Drawer*, select the profile icon and execute *Open*.

*If you cannot access the Profile Tool through the Custom→Tools menu, that means that the Profile Tool is not installed on your desktop. To install the Profile Tool on your desktop, refer to Chapter 2.*

*The Profile Tool window opens, as shown in Figure 8.*

2. Select the *Documents* button in the *Profile Tool* window.

*The Documents window opens, as shown in Figure 9.*



*Figure 8*

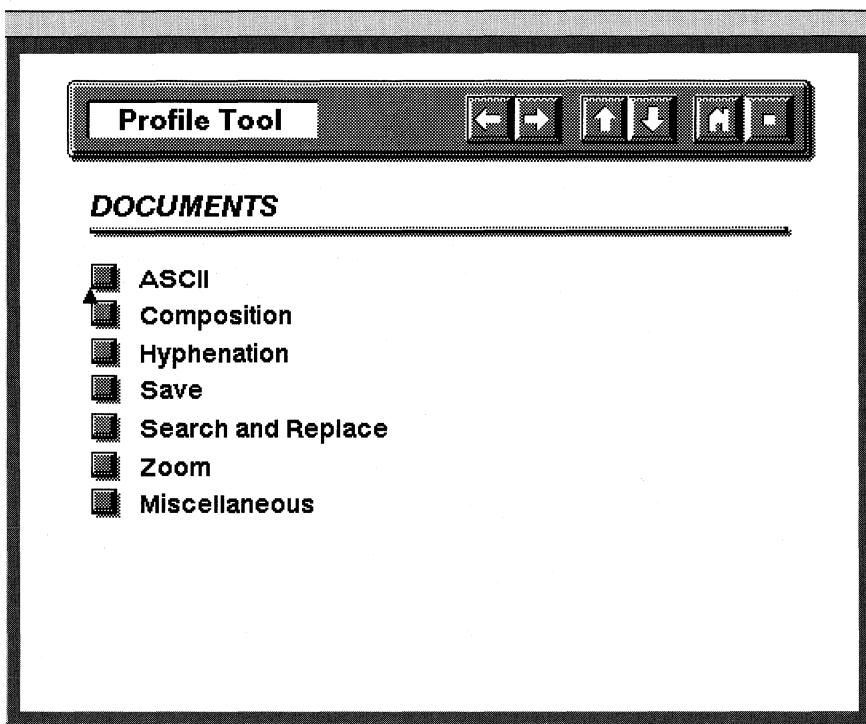


Figure 9

3. Select the *Hyphenation* button in the *Documents* window.

*The Documents: Hyphenation window opens, as shown in Figure 10.*

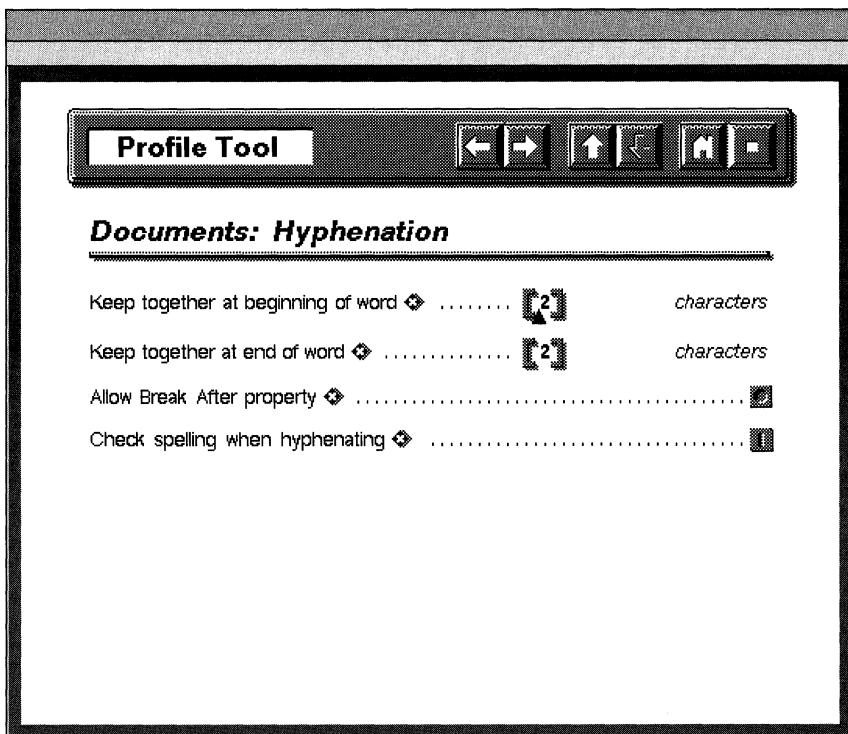


Figure 10

*The field labelled “Keep together at beginning of word” defines the number of characters that can appear before the hyphen in a hyphenated word. The field labelled “Keep together at end of word” defines how many characters can appear after the hyphen. In both cases the value is 2, which means no fewer than two characters can appear before or after the hyphen.*

4. Change the values in one or both of the “Keep Together...” fields, and execute *Load*.

*Your new default is loaded onto your desktop.*

*If you wish to save these changes between sessions, then you must also execute “Save” in the open Profile Tool window. “Save” permanently saves your changes in your profile icon. (For more information about the profile icon, refer to Chapter 2.)*



# **11. Controlling Graphics**

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A picture is worth a thousand words. I guess that means that if everyone knew how to draw, writers would be out of jobs.

Fortunately for us writers, not everyone is an artist. However, Interleaf does make it easy for non-artistic types to create relatively appealing and clear graphics. I have to admit, however, that the graphic features offered by Interleaf are easier to use if you are already familiar with technical drawing terminology. Words like *spline*, *poly*, *Bezier*, *shear*, *isometric*, and *detent* appear frequently on popup menus when you are in an open frame. Obviously, if you don't know what those functions are for, you can't take full advantage of them. On the other hand, the good news is if you're a technical illustrator, Interleaf speaks your language.

Regardless of whether you are a writer or an artist, you should try to use graphics whenever possible to help illustrate your point. Graphics present your ideas in a clear manner, leaving less for the reader to misinterpret. To make your experience with graphics a pleasant one, here are a few ideas that will help add appeal to your illustrations, as well as the answers to a number of commonly asked graphics questions.

## **General Graphics**

### **Do I have to create a frame before I add a graphic to an Interleaf document?**

No. Interleaf has something called *Auto* frames, which makes our lives much easier when inserting graphics into documents. When you copy (or cut) a graphic and then paste it into your document, the software creates an *Auto* frame at the position of the text caret, and the graphic is inserted in the frame. The *Auto* frame is automatically sized to fit snugly around the graphic. If you need the frame to be larger, you can open the *Auto* frame's property sheet and change its dimensions.

For example, to paste a graphic into a document without first creating a frame, follow these simple steps:

1. Select the graphic and execute *Copy* (or *Cut*).
2. Move the mouse cursor to the position in the document in which you wish to insert the graphic, click the select button, and execute *Paste*.

*An Auto frame is automatically created at the position of the text caret to accommodate the new graphic.*

3. Deselect the frame, hold down the menu button, and look at the menu *Create*→*Frame*→... (do not release the menu button until instructed to do so).

*Notice that "Auto" has been added to the list of available frame masters on the Create→Frame→... menu.*

4. Move the mouse cursor away from the menu so that no menu item is selected and release the menu button.

*When you create an Auto frame, the Auto frame master definition is added to the Create→Frame→... pulldown menu.*

## What is an NGO?

NGO stands for *Named Graphic Object*. In Interleaf, you can assign a name and properties to an individual graphic object and then recreate that graphic object by selecting it's name from a pulldown menu. When a piece of artwork is assigned a name, it becomes an NGO.

NGOs are new with Interleaf 5. Previous versions of the Interleaf software did not allow you to assign a property sheet to a graphic object (so if you are still using TPS 4, you need to upgrade to be able to use the NGO feature).

The nice thing about NGOs is that they are a colossal time-saver. You create the artwork once and then if you need to use it again, you simply call it up from a menu, instead of having to copy it from some other source.

The general steps to create an NGO are as follows:

1. Create the artwork.
2. When the artwork is complete, select it as a group and execute *Edit*→*Props*.

*If the artwork has not been grouped together, a stickup window will appear, as shown in Figure 1, asking you if you wish to create a property*

*sheet for the artwork as a whole (group), or assign property sheets to the individual pieces.*

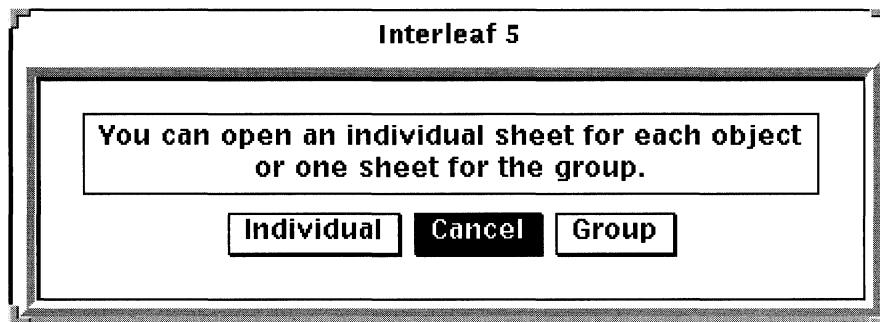


Figure 1

3. Select *Group* from the stickup window.

*The stickup window disappears and a property sheet opens, as shown in Figure 2.*

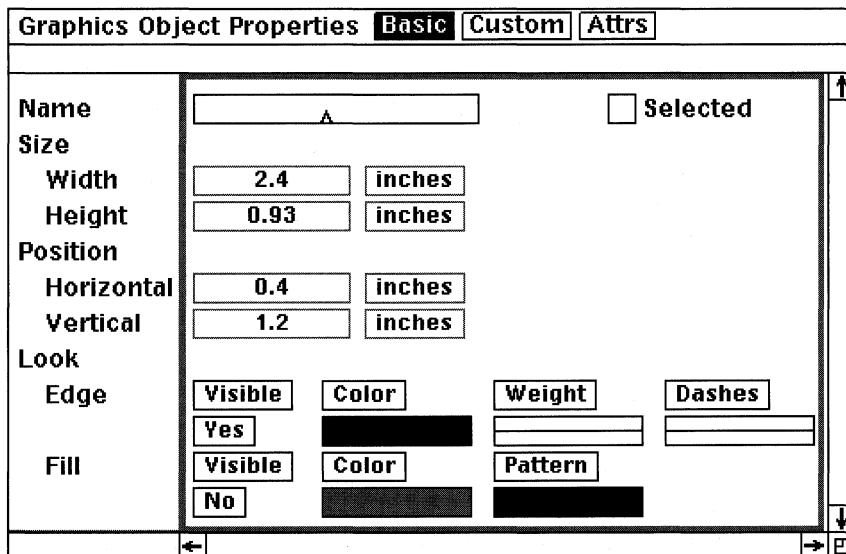


Figure 2

- Type a name for your artwork in the name box of the open property sheet.

*For example, if you were going to name your artwork "CAD Drawing 102," in the Name box (as shown in Figure 3) type:*

**CAD Drawing 102**

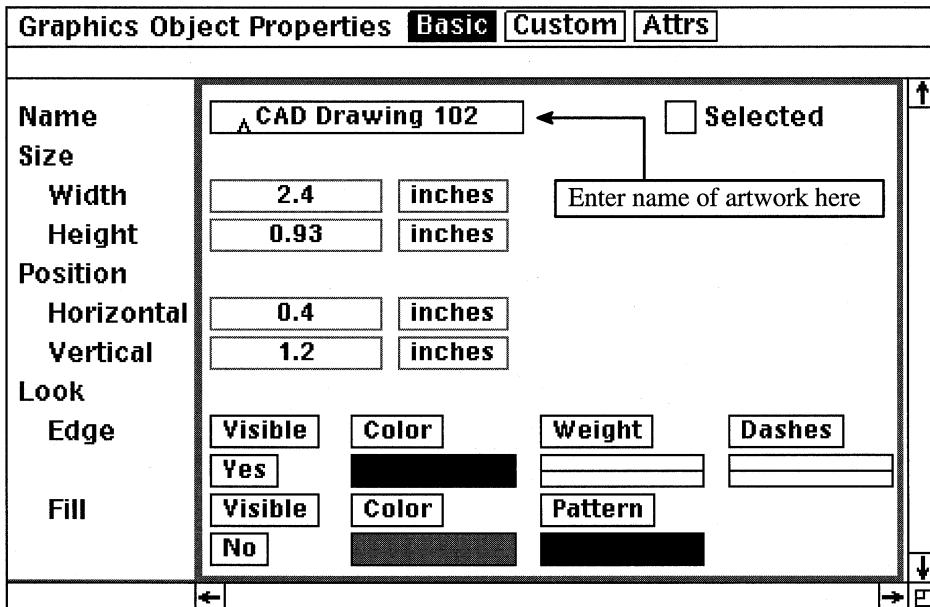


Figure 3

- Execute *Apply* and close the property sheet.

*The name that you entered on the property sheet will appear as a menu item in the "Named" pulldown menu. For example, if you entered "CAD Drawing 102" in the name box on the property sheet, you could recreate that drawing at any time (within that document) by executing Create→Named→CAD Drawing 102 from an open frame.*

It is important to note that NGOs are document specific. This means that if you create an NGO in one document, that NGO name will not automatically appear as a menu item in other documents. If you have an NGO that you want to make available to all documents, you can accomplish this in one of two ways:

- Create a template document in the *System5* cabinet, which includes the NGO.

*That way, whenever someone creates a new document from the template, the NGO name will be included in the new document's pull-down menus.*

- Create a catalog which exports the NGO to all documents in a book.

*That way, all documents in the book will be able to access the NGO from the pulldown menu exported from the catalog. It is important to note, however, that in this case only the documents in the book have pulldown menu access to the NGO. Any documents outside the book will not be influenced by the book's catalog.*

### **How can I add a ruler to my document as an NGO?**

Having vertical and horizontal rulers as NGOs in your template document is very handy. That way if you ever need to measure distances, you can bring up the rulers simply by executing a menu item.

#### **Horizontal Ruler**

To add a horizontal ruler to a document as an NGO, follow these simple steps:

1. Add a horizontal ruler to any frame in your document.

*For the steps on how to add a horizontal ruler to a document, see Chapter 4.*

2. Select the horizontal ruler and execute *Edit→Props*.

*The NGO property sheet opens on the desktop.*

3. In the name box of the open property sheet, type:

**ruler-horizontal**

Your open property sheet should look like the one shown in Figure 4.

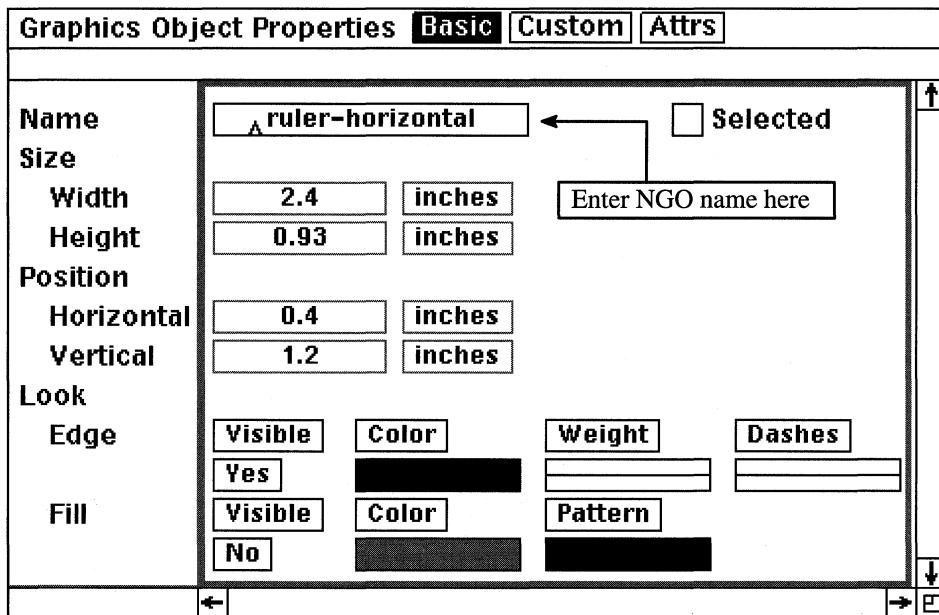


Figure 4

4. Execute *Apply* and close the property sheet.

You have now added a horizontal ruler NGO to the document. A horizontal ruler can be created from any open frame in the document, simply by executing *Create*→*Named*→*ruler-horizontal*.

Let's test this theory!

1. Create a frame anywhere else in the document and open it.
2. In the open frame, hold down the menu button and execute *Create*→*Named*→*ruler-horizontal*.

A horizontal ruler is created. Use the *Misc*→*Align* commands to align the ruler to various sides of the frame or click the select button to set the ruler down.

By default the ruler is printlocked, which means that the ruler can appear in your document, but will not print. If you like, you can change

*that default by turning the printlock off for the ruler. This can be done from either the ruler's property sheet or from the Locks pulldown menus.*

## **Vertical Ruler**

To add a vertical ruler to a document as an NGO, follow the steps to create a horizontal ruler, except after you paste the ruler into the open frame, do the following:

1. Select the ruler again and execute *Rotate→Numeric*.

*A stickup window appears asking you to enter a rotation factor.*

2. In the stickup window, type:

**90**

3. Select *Enter* from the stickup window.

*The ruler is rotated 90°, changing the ruler from horizontal to vertical, with the 1" mark starting at the top of the ruler.*

4. Select the ruler again, hold down the menu button, and execute *Edit→Props*.

*The NGO property sheet opens on the desktop.*

5. In the name box of the open property sheet, type:

**ruler-vertical**

*Your open property sheet should look like the one shown in Figure 5.*

6. Execute *Apply* and close the property sheet.

*You have now added a vertical ruler NGO to the document. This vertical ruler can be created from any open frame in the document, simply by executing *Create→Named→ruler–vertical*.*

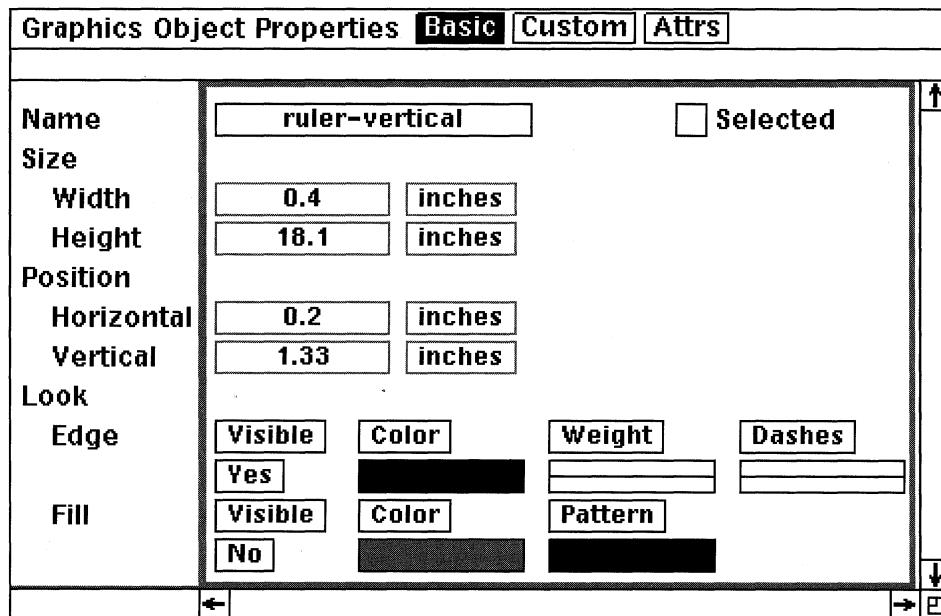


Figure 5

Let's try it to be sure!

1. Create a frame anywhere else in the document and open it.
2. In the open frame, hold down the menu button and execute *Create→Named→ruler-vertical*.

*A vertical ruler is created.*

*Just like the horizontal ruler, the vertical ruler is printlocked by default.*

### How do I control the locks for graphics?

Graphic locks allow you to control various aspects of a piece of artwork, such as whether or not the graphic can be printed, resized, ungrouped, moved, cut, etc. For example, if you have a logo in a document that must never be cut, you should *cutlock* the logo so that if someone tries to cut it, the software won't let them. You can also *grouplock* graphic objects so they can't be ungrouped, *print-lock* graphics so that they can't be printed (even though they appear in your document when viewed online), *sizelock* graphics so that they can't be resized, and so on. The complete list of graphic locks is listed on the graphic object property sheet.

There are two ways you can modify the locks of a graphic:

- Through the graphic's property sheet
- Through the *Locks* pulldown menus

### **Property Sheet Method**

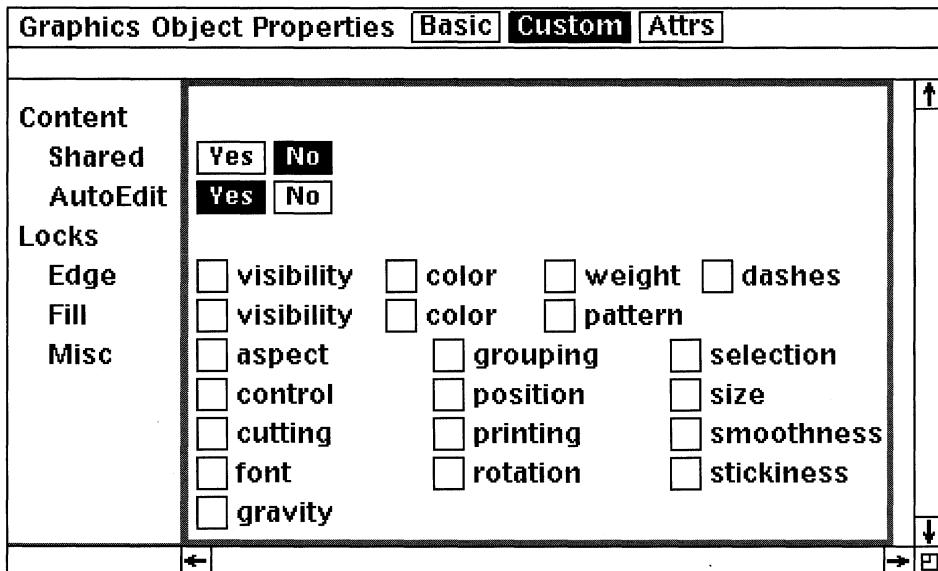
To modify the lock of an existing graphic, follow these simple steps:

1. Select the graphic and execute *Edit→Props*.

*The property sheet for the graphic opens.*

2. Move the mouse cursor into the *Custom* box at the top of the property sheet and click the select button.

*The Custom page of the property sheet opens, as shown in Figure 6. Notice all of the graphic locks are listed on this property sheet.*



*Figure 6*

If you want to set a particular lock, click the select button in the box that corresponds to that lock. For example, if you wish to grouplock your graphic so that no one can ungroup the graphic into its individual pieces, and cutlock your graphic so that no one can cut the graphic from the document, then select the *grouping* lock and *cutting* lock, as shown in Figure 7, execute *Global Apply→Confirm*, and close the property sheet.

To remove an existing lock, simply open the graphic's property sheet, go to the *Custom* page, move the mouse cursor into the box of a currently locked feature, deselect the box, and execute *Global Apply→Confirm*.

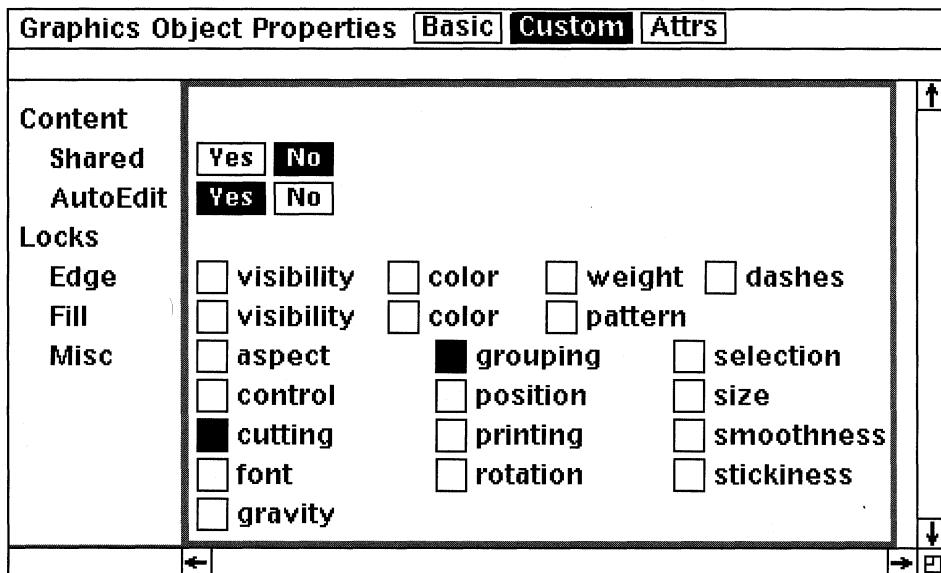


Figure 7

### Pulldown Menu Method

To modify the lock of an existing graphic, select the graphic and execute *Edit→Locks→Set→(select the feature you wish to lock)*.

*The feature you select from the pulldown menu will be locked. For example, if you select Edit→Locks→Set→Cutting, the selected graphic will be cutlocked.*

To remove an existing lock from a graphic, select the graphic and execute *Edit→Locks→Clear→(select the feature you wish to unlock)*.

*The feature you select from the pulldown menu will be unlocked. For example, if cutting is currently locked, and you select Edit→Locks→Clear→Cutting, the "cutting" lock for selected graphic will be turned off.*

To find out which features are currently locked for a graphic, select the graphic and execute *Edit→Locks→Show*.

*The features that are locked for the selected graphic will appear on the status bar of the document header. For example, if a selected graphic were grouplocked and sizelocked, and you executed Edit→Locks→Show, the status bar would display the message shown in Figure 8.*

document	Print	Page 1 of 1	Rev Tracking Off
View X1	Swiss	12	Bold Italic <Default Text Props>
<b>Locked: size grouping</b>			

Figure 8

### How do I add color to my graphics?

If you wish to fill a graphic object with color, select the object and execute *Edit→Fill→Color→(pick a color)*. If you want to change the color of a line or an object's border, select the line or border and execute *Edit→Edge→Color→(pick a color)*.

You're wondering why no colors (just shades of gray) show up as on your pull-down menus, it's because you haven't added color to the document (or your system does not have a color monitor). Default Interleaf documents do not contain color (because Interleaf has no idea if the document will end up on a color system or not). If you want color, you must add it yourself. To learn how to add color to a document, refer to Chapter 5. (Make sure that your monitor supports color before you go through the steps to add it.)

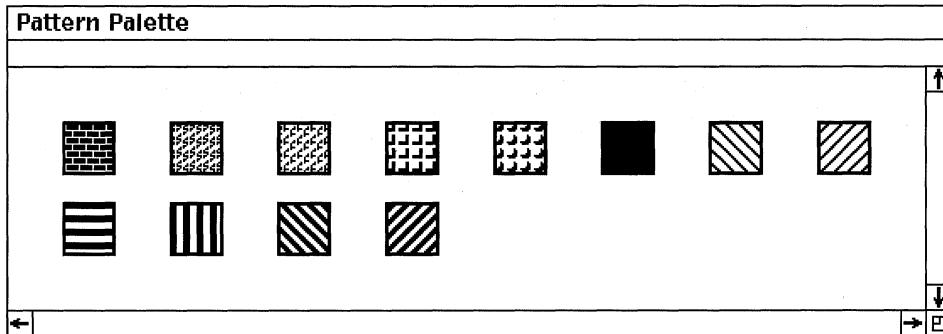
### How do I add a fill pattern to my graphics?

If you wish to fill a graphic object with a new fill pattern, select the object and execute *Edit→Fill→Pattern→(pick a fill pattern)*. If you want to change the line or border such that the line or border is no longer solid (but dashed or dotted), select the line or border and execute *Edit→Edge→Dashes→(pick a line pattern)*. (Be sure you have not selected white as your default color. If white is the default, your fill pattern or line pattern will not show up.)

The default option gives the software a number of fill patterns from which to choose. If you wish to create your own fill pattern and add it to the list of menu options, you must invoke the palette editor from the *Name* box of the document header, as follows:

1. In an open document, move the mouse cursor into the document name box, hold down the menu button, and execute *Misc→Palette→Patterns*.

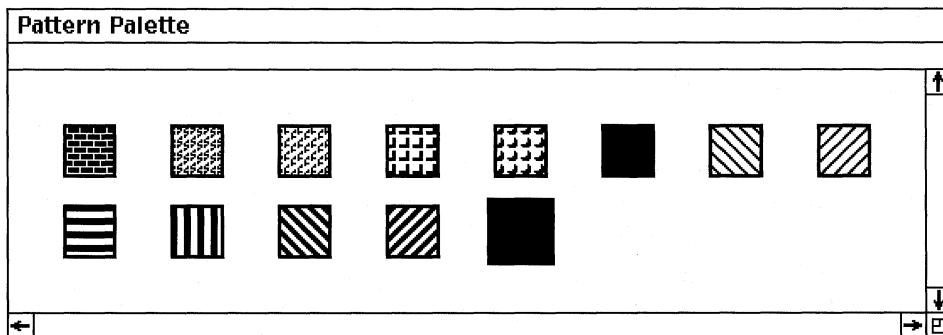
*The default fill pattern palette appears in an open window, as shown in Figure 9.*



*Figure 9*

2. Select the solid black box and execute *Copy*.
3. Move the mouse cursor after the last palette box and execute *Paste*.

*A copy of the solid black palette is pasted at the end, as shown in Figure 10.*



*Figure 10*

4. While the next box is still selected, execute *Edit*.

*The Pattern Editor window appears as shown in Figure 11.*

5. Inside the open Pattern Editor window, execute *Paint→White*.

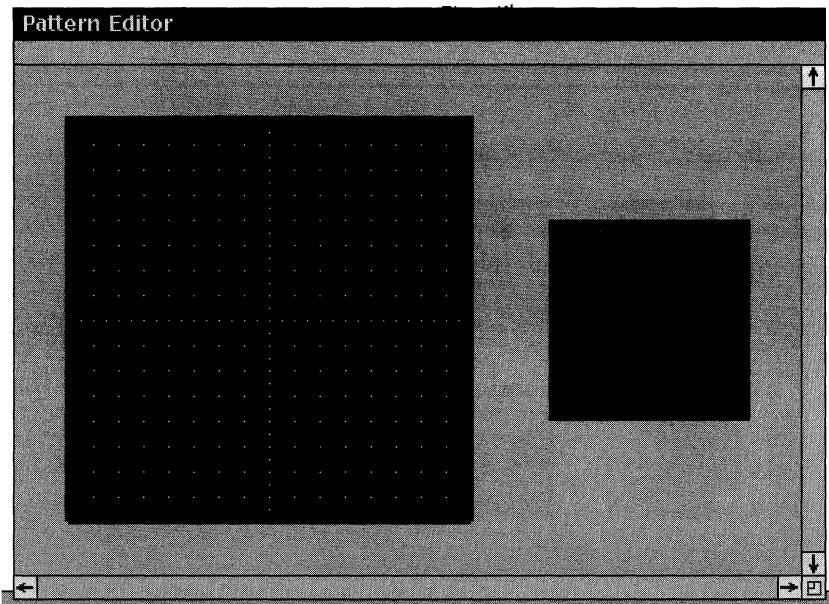


Figure 11

6. Move the mouse cursor over the black field and create the fill pattern shown in Figure 12. If you accidentally make a mistake, execute *Paint→Black* to paint over your mistake.
7. When you've finished creating the fill pattern, execute *Apply*.

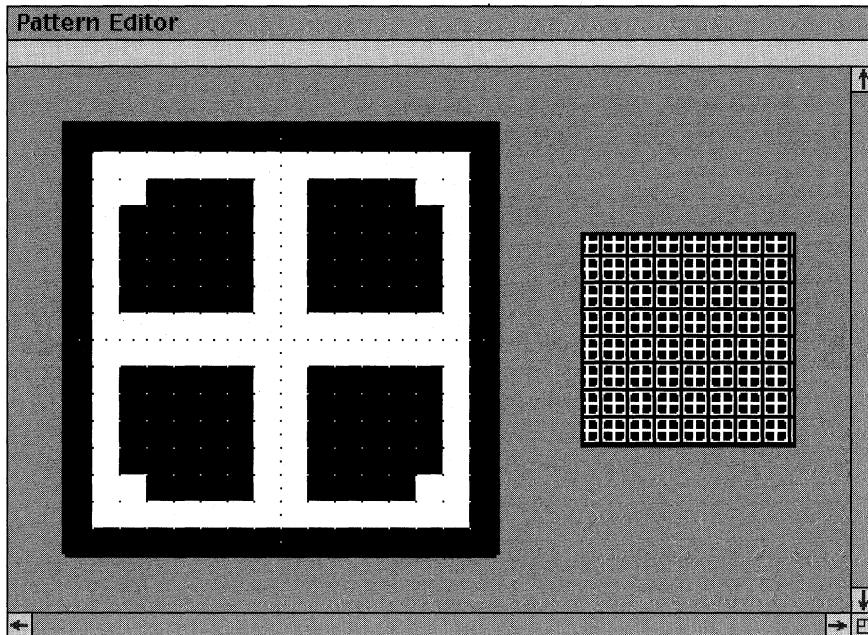
*Notice that the new box in the Pattern Palette window changes to match the new fill pattern you just created.*

8. Close the *Pattern Editor* window.
9. With the mouse inside the *Pattern Palette* window, execute *Apply* and close the *Pattern Palette* window.

*The new fill pattern has been added as a menu item to the document's *Edit→Fill→Pattern* pulldown menu.*

It is important to note that the new fill pattern will appear only on the menu of the document in which it was created. If you want this fill pattern to appear in all new documents, you must modify the default *document* in the *System5* cabinet or create a template document that contains the new fill pattern and put the template in the *System5* cabinet.

Even though it's fun to create your own fill patterns, you could save yourself considerable time by using the pre-designed fill patterns provided in the



*Figure 12*

*Graphics* drawer of the *System5* cabinet. To find these patterns look in *System5/Graphics/Patterns*, and open any one of the documents. Once you find a pattern you like, select it and copy it into the pattern palette window of your document.

### What is detent?

Detent allows you to specify a default rotation factor. For example, if detent is set to 45, selected objects rotate in increments of 45° when you execute *Rotate→Circular*, *Rotate→Clockwise*, or *Rotate→Counterclockwise*. By default, detent is set to 15°. If you wish to change that default, execute (in an open frame) *Misc→Detent→(pick a new rotation factor)*.

## Creating Graphic Objects

### How do I create a perfect circle?

If you have a really steady hand and good judgement, you could do it by executing *Create→Ellipse* from an open frame and sizing the ellipse to a perfect circle

(with *GridAlign* on). Since this method is generally unacceptable by true graphic artists (and since most of us can't draw a perfect circle if our lives depended on it), here's a way that's much more acceptable.

1. In an open document, create a frame and open it.
2. In the open frame, execute *Create*→*Arc*→*Clockwise*. **Do not** click the select button or move the mouse.

*The default arc is 90° (or one quarter) of a perfect circle. Therefore, if you edit the content of the arc and continue the arc until it closes, you automatically get a perfect circle.*

3. While the arc is still selected, hold down the menu button and execute *Edit*→*Content*.
4. Move the mouse in a clockwise motion until you have created a complete circle. Click the select button.

*You now have a perfect circle.*

### How do I size my perfect circle to a particular dimension?

Perfect circles are even more helpful when you can specify their size. In Interleaf it's easy to specify the size of a circle. All you have to do is create a circle of any proportion and then size it equally horizontally and vertically. For example, let's assume that you wanted to create a circle that had a diameter of 2". Here's how you do it:

1. Select the circle and execute *Size*→*Numeric*→*Diagonal*.

*A stickup appears asking you to enter a sizing factor.*

2. In the stickup, type:

**2 in wide**

*(Or you can also enter 2 in high.)*

*The "in" (in the above entry) is part of the expression parser. The expression parser allows you to enter values in specific units of measurement. By entering "2 in" (instead of just "2"), you get a circle with a radius of 2". If you simply entered "2" (instead of "2 in"), you would get a circle that is two times wider than the current circle.*

3. Select *Enter* on the stickup.

*You have just created a perfect 2" circle.*

### **How do I create an ellipse to a specific degree?**

You can always try to estimate the size yourself, but if you're like me, your perception of a perfect 15° ellipse may not be consistent from one day to the next.

Many people try to size an ellipse with a horizontal ruler imbedded in the frame. This can work, but once again, the margin for error (especially if you don't have a steady hand) is greater than you want.

Interleaf does provide a number of pre-designed ellipses in the graphics drawer. To get to them, open the *System5* cabinet, open the *Graphics* drawer, and open the *Ellipses* folder. Copy a specific ellipse from the *Graphics* drawer into your document.

If the ellipse you need is not in the *Graphics* drawer, then you'll have to create it yourself. The best way that I know to create an ellipse to a specific degree is as follows:

Let's assume that you want to create a 15° ellipse.

1. Create a perfect circle of any size.

*Use the steps in the first question of this section to create the perfect circle.*

2. Create a horizontal line that bisects the circle as shown in Figure 13.
3. Select both the circle and the line and execute *Misc*→*Align*→*Centers*.
4. Select only the line and execute *Rotate*→*Numeric*.

*A stickup window appears, as shown in Figure 14.*

5. In the stickup window, type:

**15**

6. Select *Enter*.

*The stickup window disappears, and the line rotates 15°, as shown in Figure 15.*

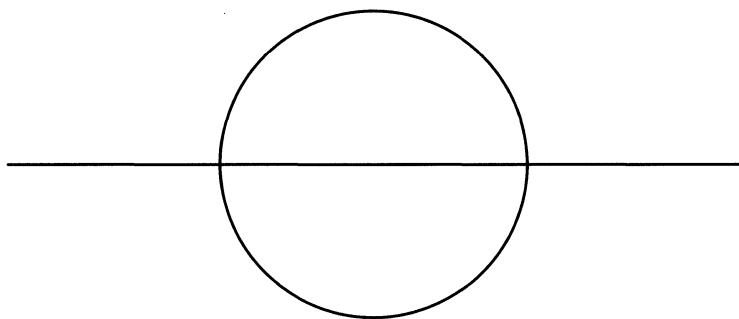


Figure 13

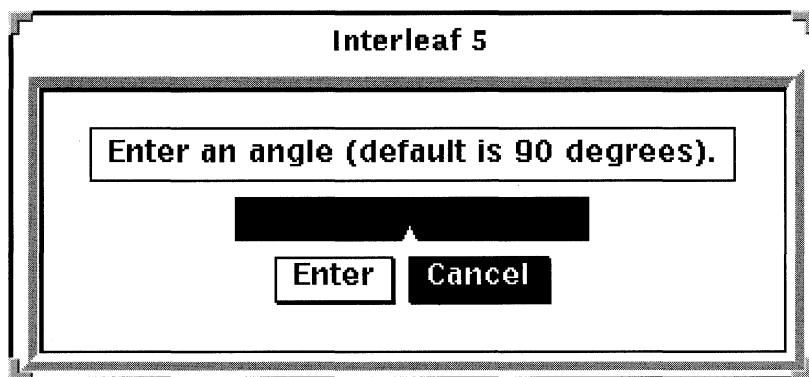


Figure 14

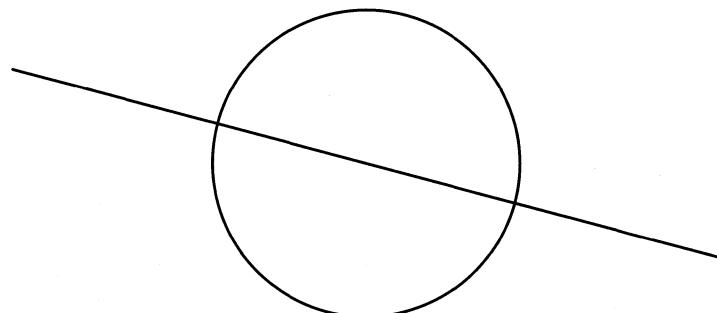


Figure 15

7. Create a new horizontal line that cuts across the circle where the left end of the diagonal line and the circle intersect, as shown in Figure 16.

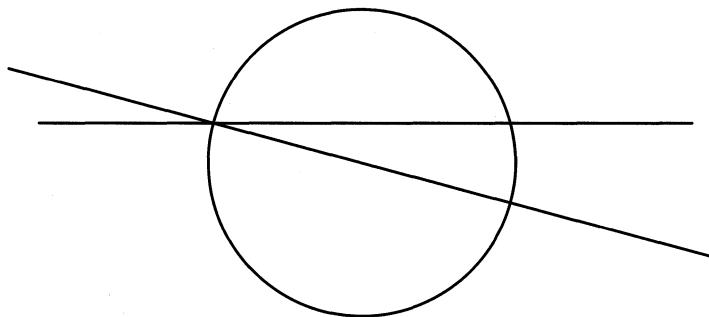


Figure 16

8. Create another horizontal line that cuts across the circle where the right end of the diagonal line and the circle intersect, as shown in Figure 17.

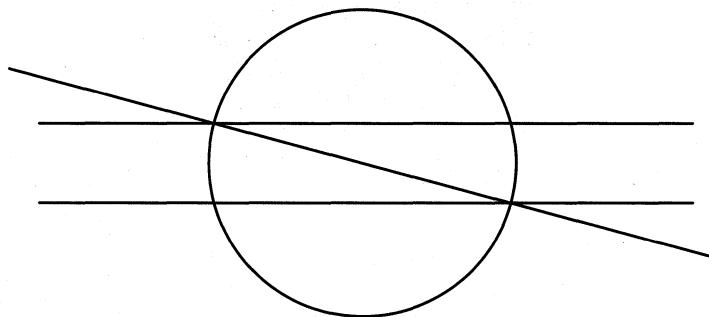


Figure 17

9. Create a small ellipse in the center of the circle between the two horizontal lines, as shown in Figure 18.
10. Remove the circle and the lines, leaving just the ellipse, as shown in Figure 19.

*This is a 15° ellipse. Execute Size→Diagonal (to maintain its proportion) if you want to make the ellipse bigger.*

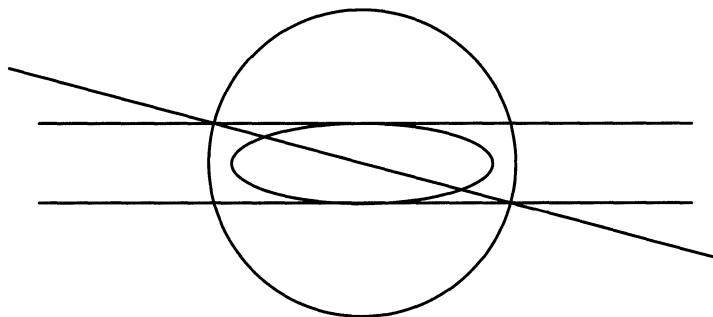


Figure 18



Figure 19

11. Save the ellipse as an NGO.

*If you save the ellipse as an NGO, you don't have to go through the previous steps the next time you need to create a 15° ellipse.*

### **How do I create an isometric cylinder?**

A cylinder is a handy thing to create and then save as an NGO. The creation of a cylinder involves nothing more than creating a combination of lines and an isometric arc. To illustrate this point, let's create a cylinder with a 1" diameter.

#### ***First Create a 1" Diameter Circle***

1. Open a frame.
2. In the open frame, create a perfect 1" circle.

*To learn how to create a perfect circle of a particular dimension refer to the first two questions in this section.*

**Next Create the Cylinder Top**

1. Execute *Misc*→*Detent*→45.

*When detent is 45°, the software rotates objects at increments of 45°.*

2. Select the circle at 12 o'clock (at the very top of the circle), as shown in Figure 20.

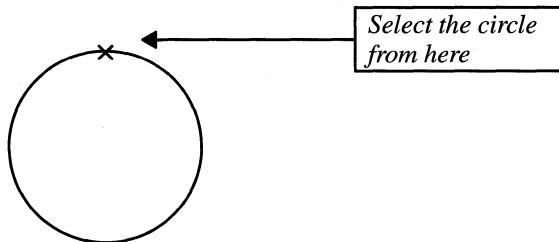


Figure 20

3. Execute *Edit*→*Content*.

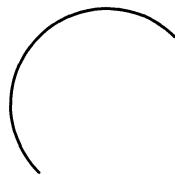
4. Move the mouse cursor in a clockwise circular motion 225° (that's 5 detents; recall, each detent is 45°), and click the select button.

*Notice that as you move the mouse the circle is erased in increments of 45°, starting at 12 o'clock, moving in a clockwise direction. After you have erased five detents, the circle becomes an arc, as shown in Figure 21.*



Figure 21

5. Select the arc at 12 o'clock again (at the very top), and execute *Edit*→*Content*.
6. Move the mouse cursor in a clockwise circular motion  $45^\circ$  (1 detent), so that your arc looks like the one shown in Figure 22.



*Figure 22*

7. Select the arc again and execute *Misc*→*Convert*→*to Iso*→*Top*.

*A stickup appears warning you that you are about to use an isometric projection, which will cause the arc to distort.*

8. Select *Confirm*.

*Converting to Iso makes your arc use an isometric coordinate system (x,y,z) instead of the default Cartesian (x,y) coordinate system. As a result, your arc size and position changes to that of the arc shown in Figure 23. But this is what you want, because the isometric projection makes your arc look like a cylinder top.*

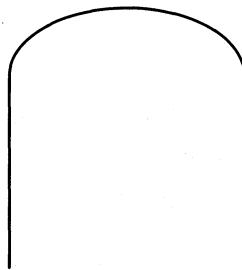


*Figure 23*

9. Deselect the arc.

### Now Create the Sides of the Cylinder

1. With nothing selected, execute *Create*→*Line*→*Vertical*.
2. With the new line still selected, execute *Size*→*Numeric*→*Vertical*.
3. In the stickup, type:  
**1"**
4. Select *Enter*.
5. Select the line and move it so that the top of the line snaps to the left end of the arc.
6. Select the line again and execute *Dup*→*Move*. Do not move the mouse until you are specifically instructed to do so.
7. Hold down the menu button, move the mouse, and execute *Move*→*Horizontal*. Move the mouse until the top of the line snaps to the right end of the arc, as shown in Figure 24.



*Figure 24*

### Finish the Cylinder Top

1. Select the top of the cylinder (the arc) and execute *Dup*→*Move*. Do not move the mouse until you are specifically instructed to do so.
2. Hold the menu button down, and (now move the mouse) execute *Size*→*Reflect*→*Vertical*.

*The copy of the arc reflects vertically.*

3. Select the reflected arc and execute *Move→Vertical*.
4. Move the reflected arc down until you complete a closed cylinder top, as shown in Figure 25, and press the select button.

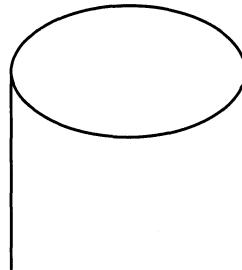


Figure 25

### **Create the Cylinder Bottom**

1. Select the reflected arc (the one that you just moved in the previous step), and execute *Dup→Move*. Do not move the mouse until you are specifically instructed to do so.
2. Hold down the menu button and (now move the mouse), execute *Move→Vertical*.
3. Move the bottom arc down until it snaps to the bottom of the vertical lines, as shown in Figure 26, and press the select button.

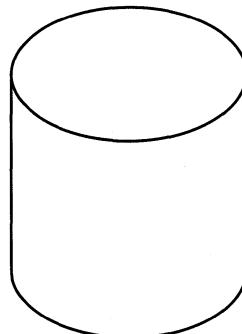


Figure 26

*You've just created a 1" cylinder. If you like, you can save the cylinder as an NGO.*

If you have trouble connecting the lines and arcs in the cylinder so that they appear seamless, try changing gravity radius to 8 (in the open frame, execute *Misc*→*Gravity*→*Radius*, and enter 8 in the resulting stickup), and turn grid align off (execute *Misc*→*Grid*→*Align On/Off*; it's a toggle, so make sure you turn it off and not on). Then use *Move*→*All* (so you're not restricted to moving at an angle) to connect the lines with the arcs. They should snap together the way you want.

## Creating Special Effects

### How do I create a control point?

I have to admit, this one had me stumped for a while. All of the Interleaf documentation I read on graphics always had a step somewhere that said, "Create a control point," but it never told me how to create a control point.

By default, unattached control points are stored in the *System5* cabinet in *System5/Graphics/TechArt/FlowChart*. To add a control point to a graphic object simply copy it from the *FlowChart* document and paste it onto the graphic object.

Fortunately, this is easier than it sounds. To create a new control point, follow these simple steps:

1. Open the *System5* cabinet.
2. Open the *Graphics* drawer.
3. Open the *TechArt* folder.
4. Open the *FlowChart* document.

*As you can see, control points are buried deep in the Graphics drawer.  
(No wonder I couldn't find them!)*

5. Select the dot labelled *Control Point* near the bottom of the open *FlowChart* document, and execute *Cut*.
6. Move the mouse cursor to the point into the open frame at which you wish to add the control point, and execute *Paste*.

*A new control point has been added to your open frame. If you need to create a lot of new control points in your document, save the control point as an NGO.*

## How do I edit individual letters in an outline font?

Outline fonts are fun to use, but when initially created, they are grouped together as one graphic object. If you wish to individually modify the letters in an outline font, all you have to do is ungroup them.

### ***Create the Outline Font***

I find that when I want to practice creating special effects in graphics, it's best to do so in a *ScratchPad* document.

1. Move the mouse to the desktop (make sure nothing is selected) and execute *Create*→*Misc*→*ScratchPad*.

*A ScratchPad document is created on your desktop. You can create any graphic effect in any open frame, however, a ScratchPad document is useful when you are just practicing.*

2. Open the *ScratchPad* document.
3. In the open *ScratchPad* document execut *Create*→*Misc*→*Text*→*Left Aligned*.

*A left-aligned text anchor appears in a selected state.*

4. While the text anchor is selected, type:

### ***Earthquake***

5. While the text is selected, execute *Misc*→*Convert*→*to Outline*→*Helvetica*.

*The software converts the text string to an outline font displayed in Helvetica.*

*Since an outline font is actually a graphic drawn to look like text, the outline font may be resized and filled just like any other graphic object.*

***Caution:*** *Once you convert a text string to an outline font, you cannot convert the outline font back to a text string. Therefore, make all of your text editing changes before you convert a text string to an outline font.*

6. Select the text again and execute *Size*→*Diagonal*.

*Sizing diagonal keeps the text proportional.*

7. Drag the mouse outward until the text is very large, as shown in Figure 27. When the text is the size you want it, click the select button.

# Earthquake

*Figure 27*

8. Select the text again, execute *Move→All*, and move the outline font to the top center of the page.

### ***Ungroup the Outline Font***

Once the outline font has been created, all you have to do is select the outline font and ungroup it. After that, you'll be able to individually edit each letter in the outline font.

9. Select the outline font again and execute *Misc→Ungroup*.

*By default, all of the letters in an outline font are grouped together as one graphic object. By ungrouping the letters, you can manipulate each letter individually.*

10. Select the first letter (the *E*) in the outline font, execute *Rotate→Circular*, rotate the letter slightly to the left, and click the select button.

*The letter E is no longer aligned at the baseline with the rest of the letters in the outline font.*

11. Select the second letter (the *a*) in the outline font, execute *Rotate→Circular*, and rotate the letter slightly to the right.

*Like the letter E, the letter a is no longer aligned with the other letters.*

12. Individually select the rest of the letters in the outline font and rotate each until the text looks similar to that shown in Figure 28.

# Earthquake

*Figure 28*

*You can achieve interesting special effects with text by manipulating each letter individually. In this case, we had to use an outline font because text strings have limited rotation properties (and cannot be ungrouped) and microdocuments cannot be rotated.*

## **How do I make dropshadow text?**

Dropshadow effects are good to use in titles and headings. The eye is automatically drawn to dropshadowed text first, so whenever you wish to make a statement or a first impression, use dropshadowed text.

To create dropshadowed text, follow these simple steps:

1. In an *Scratchpad* document or any open frame, create a left-anchored text string with text:

### **Dropshadow Effect**

2. Select the text string and execute *Misc→Convert→to Outline→Swiss*.

*The software converts the text string to an outline font displayed in Swiss.*

3. Select the text and execute *Size→Diagonal*.
4. Drag the mouse outward until the text is very large, as shown in Figure 29. When the text is the size you want it, click the select button.

# Dropshadow Effect

*Figure 29*

5. Select the new outline font again and execute *Edit→Fill→Color→(pick a medium gray)*.

*In the next step, do not move the mouse until you are specifically instructed to do so.*

6. Select the outline font again and execute *Dup→Move* (do not move the mouse yet!).
7. Press the menu button and (now move the mouse), execute *Move→Numeric→All*.

*A stickup window appears, asking you to enter the number of horizontal grid units you wish to move the duplicated text.*

8. In the stickup window, type:

**.25**

9. Select *Enter*.

*A second stickup window appears, asking you to enter the number of vertical grid units you wish to move the duplicated text.*

10. In the second stickup window, type:

**-.25**

11. Select *Enter*.

*The text is moved to the right 0.25 (or one quarter) of a grid unit, down 0.25 of a grid unit.*

12. Execute *Select→Again*.

*The duplicated version of the outline font is selected.*

*The *Select→Again* command reselects the last object you had selected.*

13. Execute *Misc→Back*.

*The duplicated version of the outline font is placed behind the original.*

14. Execute *Select→Again*.

15. Execute *Edit→Fill→Color→(pick black)*.

*The copied version of the outline font fills with black, creating a drop-shadow effect, as shown in Figure 30.*

# Dropshadow Effect

*Figure 30*

*You can control the amount of the shadowing effect by increasing the amount of vertical and/or horizontal distance you move the duplicated version of the outline font.*

## How do I make a cast shadow of text?

A dropshadow assumes a light source from a particular angle. If you move that light source, the shadowing effect begins to shear, giving the illusion that the text is casting a long shadow. To simulate the light source moving, you use the *Shear* graphic tool.

To create light source text, follow these simple steps:

1. In an *Scratchpad* document or any open frame, create a left-anchored text string with text:

### **Cast Shadow**

2. Select the text string and execute *Misc*→*Convert*→*Outline*→*Swiss*.

*The software converts the text string to an outline font displayed in Swiss.*

3. Select the text and execute *Size*→*Diagonal*.
4. Drag the mouse outward until the text is very large, as shown in Figure 31. When the text is the size you want it, click the select button.

# Cast Shadow

*Figure 31*

*In the next step, do not move the mouse until you are specifically instructed to do so.*

5. Select the outline font again and execute *Dup*→*Move* (do not move the mouse yet!).

6. Press the menu button and (now move the mouse), execute *Edit→Fill→Color→(pick a light gray)*.

*A copy of the outline font is created on top of the original. The copy is shaded with light gray and completely obscures the black original.*

7. Execute *Select→Again*.

*The gray copy is selected only. The black original is not selected.*

8. Execute *Misc→Back*.

*The light gray copy is moved behind the black original.*

9. Execute *Select→Again*.

*The light gray copy is selected.*

10. Execute *Misc→Shear→Horizontal→All* and move the mouse slightly to the left.

*Notice that as you move the mouse, the copied gray text shears horizontally, while the original black text remains the same.*

11. When you get the text the desired angle, click the select button.

12. Execute *Select→Again*.

*The light gray copy is selected.*

13. Execute *Move→All* and move the sheared text so that the font base of the sheared text is aligned with the font base of the black text, as shown in Figure 32.



*Figure 32*

*By varying the angle of the shearing, you can simulate the light source moving.*

### **How do I make text rotate radially around a circle?**

Radial aligned text is text that looks like it has been drawn around a perfect circle. In other words, the base of each letter in a word sits on the circumfer-

ence of the circle. You can think of the text as letters or numbers on an old-fashioned radio dial.

To create radial-rotated text, follow these simple steps:

1. In an *Scratchpad* document or any open frame, create a left-anchored text string with text:

### **Radio**

2. While the text is selected, execute *Misc*→*Convert*→*to Outline*→*Helvetica*.

*The software converts the text string to an outline font displayed in Helvetica.*

3. Select the text, and execute *Size*→*Diagonal*.
4. Drag the mouse outward until the text is very large, as shown in Figure 33. When the text is the size you want it, click the select button.

The image shows the word "Radio" in a large, bold, black outline font. The letters are slightly curved, giving them a radial-rotated appearance as if they were on a radio dial. The font is sans-serif, specifically Helvetica.

*Figure 33*

5. Execute *Select*→*Again*.
6. Execute *Edit*→*Edge*→*Weight*→(pick a medium weight).

*Even though you can't tell, the edge weight of the outline font has increased.*

7. Execute *Select*→*Again*.
8. Execute *Edit*→*Fill*→*Color*→(pick white).

*The inside of the outline font is filled with white. Since you made the edge weight heavy in the previous step, your outline font now looks like the one shown in Figure 34.*



Figure 34

9. Select the outline font again and execute *Misc→Ungroup*.

*Recall that, by default, all of the letters in an outline font are grouped together as one graphic object. By ungrouping the letters, you can manipulate each letter individually.*

### **Add a Control Point to the Base of Each Letter**

1. Add a new control point to the center of the baseline of the *R* in the word *Radio*, as shown in Figure 35.



Figure 35

*The software uses control points as a reference when rotating or sizing graphic objects. In this case we need to add a new control point to the baseline of each letter in the ungrouped outline font.*

### **Duplicate the Control Point for Each Letter**

Once the new control point has been added to the document, you can copy it to the baseline of the rest of the letters in the outline font.

*Once again, in the next step, do not move the mouse until you are specifically instructed to do so.*

1. Select the newly added control point and execute *Dup→Move* (do not move the mouse yet!).
2. Hold down the menu button (now move the mouse) and execute *Move→Horizontal*.

3. Move the duplicated control point to the center baseline of the *a* in the *Radio* outline font, as shown in Figure 36, and click the select button.



*Figure 36*

4. Select the duplicated control point and execute *Dup→Repeat*.
5. Move the duplicated control point to the center baseline of the *d* in the *Radio* outline font, as shown in Figure 37.



*Figure 37*

6. Repeat steps 4 and 5 above to put control points at the center baseline of each letter.

*When you are finished, your outline font should have control points at the bottom of each letter, as shown in Figure 38.*



*Figure 38*

#### **L/R Center-Align Each Control Point with its Letter**

1. Group select the *R* and its control point, as shown in Figure 39, and execute *Misc→Align→L/R Centers*.



Figure 39

2. Repeat Step 1 above for each letter and its associated control point.

### ***Establish a Radius of Rotation***

The radius of rotation of the letters is determined by the distance you move the control points from the base of the letters.

1. Group select all of control points, as shown in Figure 40.



Figure 40

2. While all of the control points are selected, execute *Move*→*Vertical*, move the control points as a group down about 1.5", and click the select button.

### ***Group Each Control Point with its Letter***

1. Group select the *R* and its control point and execute *Misc*→*Group*, as shown in Figure 41.
2. Repeat Step 1 above for each letter and its associated control point.

*The baseline control points for each letter are now grouped together with their associated letters.*



Figure 41

### **Fan Out Letters on the Circle Radius**

1. Group select all of the letters and their associated control points, as shown in Figure 42, and execute *Misc→Align→Centers*.



Figure 42

*All of the letters and control points group together, one on top of the other, as shown in Figure 43.*

2. Select the top letter and execute *Rotate→Circular*.

*Notice that as you move the mouse, the selected letter rotates on a radius that is defined by the distance of the control point from the baseline of the letter.*

3. Rotate the selected letter to a new position on the imaginary circle's radius.

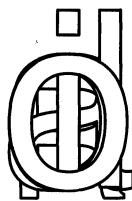


Figure 43

4. Select each letter in the outline font and rotate it until all the letters appear wrapped around a circle, as shown in Figure 44.

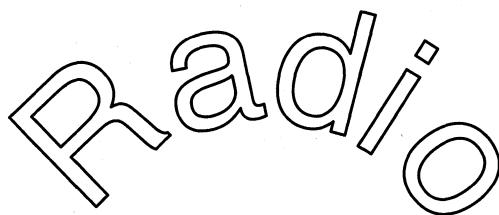


Figure 44

*Your text is radially rotated around an imaginary circle.*

### **How do I create hollow text?**

When you fill a graphic object with the color white, you cannot see through the object. This means if you fill an outline font with the color white you cannot see objects that are moved behind the outline font. If, therefore, you wish to create letters that are hollow (in other words, you can see through them), then you must make the fill of the font invisible instead of filling the font with the color white.

To create hollow text, follow these simple steps:

1. In an *Scratchpad* document or any open frame, create a left-anchored text string with text:

### Hollow

2. Select the text string and execute *Misc*→*Convert*→*to Outline*→*Swiss*.

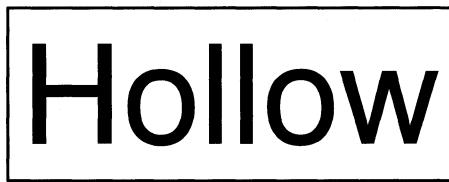
*The software converts the text string to an outline font displayed in Swiss.*

3. Select the outline font and execute *Size*→*Diagonal*.
4. Drag the mouse outward until the text is very large, as shown in Figure 45. When the text is the size you want it, click the select button.

# Hollow

*Figure 45*

5. Create a box around the outline font; make sure that the box completely encloses all of the text in the outline font, as shown in Figure 46.



*Figure 46*

6. Select both the box and the *Hollow* outline font and execute *Misc*→*Align*→*Centers*.

*The outline font is centered in the middle of the box.*

7. Select the outline font and execute *Edit*→*Fill*→*Visible*→*No*.

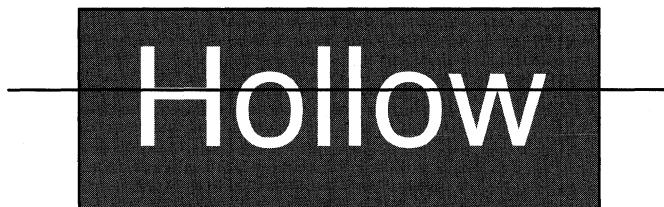
*The outline font disappears because it is not filled with any color, and it has no edge color. This leaves a true hole where the outline font was once visible.*

8. Select both the invisible outline font and the box and execute *Misc→Group*.

*The invisible outline font and the box are now one graphic object.*

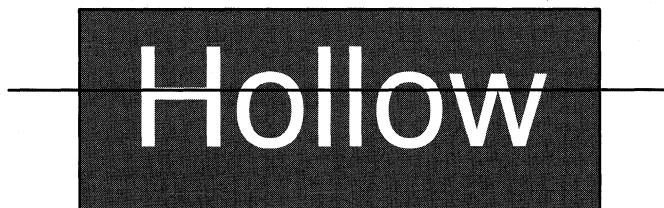
9. Select the box and execute *Edit→Fill→Color→(pick a medium gray)*.

*Notice that the outline font appears in a reverse video effect, as shown in Figure 47. This is because the outline font has no fill. So when the box is filled, the outline font is omitted from the fill process.*



*Figure 47*

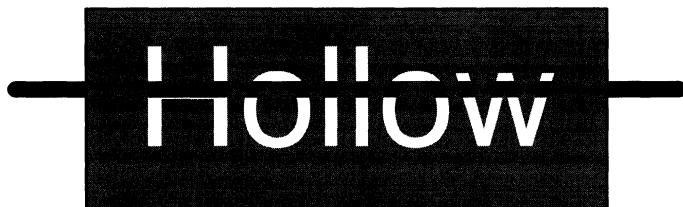
10. Create a horizontal line and move it on top of the box and outline font, as shown in Figure 48.



*Figure 48*

11. Select the line and execute *Edit→Edge→Weight→(pick the heaviest edge weight offered)*.
12. Select the line and execute *Misc→Back*.

*The line is placed behind the box and outline font. However, the line can be seen through the outline font, as shown in Figure 49. This is because the outline font fill is invisible, as opposed to filled with white. If the outline font were filled with the color white, the text would not appear hollow, and you would not be able to see the line through the letters.*



*Figure 49*

### **Can I animate my Interleaf graphics?**

Yes, in a sense. If you don't have an animation package, you can create what I call "economy animation" by putting the creation of your graphics in a macro. Then when you run the macro, the steps you performed to create the graphics will run in sequence, giving the appearance of moving pictures. This is extremely handy if you want to create a document that visually demonstrates how a particular graphic object (such as a piece of machinery) is assembled. Simply record the assembly of the graphic object in a macro and then tell the user which key sequence to press to play back that macro.

The best way to illustrate putting graphics in a macro is with an example. Let's assume that you wanted to show a box spinning about its center axis (we'll keep it simple for the sake of the example). To accomplish this, we'll set up a macro that shows the creation of the box, and the box rotating, as follows:

1. Open a *ScratchPad* document (or any frame in a document).
2. Move the mouse cursor to the desktop and execute *Custom→Tools→Macro→Control*.

*The macro control window appears on your desktop, as shown in Figure 50.*

*If the Custom→Tools→Macro→Control does not appear on your pulldown menus, then you must install the Macro Tool with the Tool Manager. Refer to Chapter 17, for the steps required to install the Macro Tool with the Tool Manager.*

3. Move the mouse cursor into the open frame of the open document, and press the following key sequence:

**Ctrl-x (**

*Notice the status box in the open Macro Control window. The status box states; "Recording", as shown in Figure 51. All keystrokes and mouse movements from this point on are being recorded.*

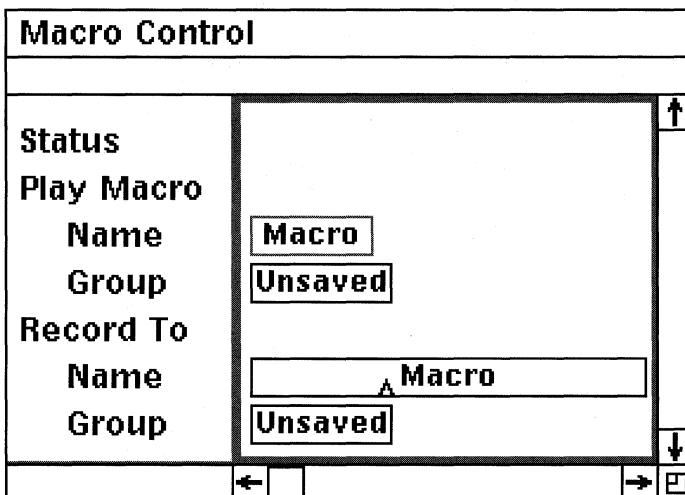


Figure 50

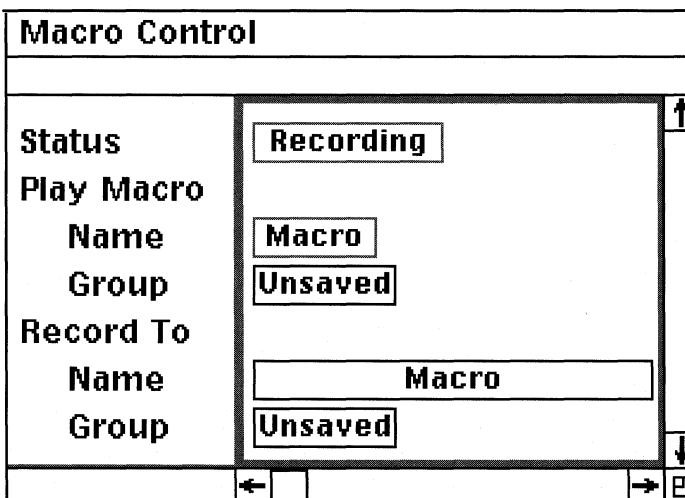


Figure 51

4. In the open frame of the document execute *Create→Box*. Visually size the box to be about 1.5" x 1.5".
5. Move the box into the middle of the frame and click the select button.

6. Select the box again, execute *Rotate→Circular*, and move the mouse in a circle so that the box rotates about its center axis about 10 times.
7. Click the select button.
8. Press the following key sequence:

**Ctrl-x )**

*The Macro Tool stops recording. Notice that the “Recording” message in the status box goes away, as shown in Figure 52. At this point, the software ceases to record keystrokes and mouse movements. But everything you did on the desktop between Steps 3 and 8 of this section have been recorded in a macro.*

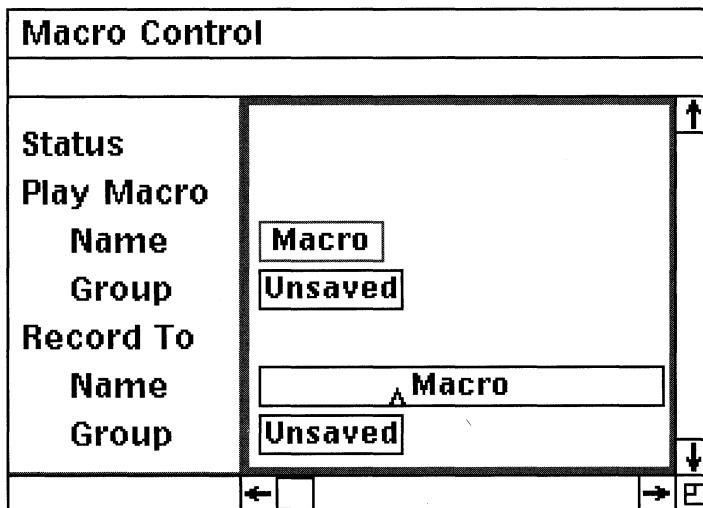


Figure 52

9. Move the mouse cursor into the open *Macro Control* window, hold down the menu button, and execute *Play→Start*.

*The Macro Tool gets ready to play back your macro. Notice that the status box in the open *Macro Control* window states “Initiate Play,” as shown in Figure 53.*

10. Move the mouse into the open frame of the document, hold down the menu button, and execute *Play*.

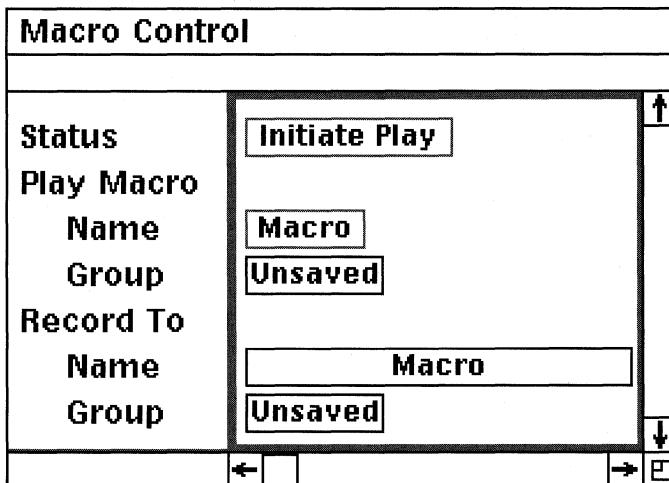


Figure 53

*Executing Play plays back the macro you just created. In this case, the software creates a new box and rotates it about its center axis, giving the illusion of animation. If you wish to save this macro, you can name it, bind it to a key sequence, and store it in your desktop in a macro container, as explained in Chapter 17.*

### How do I make text wrap around a graphic object?

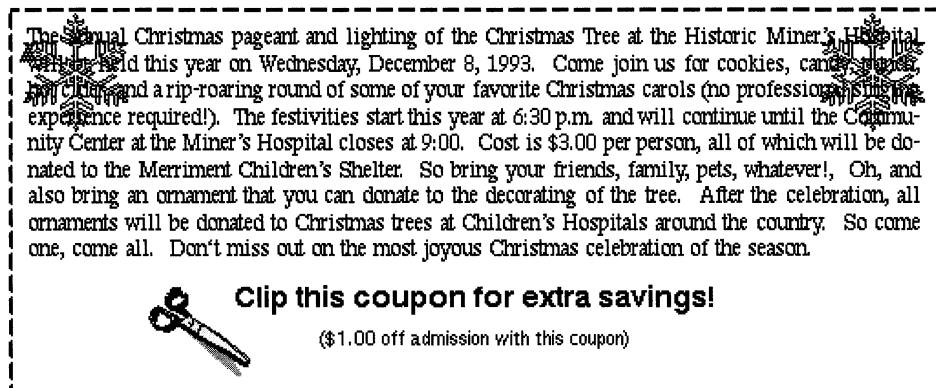
This is known in “Interleaf-ese” as shaping text.

There are two basic ways you can shape text:

- By executing the *Misc→Shape* command from the text area menus
- Through the *Profile* page of the component property sheet

In either case, you create a *fullpage* frame (or any frame that has a placement of underlay or overlay), and put the graphic object in it. Because the placement of the frame is underlay or overlay, the text on the page sits on top of (or underneath) the graphic object. All you have to do now is use one of the shaping methods to shape the text around the graphic object.

As always, the best way to see how this works is to look at an example. Let’s assume that you were working with the text and graphics shown in Figure 54, and you wanted to shape the text around the snowflakes. You can easily accomplish this using the *Misc→Shape* command or the *Profile* page of the component property sheet.

*Figure 54*

## ***Using Misc→Shape***

In this example, the snowflakes are in a frame that has *underlay* placement. This means that the text sits on top of the graphic object. In this case, the easiest way to shape the text around the snowflakes is to perform the following steps:

1. With the mouse cursor in the text area, hold down the menu button and execute *Misc→Shape*.

*Shape bars appear at the beginning and end of each line, as shown in Figure 55. Notice also that the cursor changes form. These two changes tell you that you are in shape mode.*

2. Hold down the menu button and execute *Gravity→Off*.

*This allows you to move the shape bars smoothly.*

3. Select the shape bar that appears at the beginning of the first line and execute *Set*.
4. Slide the selected shape bar to the right until the text is no longer obscured by the snowflake, as shown in Figure 56, and execute *Apply*.

The annual Christmas pageant and lighting of the Christmas Tree at the Historic Miner's Hospital will be held this year on Wednesday, December 8, 1993. Come join us for cookies, candy canes, eggnog, cider, and a rip-roaring round of some of your favorite Christmas carols (no professional singing experience required!). The festivities start this year at 6:30 p.m. and will continue until the Community Center at the Miner's Hospital closes at 9:00. Cost is \$3.00 per person, all of which will be donated to the Merriment Children's Shelter. So bring your friends, family, pets, whatever!, Oh, and also bring an ornament that you can donate to the decorating of the tree. After the celebration, all ornaments will be donated to Christmas trees at Children's Hospitals around the country. So come one, come all. Don't miss out on the most joyous Christmas celebration of the season.

**Clip this coupon for extra savings!**

(\$1.00 off admission with this coupon)

Figure 55

The annual Christmas pageant and lighting of the Christmas Tree at the Historic Miner's Hospital will be held this year on Wednesday, December 8, 1993. Come join us for cookies, candy canes, eggnog, cider, and a rip-roaring round of some of your favorite Christmas carols (no professional singing experience required!). The festivities start this year at 6:30 p.m. and will continue until the Community Center at the Miner's Hospital closes at 9:00. Cost is \$3.00 per person, all of which will be donated to the Merriment Children's Shelter. So bring your friends, family, pets, whatever!, Oh, and also bring an ornament that you can donate to the decorating of the tree. After the celebration, all ornaments will be donated to Christmas trees at Children's Hospitals around the country. So come one, come all. Don't miss out on the most joyous Christmas celebration of the season.

**Clip this coupon for extra savings!**

(\$1.00 off admission with this coupon)

Figure 56

*The text on line 1 now indents so that the snowflake in the upper right-hand corner no longer obscures it.*

5. Select the shape bar that appears at the beginning of the second line and execute *Set*.
6. Slide the selected shape bar to the right until the text is no longer obscured by the snowflake and execute *Apply*.

7. Repeat this process for the next two lines until all of the lines in the component are staggered around both snowflakes, as shown in Figure 57.

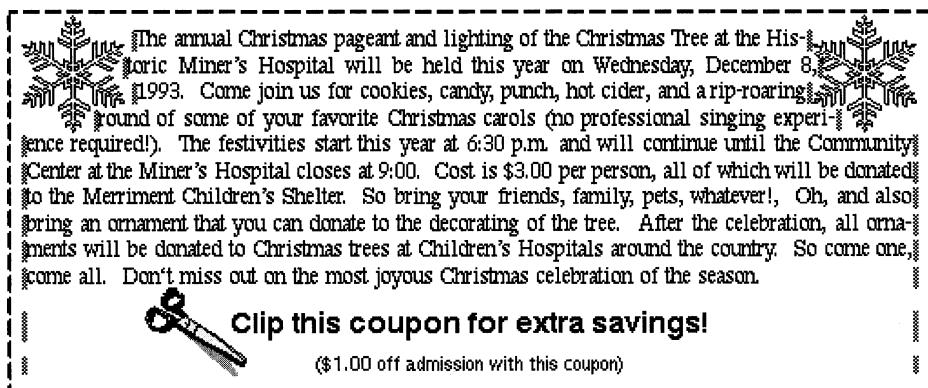


Figure 57

8. Execute Close.

*The shape bars disappear, the text caret reappears, and you are returned to regular text-editing mode, as shown in Figure 58.*

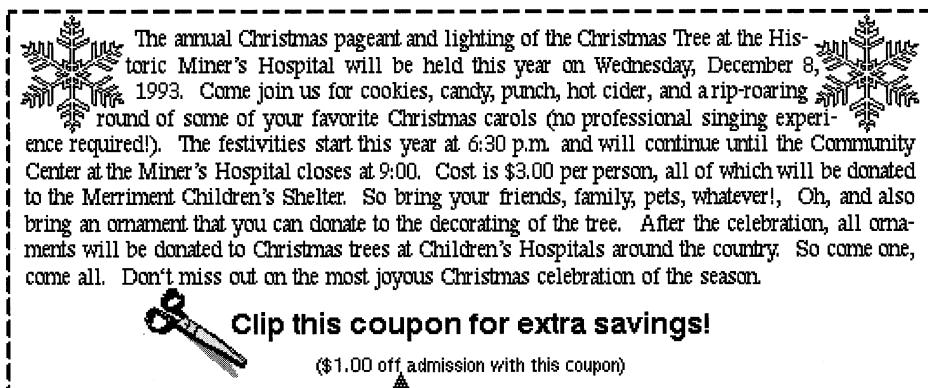


Figure 58

## ***Shaping Text with the Profile Sheet***

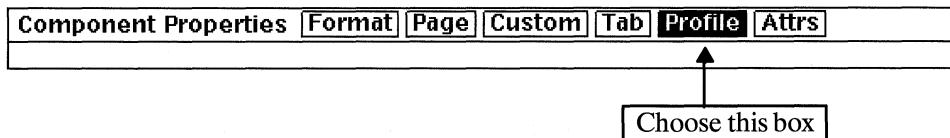
In addition to the *Misc→Shape* command, each component comes with a *Profile* sheet (accessed from the component's property sheet). The *Profile* sheet allows you to select individual lines in a particular component and indent those lines by a specified amount.

Keeping with the same example, let's assume that you wanted to access the *Profile* page for the text you just shaped.

1. Select the component that contains the text you just shaped and execute *Props*.

*The component's property sheet opens.*

2. Move the mouse cursor to the top of the property sheet and click the select button into the *Profile* box, as shown in Figure 59.



*Figure 59*

*The Profile page for the text you just shaped opens, as shown in Figure 60..*

In Figure 60:

- The *Start line* box identifies the line number in the component that is to be indented.
- The *Count lines* box indicates how many lines down (from the Start Line) are affected by the indent.
- The *Indent* box indicates how much of an indent is to take place (in inches).
- The *Left* and *Right* boxes indicate if the text is to be indented left or right.

Component Properties		Format	Page	Custom	Tab	Profile	Attrs
Start	Count	Indent					
line 1	1	.81	inches	Left	Right	Remove	
line 1	1	.77	inches	Left	Right	Remove	
line 2	1	.75	inches	Left	Right	Remove	
line 2	1	.69	inches	Left	Right	Remove	
line 3	1	.81	inches	Left	Right	Remove	
line 3	1	.77	inches	Left	Right	Remove	
line 4	1	.53	inches	Left	Right	Remove	
line 4	1	.56	inches	Left	Right	Remove	
line 0	0	0	inches	Left	Right	Remove	
line 0	0	0	inches	Left	Right	Remove	
line 0	0	0	inches	Left	Right	Remove	
line 0	0	0	inches	Left	Right	Remove	

Figure 60

For example, in Figure 60, the first row of boxes tells us that starting at line 1, for a count of 1 line, the software will indent the text .81 inches from the left. This means that line 1 is indented .81 inches left. The second row of boxes tells us that starting at line 1, for a count of 1 line, the software will indent the text .77 inches from the right. This means that in addition to being indented left, line 1 is also indented .77 inches right. Lines 2, 3, and 4, also have two indents each, one on each end (left and right) of the line.

*The Profile page allows you to set a specific indent for each line in the component. You can enter indent values directly on the Profile page, and then execute Apply, or you can use the Misc→Shape command to dynamically shape text and then let the software fill the values in the Profile page for you. In this case, we indented using the Misc→Shape command, thus the software filled in the current indentations in the Profile page for us. Editing the Profile page directly is especially handy to use if each line in a component must be indented a uniform distance, for example, if line 1 is indented 0.5" to the left, line 2 is indented 0.75" to the left, line 3 is indented 1" to the left, and so on, or if a series of lines (for example, the Count lines box contains 10) is to be indented the same distance.*

## How do I add a drop-cap as the first letter in a paragraph?

A drop cap, as shown in Figure 61, creates a nice effect for the first paragraph at the beginning of a chapter or document.

The annual Christmas pageant and lighting of the Christmas Tree at the Historic Miner's Hospital will be held this year on Wednesday, December 8, 1993. Come join us for cookies, candy, punch, hot cider, and a rip-roaring round of some of your favorite Christmas carols (no professional singing experience required!). The festivities start this year at 6:30 p.m. and will continue until the Community Center at the Miner's Hospital closes at 9:00. Cost is \$3.00 per person, all of which will be donated to the Merriment Children's Shelter. So bring your friends, family, pets, whatever!, Oh, and also bring an ornament that you can donate to the decorating of the tree. After the celebration, all ornaments will be donated to Christmas trees at Children's Hospitals around the country. So come one, come all. Don't miss out on the most joyous Christmas celebration of the season.

*Figure 61*

In Interleaf, the only way you can have a letter extend below its current line is by putting the letter in a frame as a outline font. Therefore, the secret to creating a drop cap is to first create a small frame just for the drop cap, insert an outline font letter, and then shape the component text around the frame.

To illustrate this procedure, let's create the drop cap shown in Figure 61.

Let's assume that this is the first component on the first page in a document.

1. Go to page 1 and click the select button in front of the first letter in the first component on the page.

*The text caret moves to the beginning of the document.*

2. Create a floating frame and open its property sheet.
3. Change the fields in the open property sheet to match those shown in Figure 62.
4. Execute *Apply* and close the property sheet.

*The frame is now small (.75" x 1") and overlays the text in the upper left corner of the component, as shown in Figure 63.*

5. Open the *Drop Cap* frame, and execute *Create*→*Misc*→*Text*→*Left Aligned*.

*A left aligned text anchor appears in a selected state.*

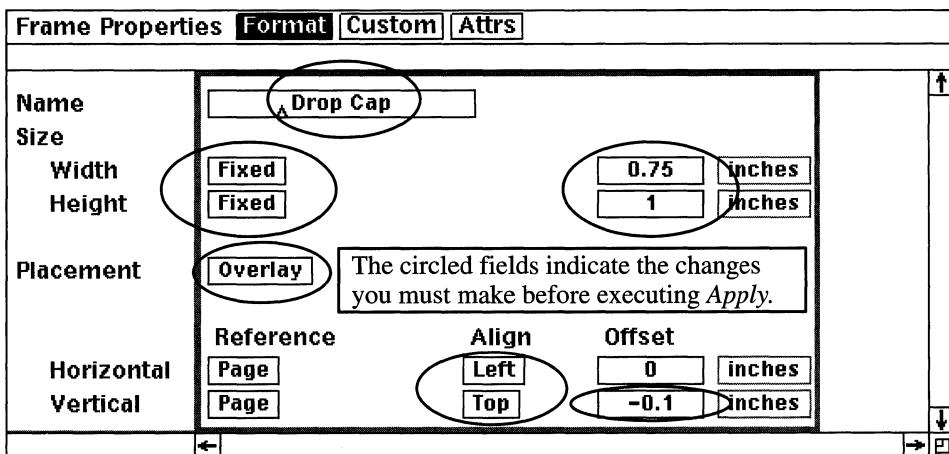


Figure 62

The annual Christmas pageant and lighting of the Christmas Tree at the Historic Miner's Hospital will be held this year on Wednesday, December 8, 1993. Come join us for cookies, candy, punch, hot cider, and a rip-roaring round of some of your favorite Christmas carols (no professional singing experience required!). The festivities start this year at 6:30 p.m. and will continue until the Community Center at the Miner's Hospital closes at 9:00. Cost is \$3.00 per person, all of which will be donated to the Merriment Children's Shelter. So bring your friends, family, pets, whatever!, Oh, and also bring an ornament that you can donate to the decorating of the tree. After the celebration, all ornaments will be donated to Christmas trees at Children's Hospitals around the country. So come one, come all. Don't miss out on the most joyous Christmas celebration of the season.

Figure 63

6. While the frame anchor is selected, type:

T

*The letter "T" appears as a text string.*

7. While the text text string is still selected, execute *Misc→Convert→to Outline→<Preserve Font>*.

*The text string is converted to an outline font. Now you can use the graphics tools to size the letter T as big as you like.*

8. Select the outline font *T* and execute *Size→to Frame→Diagonal*.

*The letter *T* grows to fill the frame.*

9. Close the frame.

*Because the Drop Cap frame placement is overlay, the outline font obscures the text, as shown in Figure 64. What you need to do now is shape the first four lines of the text around the outline font *T*.*

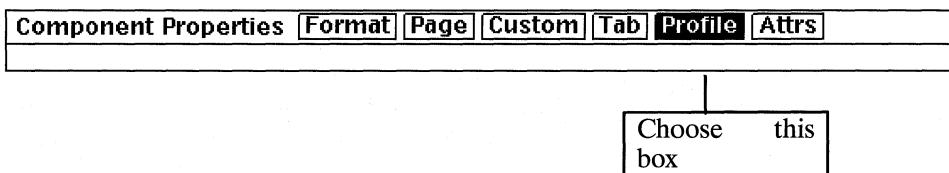
The annual Christmas pageant and lighting of the Christmas Tree at the Historic Miner's Hospital will be held this year on Wednesday, December 8, 1993. Come join us for cookies, candy, punch, hot cider, and a rip-roaring round of some of your favorite Christmas carols (no professional singing experience required!). The festivities start this year at 6:30 p.m. and will continue until the Community Center at the Miner's Hospital closes at 9:00. Cost is \$3.00 per person, all of which will be donated to the Merriment Children's Shelter. So bring your friends, family, pets, whatever! Oh, and also bring an ornament that you can donate to the decorating of the tree. After the celebration, all ornaments will be donated to Christmas trees at Children's Hospitals around the country. So come one, come all. Don't miss out on the most joyous Christmas celebration of the season.

*Figure 64*

10. Select the component (from the component bar) and execute *Props*.

*The component's property sheet opens.*

11. Move the mouse cursor to the top of the property sheet, and click the select button into the *Profile* box, as shown in Figure 65.



*Figure 65*

*The Profile page appears on the desktop.*

12. In the first row of boxes on the *Profile* page, change the contents of the *Start line* box to 1, the *Count lines* box to 4, the *Indent* box to .75, and select the *Left* box, as shown in Figure 66.

Component Properties		Format	Page	Custom	Tab	Profile	Attrs	
Start	Count	Indent						
line 1	4	lines	0.75	inches	Left	Right	Remove	
line 0	0	lines	0	inches	Left	Right	Remove	
line 0	0	lines	0	inches	Left	Right	Remove	
line 0	0	lines	0	inches	Left	Right	Remove	
line 0	0	lines	0	inches	Left	Right	Remove	
line 0	0	lines	0	inches	Left	Right	Remove	
line 0	0	lines	0	inches	Left	Right	Remove	

Figure 66

The Profile page settings shown in Figure 66 tell the software to indent four lines of text, starting with line 1. The distances the lines are to be indented is 0.75 inches from the left.

13. Execute *Apply* and close the property sheet.

The first four lines of the component have been indented left 0.75 inches, allowing you to see the outline font drop cap.

Notice the first word in the component is "The." The "T" in the word "The" is supposed to be the drop cap. Therefore, you need to delete the capital "T" in the first word of the component text.

14. Move the text caret before the *h* in the word *The* (the first word in the component) and press the *Delete* key.

Now your drop cap paragraph looks like the one shown in Figure 67.

The annual Christmas pageant and lighting of the Christmas Tree at the Historic Miner's Hospital will be held this year on Wednesday, December 8, 1993. Come join us for cookies, candy, punch, hot cider, and a rip-roaring round of some of your favorite Christmas carols (no professional singing experience required!). The festivities start this year at 6:30 p.m. and will continue until the Community Center at the Miner's Hospital closes at 9:00. Cost is \$3.00 per person, all of which will be donated to the Merriment Children's Shelter. So bring your friends, family, pets, whatever! Oh, and also bring an ornament that you can donate to the decorating of the tree. After the celebration, all ornaments will be donated to Christmas trees at Children's Hospitals around the country. So come one, come all. Don't miss out on the most joyous Christmas celebration of the season.

Figure 67



## **12. Special Graphic Applications**

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I wish I had a dollar for every time someone asked me why Interleaf doesn't create business charts. (I'd be rich and wouldn't have to write books about how Interleaf *does* create business charts.)

The Interleaf Chart Editor and the Image Editor are two of the best kept secrets of the Interleaf software. For some reason, people become misled about the capabilities of Interleaf, thinking it only formats text and vector graphics, and they never get as far as how to create a chart or edit an image file. Too bad. These tools allow you to fine tune your Interleaf documents by adding or, in the case of the Image Editor, taking away information.

The Interleaf Chart Editor lets you create basic business charts, including bar charts, line charts, area charts, and pie charts. In addition, you can add chart annotation, such as titles, axes labels, and legends. Charts work well in conjunction with tables, allowing your reader to see both literal and visual representations of your data. Trends can be shown in a chart, while the actual data is listed in a table. If you ever wanted to influence with statistics, this is the best way to do it. Fewer words make a greater impact. Let the data do the talking.

The Image Editor, on the other hand, allows you to edit graphic images (not vectors) that are brought into your document as a result of screen captures, scanned output, or filtered documents. An image is a bit-mapped representation (as opposed to a vector representation) and therefore cannot be edited with the regular graphic drawing tools. Granted the editing capabilities of the Image Editor are limited compared to the basic drawing tools, but still the Image Editor offers more functionality than most other desktop publishing packages. With the Image Editor, you can size, rotate, crop, and change the gray shading of bit-mapped images. You can also paint over unwanted parts of the image and increase the view of the image up to 32 times larger than its original size, allowing you to edit the image bit by bit.

Both the Chart Editor and the Image Editor must be used in an open frame. (This may be why they are often overlooked. Not everyone uses graphics.)

This chapter introduces both the Chart Editor and Image Editor and shows you how to get the most out of each by using a few simple techniques.

## Creating Business Chart Graphics

### How do I create a chart using Interleaf's Chart Editor?

In Interleaf, charts are special types of graphics that are created in frames. Therefore, if you want to create a chart, you must first create a frame.

1. In an open document, create a frame and open it.

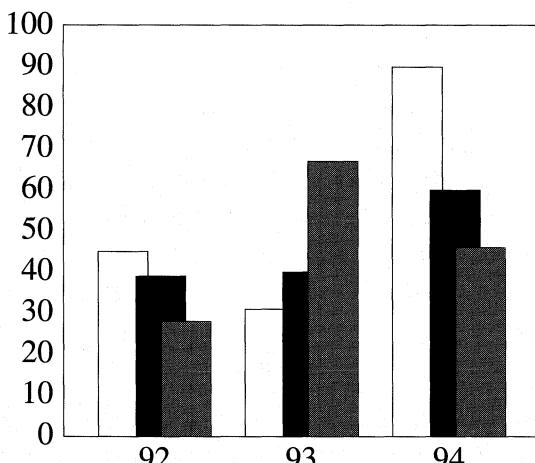
*Make sure the frame is at least 3" tall x 6" wide.*

2. Move the mouse cursor near the top of the open frame, hold down the menu button, and execute *Create→Misc→Chart*.

*An animated box appears in the open frame.*

3. Move the mouse downward and to the right until the animated box is about 2 inches wide by 1.5 inches high.
4. Click the select button.

*A bar chart with three sets of bars is created in the frame, as shown in Figure 1. This is the default chart that the Chart Editor creates. In order to customize the chart with your own data and chart properties, you must edit the chart.*



*Figure 1*

5. Select the bar chart and execute *Edit*→*Content*.

*The Chart Editor window appears on the desktop, as shown in Figure 2.*

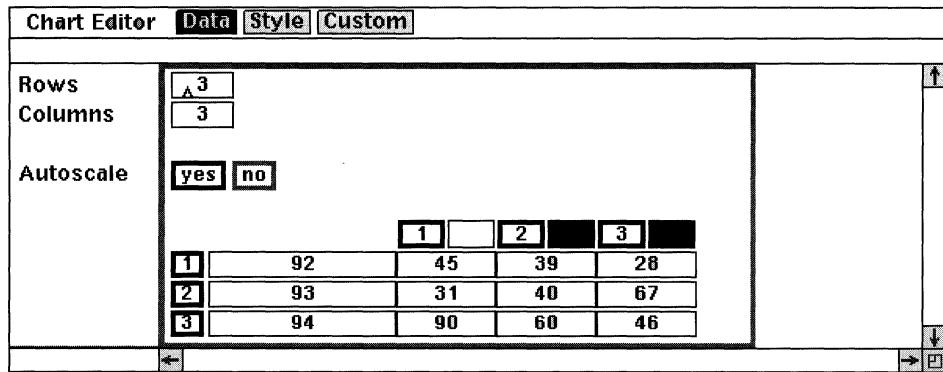


Figure 2

The default chart created by the *Chart Editor* initially contains default data. The default data is shown in a 3 x 3 table on the *Data* sheet of the *Chart Editor* window. This is the data that the *Chart Editor* uses as a placeholder until you replace it with your own meaningful data.

### ***Changing the Horizontal Axis Labels***

Notice that the row headings 92, 93, and 94 correspond to the bar grouping labels in the x axis of the chart.

1. Move the mouse cursor into the row that contains the text 92 and click the select button.
2. Change the 92 to *Jul*.
3. Press the down arrow key.
4. Change the 93 to *Aug*.
5. Press the down arrow key.
6. Change the 94 to *Sep*.

Your open Chart Editor window should look like the one shown in Figure 3.

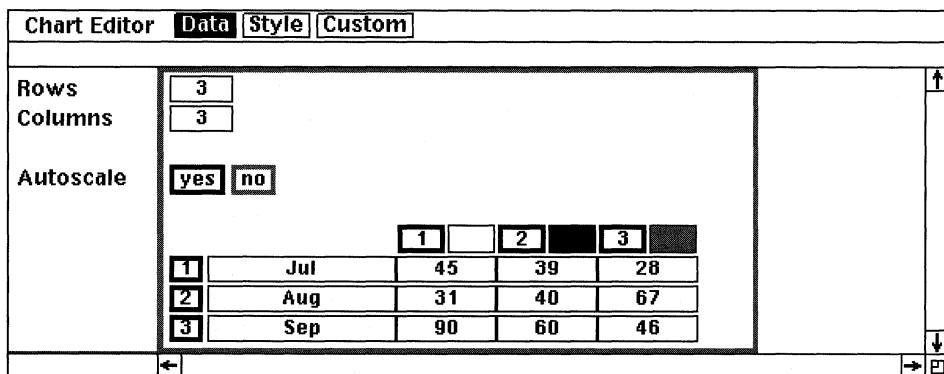


Figure 3

7. Execute *Apply*.

Now the bar grouping labels in the x axis will contain the text "Jul," "Aug," and "Sep," instead of 92, 93, and 94, as shown in Figure 4.

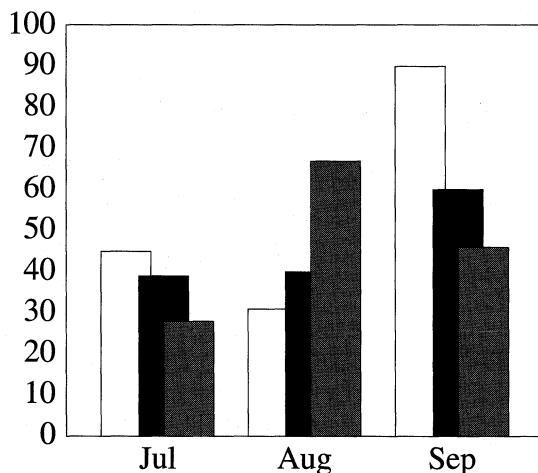


Figure 4

### ***Changing the Default Data***

The values in the table determine the number of bars and the height of the bars. As stated earlier, these values are merely placeholder data so that a default chart can be created. The software assumes that you will change the default data to your own meaningful data, as shown in the following steps:

1. Move the mouse cursor into the first row of column 1, click the select button, and type:

**85**

2. Press the down arrow key and type:

**94**

3. Press the down arrow key.

**97**

*You have just entered new data for column 1.*

4. Using steps 1 through 3 above replace the data in column 2 with the following values:

**59**

**65**

**76**

5. Using steps 1 through 3 above replace the data in column 3 with the following values:

**35**

**90**

**85**

Your open Chart Editor window should look like the one shown in Figure 5.

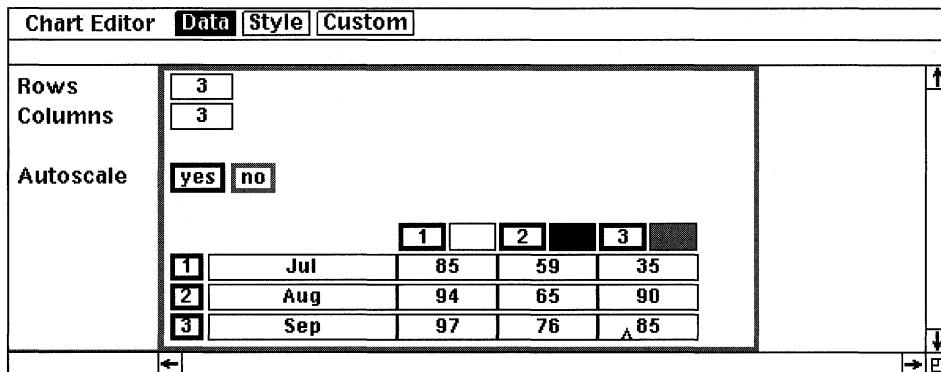


Figure 5

6. Execute *Apply* and close the *Chart Editor* window.

Now the bars reflect the new data, as shown in Figure 6.

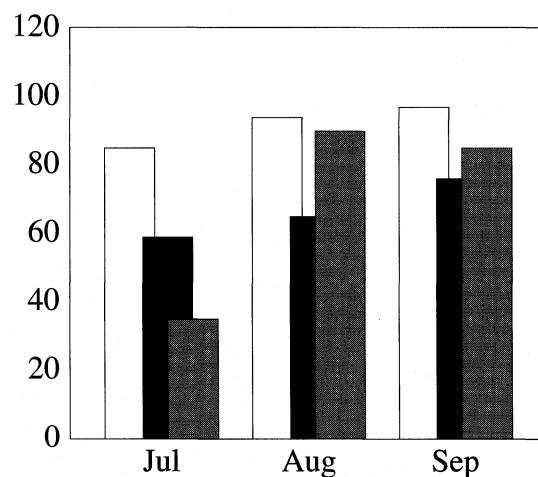


Figure 6

## How do I add more bars to the chart?

By default, the table of data in the *Chart Editor* always has three rows and three columns, which corresponds to three groups of three bars. You may, however, need to add more bars or more groupings to accommodate your own data. To add a new bar to every grouping, you add a new column to the table in *Chart Editor* window. To add a new grouping, you add a new row.

1. Select a bar chart in an open frame and execute *Edit→Content*.

*The Chart Editor window appears on the desktop, as shown in Figure 7.*

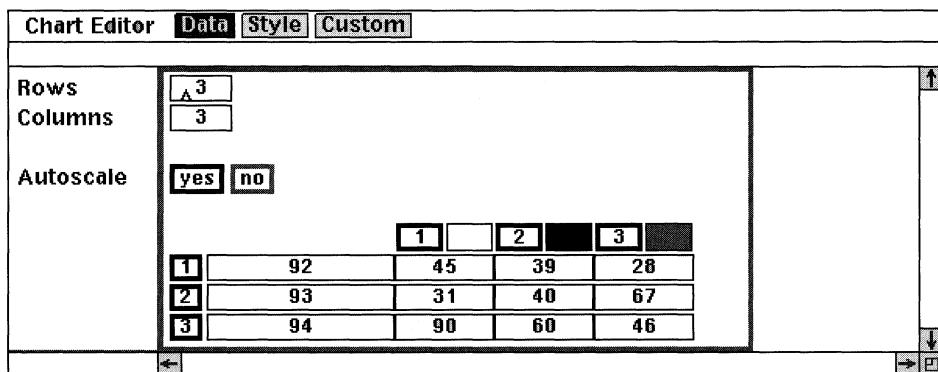


Figure 7

2. Move the mouse cursor into the *Columns* field at the top of the *Chart Editor* window and click the select button.
3. Change the *Columns* field from 3 to 4 and click the select button, as shown in Figure 8.

*Notice that when you click the select button another column gets added after column 3. All of the data in column 4 is set to zero, as shown in Figure 8. It is up to you to fill in the data for the newly created column 4.*

4. Fill the *Chart Editor* data table with the data shown in Figure 9.
5. Execute *Apply*, and close the *Chart Editor* window.

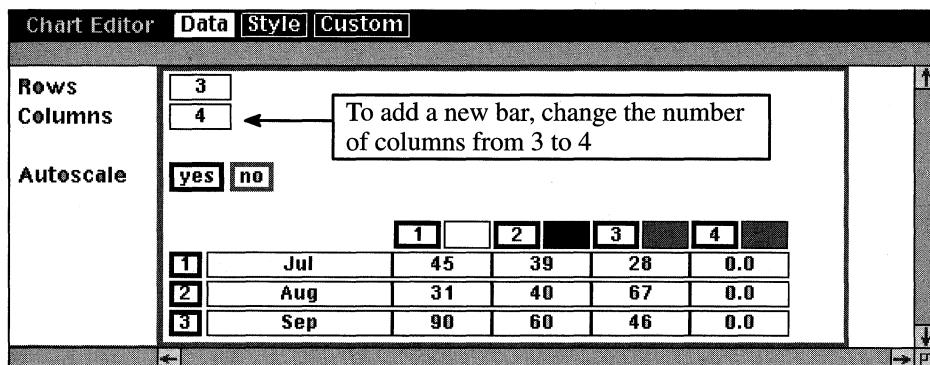


Figure 8

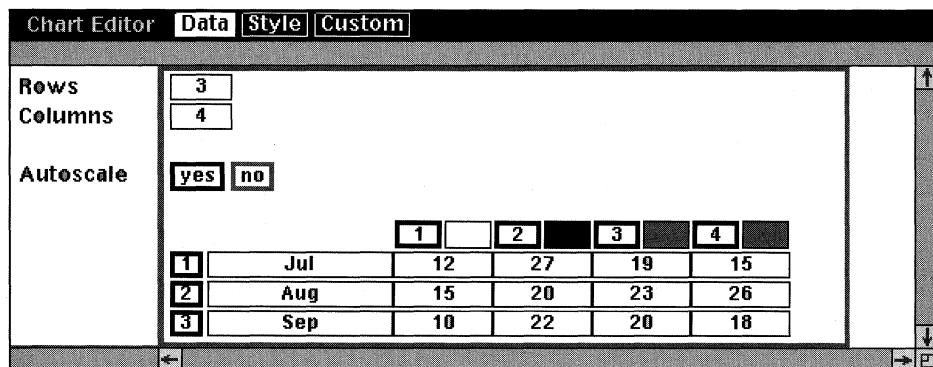
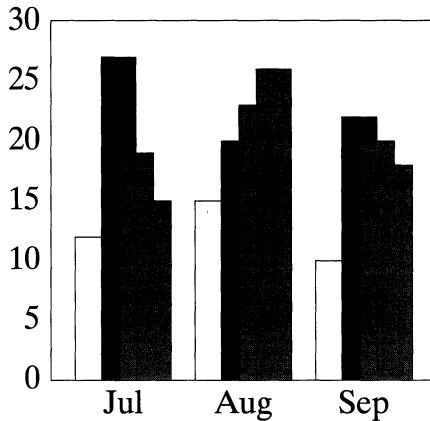


Figure 9

The chart in the open frame changes to resemble that of Figure 10. Notice that there are now four sets of bars (for four columns) in three groupings (for three rows). Notice also that the x axis grouping labels have been changed to match those in the Chart Editor data table.

*Figure 10***How do I change the color and shade patterns of the bars?**

When you add a new bar, it uses the shade color and pattern of the previous bar. This means two of the bars in the bar chart have the same fill color (in this case, gray), which is confusing.

Let's assume that you are working with the table shown in Figure 10. To change the color and shade pattern of the last bar (column 4 data) follow these simple steps:

1. Select a bar chart in an open frame and execute *Edit→Content*.

*The Chart Editor window opens.*

2. Move the mouse cursor to the top of the *Chart Editor* window and click the select button in the *Style* box.

*The Style portion of the Chart Editor appears in the open window, as shown in Figure 11.*

3. Move the mouse cursor into the color field for *Bar 4* on the *Style* sheet, as shown in Figure 11, hold down the menu button, and execute *Color→(black)*.

*The box corresponding to the fill color for Bar 4 turns black.*

4. With the mouse still in the color field for *Bar 4*, hold down the menu button and execute *Pattern→(pick heavy diagonal stripes)*.

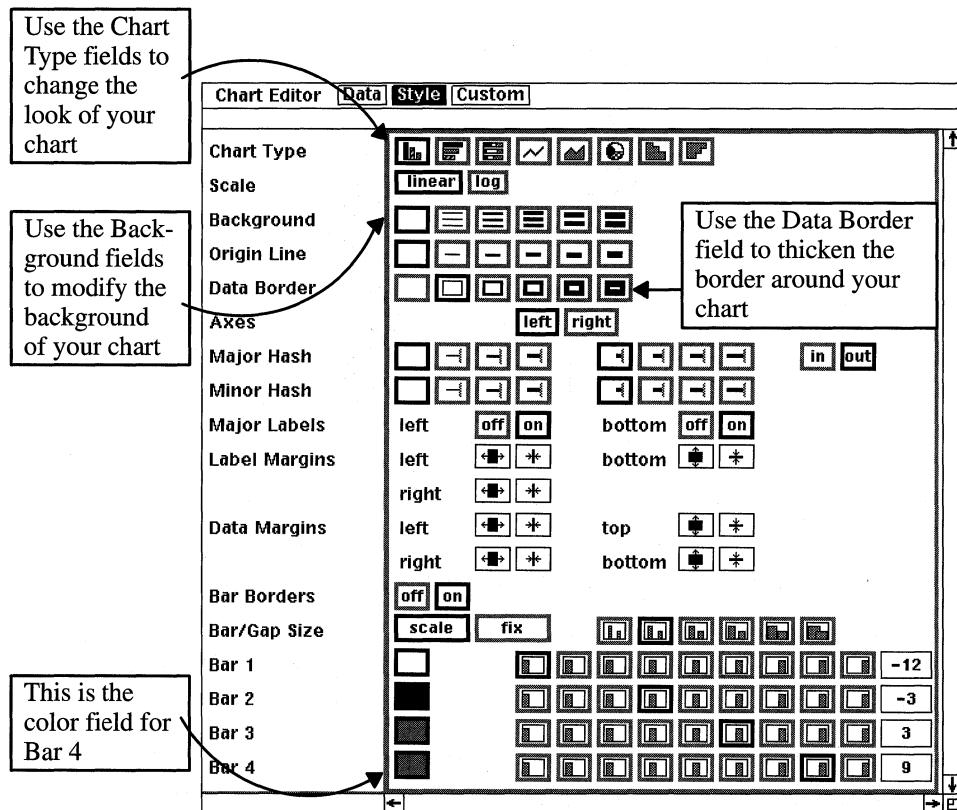
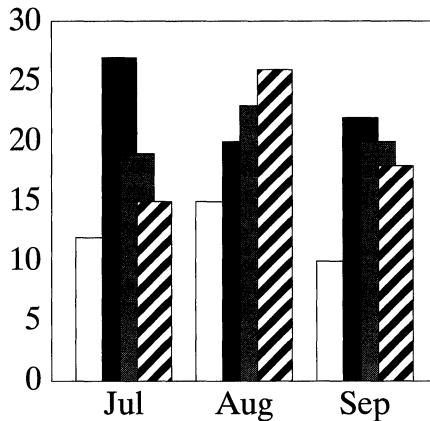


Figure 11

### 5. Execute *Apply*.

*The chart in the open frame now resembles the one shown in Figure 12. Each bar in each grouping should now have its own unique fill color or pattern.*

*Figure 12***What other chart annotations can I add?**

To start, you can create interest and clarity in your charts by adding background lines. Let's use the bar chart in the previous question as an example.

1. On the open *Style* sheet, select the third box from the left in the *Background* field near the top of the window, as shown in Figure 11, and execute *Apply*.

*Notice that horizontal lines are placed behind the vertical bars, as shown in Figure 13. The horizontal lines indicate the location of the y axis tick marks.*

**Changing the Edge Weight of the Border**

1. In the open *Style* sheet, select the third box from the left in the *Data Border* field near the top of the window, as shown in Figure 11, and execute *Apply*.

*Notice that edge weight of the border around the chart is now just as thick as the horizontal background lines in the bar chart, as shown in Figure 14.*

**How do I create X and Y axis labels?**

To add an axis label, simply create a text string, type in the label text, and move the label next to the appropriate axis.

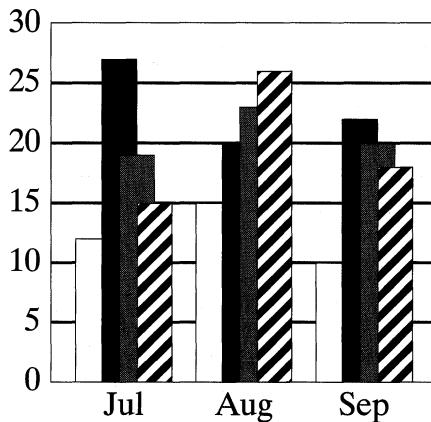


Figure 13

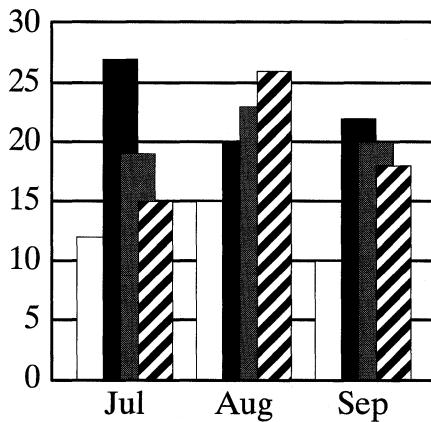


Figure 14

### ***Creating an X Axis Label***

Let's assume that you are working with the table shown in Figure 14. To add an x (horizontal) axis label to the bar chart, follow these simple steps:

1. If the *Chart Editor* window is open, close it.

*Even though the Chart Editor window is closed, make sure that the frame in which the chart exists is still open.*

2. Move the mouse cursor to the bottom of the open frame and execute *Create→Misc→Text→Left Aligned*.

*A left-aligned text anchor appears in the frame. The text anchor is blinking, which means that it is in a selected state.*

3. While the text anchor is still selected, type:

### **First Quarter**

4. While the text is still selected, execute *Edit→Font→Family→Thames*.

*The text font changes to Thames.*

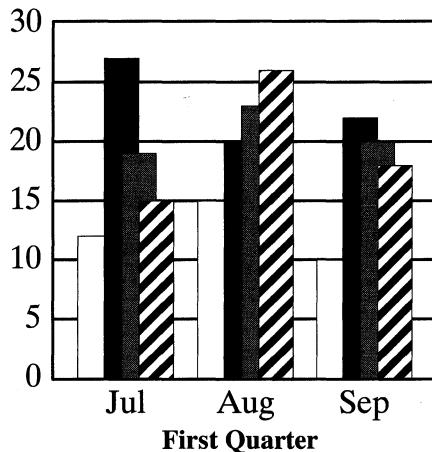
5. Reselect the text and execute *Edit→Font→Size→10*.

*The font size changes to 10 point.*

6. Reselect the text and execute *Edit→Font→Bold→On*.

*The font style changes to bold.*

7. Reselect the text, execute *Move→All*, and move the text so that it is centered directly under the *x axis* of the chart, as shown in Figure 15.



*Figure 15*

*You have just created an x axis label for your chart.*

## ***Creating a Y Axis Label***

1. Move the mouse cursor to the bottom of the open frame and execute *Create→Misc→Text→Left Aligned*.
2. While the text anchor is still selected, type:

**Dollars (in thousands)**

*Notice that the text string is created in Thames, 10-point, bold. This is because Interleaf retains the changes from the last time you changed the font properties of the text string.*

3. While the text is still selected, hold down the menu button and execute *Rotate→Numeric*.

*A stickup appears, asking you to enter a rotation factor.*

4. In the open stickup, type:

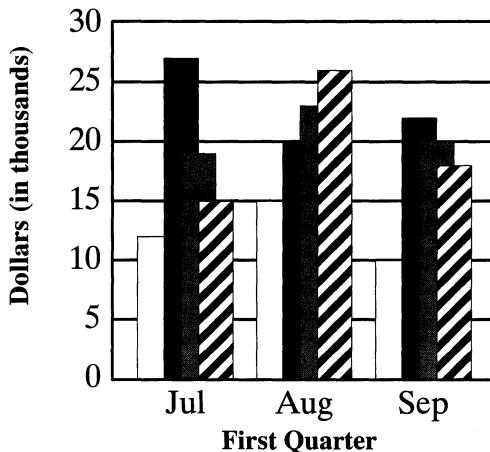
**-90**

5. Select *Enter*.

*The text string rotates -90°, such that it is standing on end.*

6. Reselect the text, execute *Move→All*, and move the text so that it is centered directly to the left of the *y axis* of the chart, as shown in Figure 16.

*You have now created a y axis label for your chart.*

*Figure 16***How do I add a legend to my chart?**

Basically, a legend in a chart is used to assign names to the data represented by the individual bars, lines, or pies, displayed in the chart.

Unfortunately, Interleaf does not automatically create a legend for your chart. If you want a legend, you will have to build it yourself. And if the data in the chart changes (for example, you add another bar, or change a shade pattern), you are responsible for remembering to make the change in the chart's legend (Interleaf will not automatically update the legend).

Let's assume you're working with the table shown in Figure 16. To create a legend for this chart, follow these simple steps:

***Create the Legend Boxes***

The trick to creating legend boxes is to screen capture the fill boxes at the bottom of the *Style* sheet (in the *Chart Editor* window), and then label them.

1. Select the chart and execute *Edit→Content*.

*The Chart Editor window opens.*

2. In the open *Chart Editor* window, go to the *Style* sheet, if it is not already present in the *Chart Editor* window.
3. Press *Ctrl-z*.

*The screen capture bounding box appears.*

4. Size and move the screen capture bounding box around just the fill boxes at the bottom of the *Style sheet*, and click the select button.

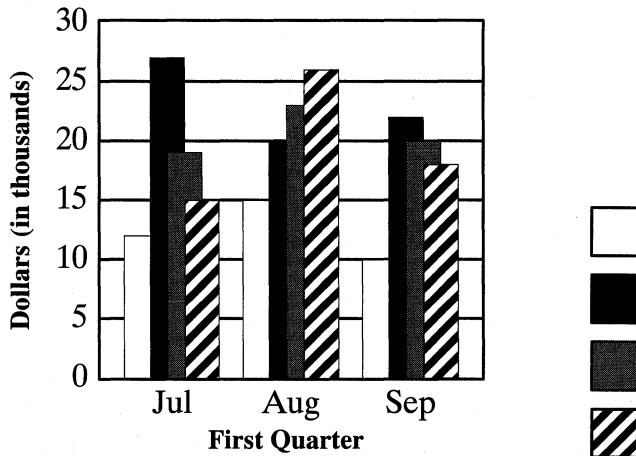
*The fill boxes have been captured in an image file, which has been copied to the clipboard.*

5. Close the *Chart Editor* window.
6. Move the mouse cursor to the right of the chart in the open frame, and execute *Paste*.

*The fill boxes from the *Style sheet* are pasted into the open frame. These will now act as your legend boxes.*

7. Position the new legend boxes where you want them, and click the select button.

*Your chart and legend should now resemble the ones shown in Figure 17.*



*Figure 17*

### ***Labeling the Legend Boxes***

Each set of data represented by the bars has a name. In this case, the bars represent the different sales regions.

1. Move the mouse cursor to the right of the top box and execute *Create→Misc→Text→Left Aligned*.

*A left aligned text anchor appears. The text anchor is blinking, which means that it is in a selected state.*

2. While the text anchor is still selected, type:

### **Southwest**

3. While the text is selected, execute *Edit→Font→Family→Helvetica*.

*The font family changes to Helvetica.*

4. Select the text string again and execute *Edit→Font→Bold→Off*.
5. Select the legend box and its text and execute *Misc→Align→T/B Centers*.
6. Press the *Return* key.

*A second text string is created, left-aligned with the first.*

7. In the second text string, type:

### **Midwest**

8. Select the text string and move it down such that it is immediately to the right of its associated legend box.
9. Select the second legend box and its text, and execute *Misc→Align→T/B Centers*.
10. Repeat steps 6 through 9 for the third legend box, except type the text *Northeast*.
11. Repeat steps 6 through 9 for the fourth legend box, except type the text *Southeast*.

## ***Adding a Legend Title***

A legend title is used to give an overall title to the data so that the reader knows, at a glance, exactly the type of data he or she is viewing. Sometimes the legend table can be omitted, if the entire chart has a title (usually placed above the chart at the top of the page).

1. Move the mouse cursor above the top legend box and execute *Create→Misc→Text→Left Aligned*.

*A left text anchor is created.*

2. While the text string is selected, type:

### Sales Regions

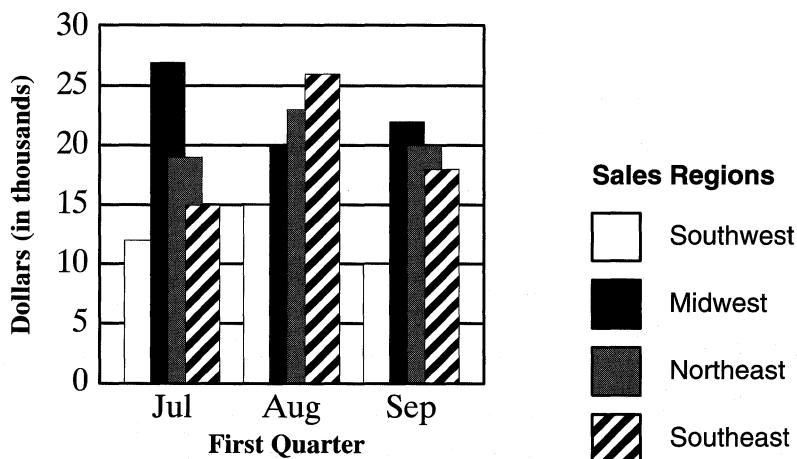
3. While the text string is still selected, execute *Edit→Font→Bold→On*.

*The text string becomes bold.*

4. Select the *Sales Region* text string and the top box and execute *Misc→Align→Left Sides*.

*The legend title left aligns with the legend boxes.*

*Your chart and legend should resemble the one shown in Figure 18.*



*Figure 18*

### How do I make my chart a pie chart?

If bar charts don't suit you, you can display your data in a number of other chart styles, including line charts, pie charts, and area charts.

1. Open the frame that contains the chart.
2. Select the chart and execute *Edit→Content*.

*The Chart Editor window opens.*

3. Move the mouse cursor to the top of the *Chart Editor* window and click the select button in the *Style* box.
4. On the open *Style* sheet, select the horizontal bar chart in the *Chart Type* field (at the top of the window), as shown in Figure 11, and execute *Apply*.

*The data is now displayed as a horizontal bar chart.*

5. Select the pie chart in the *Chart Type* field and execute *Apply*.

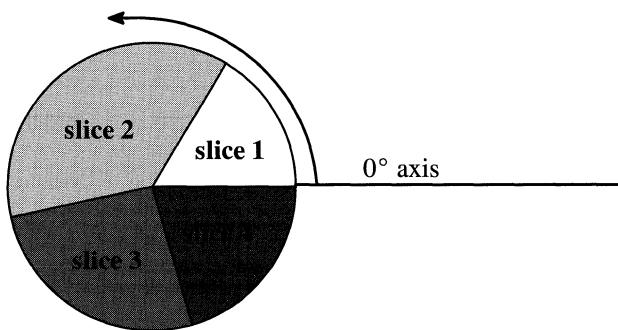
*The data is now displayed as a series of pie charts.*

6. Select the vertical bar chart in the *Chart Type* field and execute *Apply*.

*The data is once again displayed as a vertical bar chart.*

**I notice that my pie data begins at three o'clock. How can I change my pie chart so that my first pie slice begins at 12 o'clock?**

By default, the first slice in a pie chart starts at three o'clock, which is the  $0^\circ$  axis on a (x,y) coordinate system, and the subsequent pie slices rotate counter-clockwise, as shown Figure 19.



*Figure 19*

If you want your first pie slice to begin at  $90^\circ$  (which is 12 o'clock), you need to modify the *Style* page of the *Chart Editor* window for the pie, as described below:

1. Open the frame that contains the pie chart.

2. Select the chart and execute *Edit→Content*.

*The Chart Editor window opens.*

3. Move the mouse cursor to the top of the *Chart Editor* window and click the select button in the *Style* box.

*The Style page opens, as shown in Figure 20.*

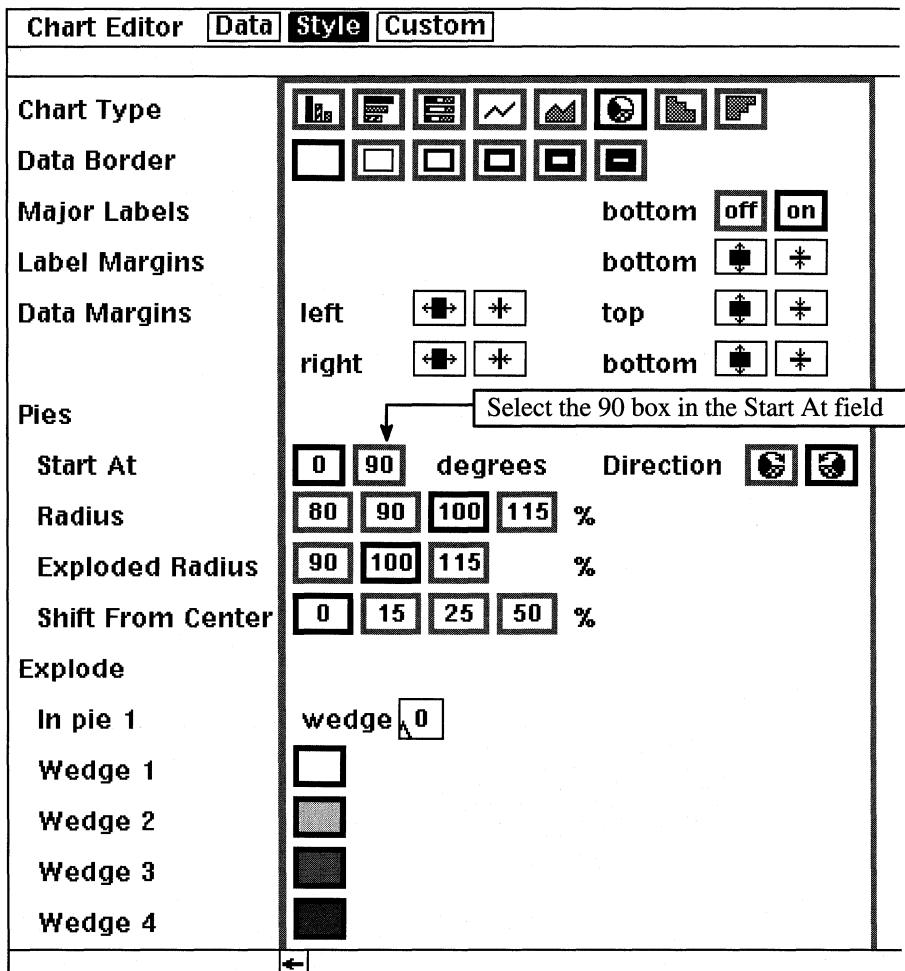


Figure 20

4. On the open *Style* sheet, select the *90* box in the *Pies Start At* field, as shown in Figure 20, and execute *Apply*.

*The first pie slice now starts at 12 o'clock ( $90^\circ$ ), and the subsequent slices rotate counterclockwise, as shown in Figure 21.*

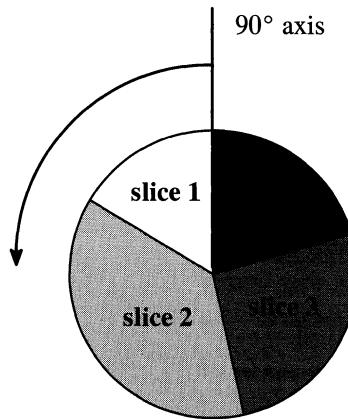


Figure 21

### How do I reverse the direction in which the pie slices rotate?

If you want your pie slices to rotate clockwise instead of counterclockwise, you need to once again modify the *Style* page of the *Chart Editor* window for the pie, as described below:

1. Open the frame that contains the pie chart.
2. Select the chart and execute *Edit→Content*.

*The Chart Editor window opens.*

3. Move the mouse cursor to the top of the *Chart Editor* window and click the select button in the *Style* box.

*The Style page opens, as shown in Figure 22.*

4. On the open *Style* sheet, select the *Clockwise* box of the *Direction* field, as shown in Figure 22, and execute *Apply*.

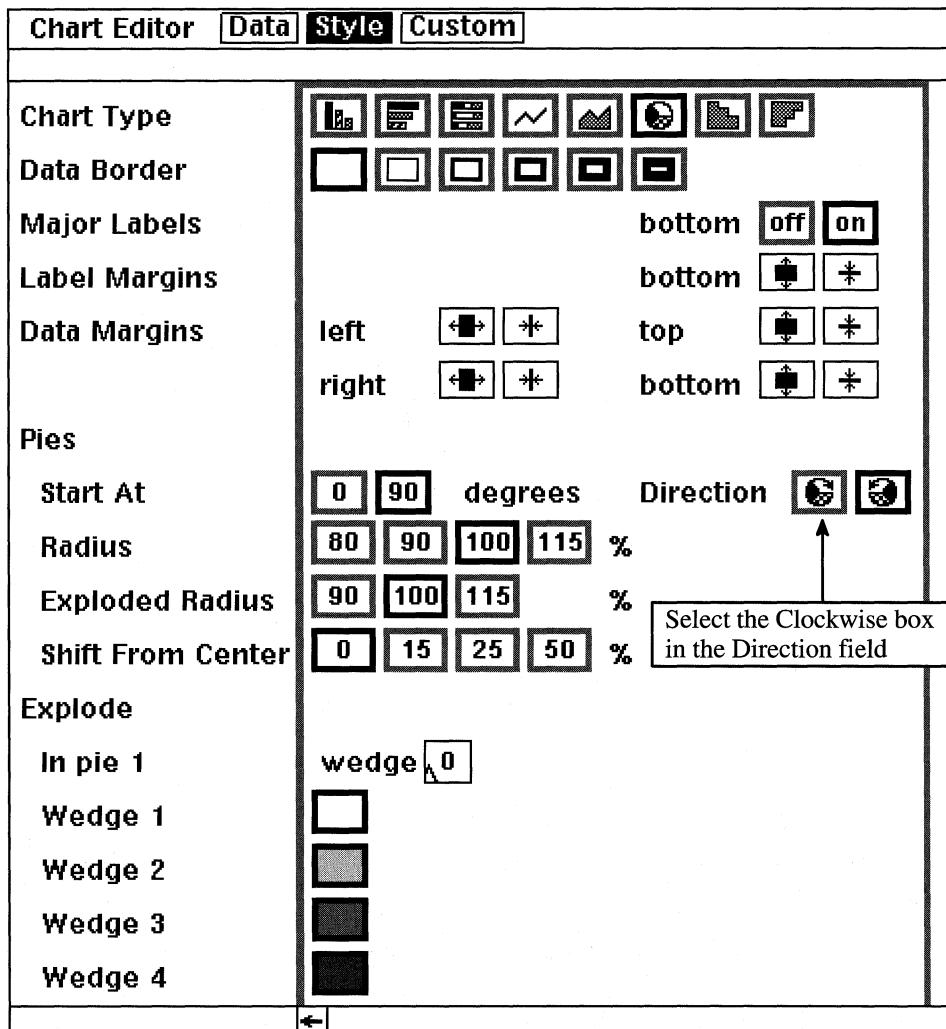


Figure 22

The first pie slice now starts at 12 o'clock ( $90^\circ$ ), and the subsequent slices rotate counterclockwise, as shown in Figure 23.

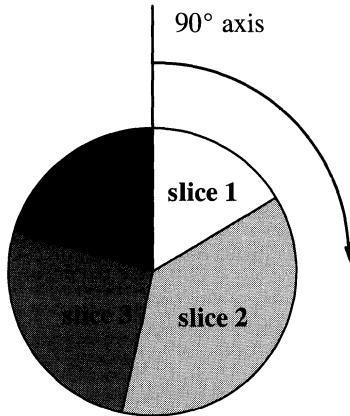


Figure 23

### How do I convert chart data into a table?

Often it is useful to display data in both chart and table form, where the chart is the graphical representation of the literal data listed in a table. The Interleaf 5 chart utility allows you to copy chart data from a graphics frame and paste it into a text component, where it can then be converted to a table.

### **Copy the Chart Data**

1. Open the frame that contains the chart.
2. Select the chart and execute *Edit*→*Content*.

*The Chart Editor window appears.*

3. Move the mouse cursor anywhere into the open *Chart Editor* window, hold down the menu button, and execute *Copy*→*As is*→*With decimal*.

*The chart data (not the chart itself) is copied to the clipboard. In this case, any decimal points in the chart data will be represented by a period.*

4. Close the *Chart Editor* window.

5. Close the frame.
6. Create a new *para* component immediately below the frame that contains the chart.
7. Move the mouse cursor into the text area of the new *para* component and execute *Paste*.

*The data from the chart editor appears in tabular form; each data point is separated by a tab. Tabular data can easily be converted to a table.*

*Note: You can paste either from the component bar or the text area, however, your chart will not appear the same. If you paste from the component bar the values will be separated by decimal tabs. If you paste from the text area, the values will be separated by left tabs.*

8. While the newly pasted chart data is still selected, execute *Misc→Convert→to Table→<Default>*.

*Notice all of the tabular data is placed in a table, where every tab stop becomes a table cell. Since all of the tab stops were identical, the tabular data is easily converted into a table. If so desired, you can now use the table features to annotate this table and save it as a template.*

## Editing Image Files

### What's the difference between an image file and a graphic?

A graphic is a collection of (x,y) coordinate points connected by vectors. The points are so close together that the vectors, and thus the drawing, appear very smooth. An image, on the other hand, is a collection of bits (dots) that are placed so close together that when viewed from a distance, the bits create a picture. This picture is known as a bit-mapped image. The more bits used, the clearer the picture.

Vector graphics are usually less resource-intensive (they use less disk space, etc.) than a bit-mapped image. (In either case, however, both bit-mapped images and vector graphics use up more computer resources than plain text.) Plus, the resolution of a bit-mapped image is not as high as a vector graphic. Bit-maps are device-dependent (as far as resolution goes). Interleaf vectors,

on the other hand, are represented by 1,000,000 units per inch, which translates to an output resolution of up to one million DPI.

### ***So why do we use bit-mapped images at all?***

If quality is not your main concern, bit-mapped images process faster.

Also, bit-mapped images are easier to transport between software packages. As we have already learned, an Interleaf graphic resides in a frame in an Interleaf document. If the graphic was originally created in an Interleaf document, the graphic can be used in other Interleaf documents.

More often than not, however, we need to import graphics that were created outside of Interleaf. There are a couple of ways to get non-Interleaf graphics into an Interleaf document. You can scan in the image with a scanner (or screen capture), or you can use one of the many Interleaf filters to convert the graphics into a format which Interleaf understands. In either case, scanning or filtering, you end up with an image file.

### ***So why don't we use bit-mapped images for all our graphic needs?***

Because bit-mapped images are large and you can't edit them as extensively as you can vector graphics. Interleaf does provide the *Image Editor*, however, even with this, you can edit an image only so much. Also, all bit-mapped images are displayed in black, white, and 255 shades of gray in between. No color. (However, Interleaf 5.4 for DOS does support color TIFF files.)

An image file is represented on the Interleaf desktop by a *Mona Lisa* icon, as shown in Figure 24. Because an image file is not made up of vectors, the regular Interleaf drawing tools cannot be used to modify images. Instead, you must use the Interleaf *Image Editor*.



*Figure 24*

### **How do I get an image file into a document?**

Copy the *Mona Lisa* icon from the desktop and paste it into an open frame in a document. (Or if you paste the image directly into a document without first

opening a frame, the software will create an *Auto* frame for you and put the image in there.)

If the *Mona Lisa* image file is already open on your desktop, you can select the image directly, copy it, and paste it into your document.

### **How do I invoke the Image Editor?**

Basically, there are two ways you can edit an image. You can use the *Picture Editor* window or the *Image Editor* window. Here's how you invoke both:

- Open a *Mona Lisa* file (result: *Picture Editor* window opens)
- Execute *Edit*→*Content* on a selected image in a document (result: *Image Editor* window opens)

### ***Open the Mona Lisa Image File Directly (Picture Editor)***

The entire contents of a *Mona Lisa* image file is a bit-mapped image. There are no vector graphics, no text, no nothing other than bits. The software knows this, so when you open a *Mona Lisa* image file directly from the desktop, the software automatically puts you in the *Picture Editor* window where you can edit the image.

Here's how easy it is:

1. Select a *Mona Lisa* image file and execute *Open*.

*The Picture Editor window opens on the desktop. Inside the Picture Editor, you will see the image. Notice that an open image file does not contain the same document header boxes that you are used to seeing in an open Interleaf document (ie: Name box, Print box, Page box, View box, etc.).*

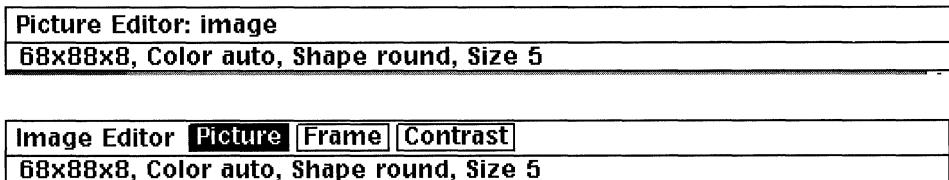
*To edit the image, hold down the menu button, and select the appropriate image editing tools from the menu items.*

### ***Execute Edit*→*Content (Image Editor)***

The other way you invoke the *Image Editor* is by selecting an image that already exists in a frame (in a document), and execute *Edit*→*Content*. The software is smart enough to know that the basic graphics tools are of no use when you want to edit the selected image. As soon as you execute *Edit*→*Content*, the *Image Editor* window opens outside of the document, with a copy of the image in the window.

## ***So what's the difference between the Picture Editor and Image Editor windows?***

The difference comes in the window header, as shown in Figure 25. The *Image*



*Figure 25*

*Editor* window has *Picture*, *Frame*, and *Contrast* sections, where the *Picture Editor* does not. If you select the *Picture* box in the *Image Editor* window, you can edit the image with the *Picture Editor* editing tools (the same ones you have access to in the *Picture Editor* widow). If you select the *Frame* box, you can dynamically size and move the bounding box of the image. If you select the *Contrast* box, you can change the lightness and darkness contrast of the entire image.

### **To what extent can I edit an image?**

Here's a list of the things you can do to an image with the *Image Editor*:

- Crop the image (top, bottom, left, and right)
- Paint over unwanted objects
- Change the color of an image (as long as it's black, white, or shades of gray in between, except if you're using color TIFF files in Interleaf 5.4 for DOS)
- Rotate the image
- Zoom in on the image (up to 32 times)

You can resize an entire image outside the *Image Editor*, using the basic graphic tools in a frame. Just select the image, execute *Size→Diagonal*, and move the mouse until the image is the size you want. You cannot, however, select the image, ungroup it, and edit the individual objects in the image independently. In fact, you can never ungroup a bit-mapped image. It always remains one big blob.

### **How do I change the color of an image?**

An image is always going to be in various shades of black and white. Even though this sounds a little boring, you have more options than you think. The

*Image Editor* offers you 256 gray shades to choose from. For example, if you think your scanned image came out a little dark, you can lighten it up by changing the color (as long as you scanned the image as 256 grayscale instead of black and white), as follows:

1. Open the *Mona Lisa* image file in which the image exists.

*The Image Editor window opens on the desktop.*

2. Move the mouse anywhere into the open *Image Editor* window and execute *Color→Numeric*.

*A stickup appears asking you to enter a gray shading level between 0 and 255, as shown in Figure 26. The value 0 will create black and 255 will create white. All numbers in between will create different levels of gray; the darker gray tones will be closer to 0, and the lighter shades will be closer to 255.*

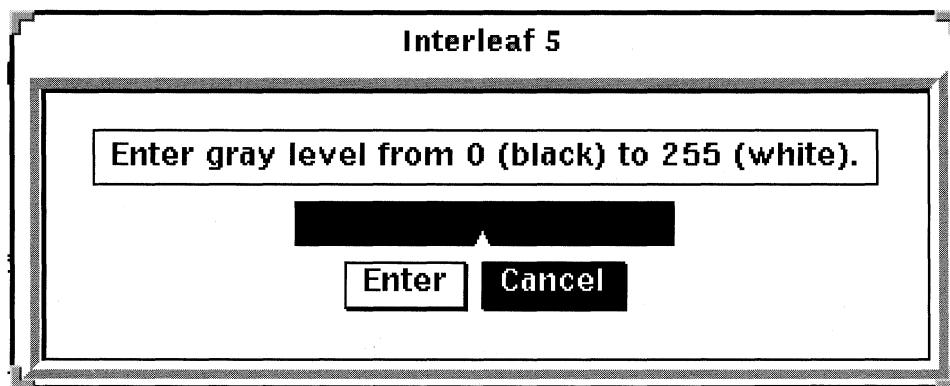


Figure 26

3. In the open stickup, enter the a value between 0 and 255 and select *Enter*.

*At this point, nothing appears to happen. Nothing has changed color. This is because all you have done is designate a default color. Now you must tell the *Image Editor* which areas in the image you wish to fill with the color you just specified.*

4. Move the mouse cursor to an area in which you wish to change color, hold down the menu button, and execute *Fill*.

*The area in which the cursor is currently pointing fills with the color you specified.*

*Every time you wish to change the default color, you must execute Color→... from the pulldown menu. You can only work with one default color at a time.*

*Note: You can change the fill color to gray shades, if and only if the image is a 256 grayscale. If the image is black and white, the grayscale fill will not work. In that case, the fill colors can be only black or white (nothing in between). If you are having trouble with changing the fill color of an image, rescan the image as a 256 grayscale, and try again (the trouble may be due to the fact that you have a black and white scanned image).*

5. After you have changed all the colors you want, execute *Apply*.

*The image is updated with your new fill colors.*

If you need to match a color, you can use the *Color→Pickup* command in the *Image Editor*. The *Color→Pickup* command picks up the color the mouse cursor is currently pointing to at the moment of execution. The next time you execute *Fill* (after executing *Color→Pickup*), the object the mouse cursor is pointing to will fill with the “picked-up” color. You use the *Color→Pickup* command when you are trying to match gray shades between objects.

### **How do I crop an image?**

Many times the images you import contain extraneous data that you don’t want to include in the final draft. This is often the case when you scan in an entire page of graphics. In this case, you must crop the unwanted data out of the image file.

You can crop an image from the top, bottom, left, or right of the current position of the cursor, as follows:

1. Open the *Mona Lisa* image file in which the image exists.

*The Image Editor window opens on the desktop.*

### **To crop from the bottom down**

2. Move the mouse cursor immediately below the portion of the image you wish to keep, hold down the menu button, and execute *Crop→Bottom*.

A stickup appears, as shown in Figure 27, warning you that cropped data will be permanently removed from the image.

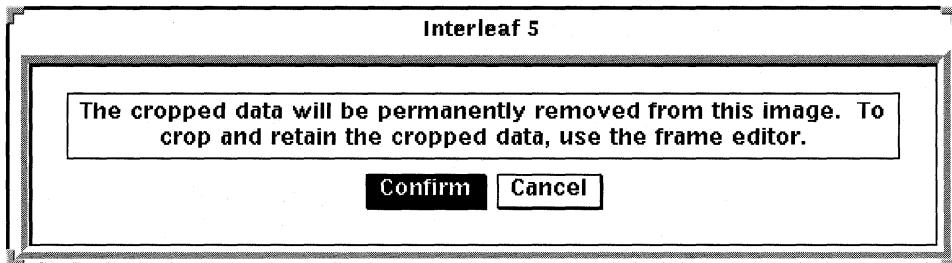


Figure 27

3. Select *Confirm*

*All of the image data below the current position of the mouse cursor is cropped from the window. Be careful when you crop. Crop is not like cut. When you crop part of an image, you cannot get the cropped portion back by executing Paste.*

*The only way you can recover cropped data is to Cancel the cropping. If you make a mistake in your cropping, do the following to get the cropped portion back:*

4. With the mouse cursor in the open *Image Editor* window, hold down the menu button and execute *Cancel*.

*All of the cropped data returns. You can get cropped data back by executing Cancel as long as you haven't first executed Apply. Once you execute Apply after a Crop, all of your cropped data is permanently lost. A good precaution is to save the document before you crop, then if you make a mistake and must revert the document back to last save, you won't lose everything you did before you attempted to crop.*

### **To crop from the top up**

Follow Steps 1 through 3 above, except execute *Crop→Top*.

*All of the image data above the current position of the mouse cursor is cropped from the window.*

**To crop to the right**

Follow Steps 1 through 3 above, except execute *Crop→Right*.

*All of the image data to the right of the current position of the mouse cursor is cropped from the window.*

**To crop to the left**

Follow Steps 1 through 3 above, except execute *Crop→Left*.

*All of the image data to the left of the current position of the mouse cursor is cropped from the window.*

**Can I edit text in a scanned image?**

Depends on where the scanning was done. Some scanning software can create an Interleaf image file or text file. This is nice because then you don't have to filter the scanned image to get it into a format that Interleaf understands. Interleaf can read the resulting scanned files directly.

If the scanning creates only an image file, you cannot edit the text that appears in the scanned result.

If the scanning software creates an Interleaf text file, you can edit the text in the resulting scanned file. All you have to do is select the scanned document icon from the Interleaf desktop, execute *Open*, and begin editing, just as you would a regular Interleaf document.

In my opinion, the scanning software that I've personally used that works best with Interleaf is ScanWorx by Xerox Imaging Systems. ScanWorx scans any image and creates an Interleaf image file or text file, depending on which you specify. The ScanWorx interface is extremely easy to use, and the learning curve to become productive is low. For more information on ScanWorx, contact your local Xerox Imaging Systems VAR or contact Xerox Imaging Systems directly at 9 Centennial Park, Peabody, MA, 01960, or call 1-800-248-6550 (for you West Coast people, XIS has an office in the Bay Area at (408) 562-4052).



# **13. Manipulating Tables**

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Using tables in a document is one of the best ways to clarify information. If your ideas can be presented sequentially or in a matrix format, then switching from text to tables is a good idea. Tables can be read at a glance, and if set up correctly, can convey information just as fast as a graphic.

Interleaf tables provide you with the basic table features (row and column manipulation), as well as table layout features such as running table headers and footers, table page numbering, and special table attributes. You can also add interest to your tables through the use of color, cell shading, and ruling textures (rulings are the lines that make up the table). All of these features are available to you through the use of table property sheets. The table formatting possibilities are endless as long as you know which property sheet to use.

## **Table Basics**

### **How many property sheets does a single table have?**

Each table has five different types of property sheets:

- Row property sheet
- Column property sheet
- Table property sheet
- Cell component property sheet
- Table cell property sheet

The row property sheet is used to determine the name of the row, the height of the row, and whether or not the row is a running header or footer. Every row has its own property sheet, which means that every row in your table can have a different name and set of properties. To access a row property sheet, select the row component from the component bar and execute *Props→Row*.

The column property sheet is used to determine the width of a selected column. Every column has its own property sheet, which means that every column

in your table can have a different width. To access a column property sheet, select a single column from the table and execute *Props*.

The table property sheet is used to determine the name of the table, the top, bottom, left, and right margins around the table, whether or not the table begins a new page, and whether or not the table fits between the page margins or in a column (in a multi-column document). Each table has only one table property sheet. To access a table property sheet, select any row component in the table and execute *Props→Table*.

The cell component property sheet is used to determine the appearance of the text that you type into the cell (such as alignment, font type, font size, bold, italic, etc.). Every cell in a table has its own cell component property sheet, which means that every piece of text in your table can have its own look. To access a cell component property sheet, double click the select button in the cell you want to modify. *The row components disappear, and the cell component appears in the component bar.* Select the cell component and execute *Props*.

The table cell property sheet is used to determine the height of the cell, the vertical alignment of the text in the cell, and whether or not the cell can accept graphic images. Every cell in a table has its own table cell property sheet, which means that every cell can independently accept either text or graphics or both. To access a table cell property sheet, move the table caret into the cell you wish to modify and execute *Select→Cell*. *The cell is selected.* While the cell is selected, execute *Props*.

## Rows

### How do I create a new row?

Move the component caret between the two rows in which you wish to insert a row and execute *Create→(the name of the row)*. A new row will be created at the position of the component caret.

Or you can use the *Create Component* key (*Ctrl-j*). Move the component caret between the two rows in which you wish to insert a row and press the *Create Component* key. A new row will be created at the position of the component caret. (In addition to *Ctrl-j*, each hardware platform has its own *Create Component* key sequence. If you don't know where the *Create Component* key is for your system, refer to the *Keyboard Display*.)

### How do I change the height of a row?

There are a couple of ways this can be done. You can either change the top and bottom margins on the row property sheet, or you can change the height of any one of the cells in the row from the table cell property sheet.

#### **From the Row Property Sheet**

1. Select the row component, and execute *Props→Row*.

*The row property sheet opens, as shown in Figure 1.*

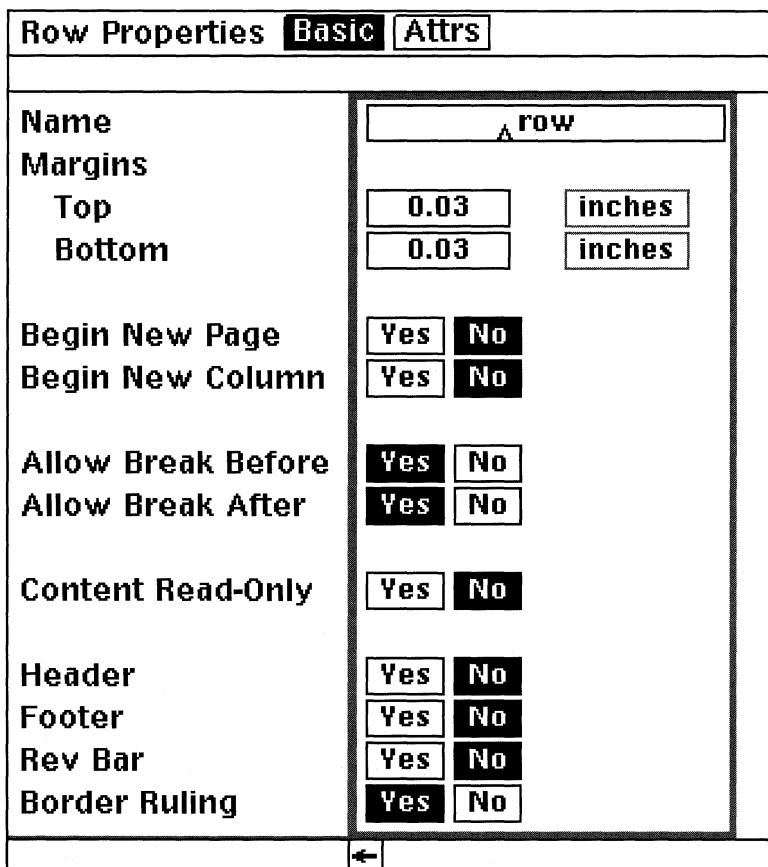


Figure 1

2. Change the values in the *Top* and/or *Bottom* box in the *Margins* field.

*If you increase these values, the row will become taller. If you decrease these values, the row will become shorter.*

3. Execute *Apply* and close the property sheet.

*The row will change in height to accommodate the size of the row's new top and bottom margins.*

The top and bottom margins for a row determine the white space above and below the text that you insert into the cells in the row. It is important to note that the text you insert in a cell also helps determine the height of the row. For example, if you insert 36-point text in a row, the row will grow in height to accommodate the large text, even if the row top and bottom margins are set to zero.

### **How do I create a running header in a table?**

When a table spans more than one page, it's helpful to have the same header row appear at the top of every page in the table. This is called a running header. In Interleaf, you can create a running header simply by converting a basic table row to a header row. The easiest way to illustrate this is with an example.

Let's assume that you had a table that spanned three pages, and the first row of the table was a title row that contained the text, *Annual Report Revenue by Regions*. To make this table easier to read, you decided to have the header row appear as the first row on every page that the table spans. Fortunately, this is extremely easy to do in Interleaf.

1. Select the table row component that contains the table title (in this case, the table title is *Annual Report Revenue by Regions*), and execute *Props→Row*.

*The row property sheet opens.*

2. Change the name of the row to *running\_head*.

*You can change the name of the row to anything you want, but it should be something that reflects the fact that the row is a running header.*

3. Move the mouse cursor to the *Header* field (near the bottom of the property sheet), and click on the select button in *Yes* box, as shown in Figure 2.

*By selecting the Yes box in the Header field, you change the row component to a running header.*

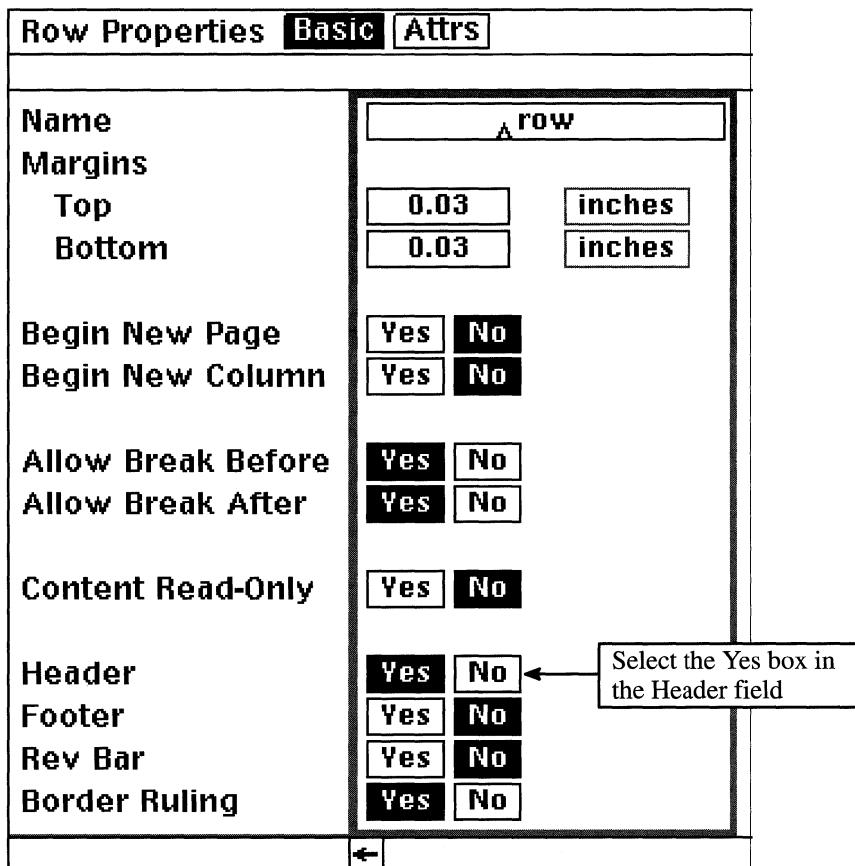


Figure 2

4. Execute *Apply*.

*A stickup window appears.*

5. Select *Template* from the stickup.

*You've just created a running header component called `running_head`. The `running_head` component and its text will now appear as the first row on every page the table spans.*

6. Close the `running_head` property sheet.

## How do I create a running footer in a table?

Exactly the same way you create a running header, except you select the *Yes* box in the *Footer* field of the row property sheet, as shown in Figure 3.

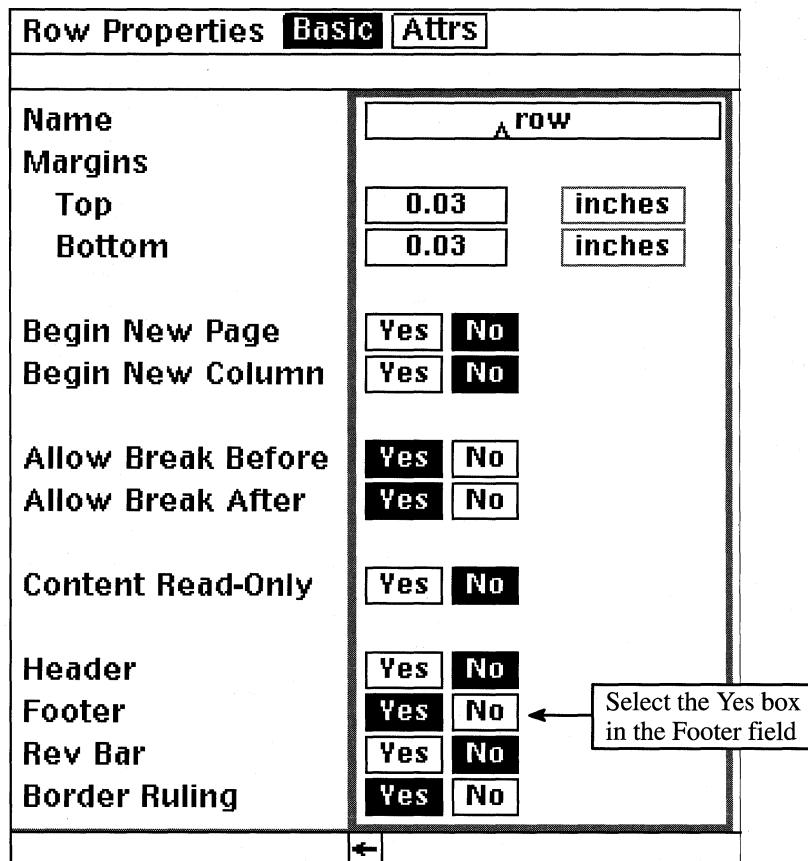


Figure 3

You define a running footer, as the last row in the table. Then the last row on every page the table spans contains the same footer information. Usually people put table page numbers in a running footer.

1. Select the last row in the table and execute *Props→Row*.

*The row property sheet opens.*

2. In the open property sheet, change the name in the *Name* box to *Footer*.

*You can name the running footer anything you want. We are using the name “Footer” for the sake of the example.*

3. Move the mouse cursor into the *Footer* field (near the bottom of the open property sheet) and click the select button in the *Yes* box, as shown in Figure 3.
4. Execute *Apply*.

*A stickup window appears.*

5. Select *Template* from the stickup window.
6. Close the property sheet.

*By selecting the Yes box in the Footer field, you change the row component to a running footer.*

### **Can I have more than one running header or running footer in the same table?**

Yes. You can have as many running headers and/or footers as you want in a table, as long as each has a different name. It's best, however, if you keep all of your running headers at the beginning of the table and all of the running footers at the end of the table. For example, the first three rows of your table can be running headers and the last three rows of the table can be running footers. Generally, it is not a good idea to put a running header or footer row in the middle of the table. If you do, your table will reformat itself in a way that you probably will not like. (Running headers and footers were not designed to be inserted in the middle of a table.)

### **In a running header, how do I add the word “Continued” (or “Cont”) to every page except page 1 of the table?**

When you have a running header, you may want to add continuation text to the headers that appear on pages 2, 3, 4, etc. This additional text will not appear on page 1, but will appear on the subsequent pages.

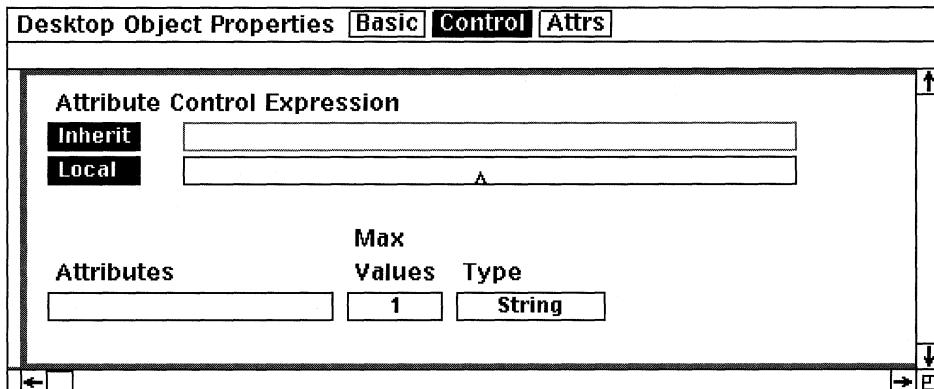
To add text to the headers that appear on pages greater than page 1, you must use a special Interleaf-supplied table attribute called *table-continued*. You add the *table - continued* attribute to your table as follows:

1. Open the document that contains your table.
2. Move the mouse cursor to the document *Name* box of the document header and execute *Props*.

*The object property sheet for the document opens.*

3. In the top of the open property sheet, click the select button into the *Control* box.

*The Control page of the property sheet opens, as shown in Figure 4.*



*Figure 4*

4. Move the mouse cursor into the *Attributes* field and click the select button.
5. In the *Attributes* field type:

#### **table—continued**

*The table-continued attribute is a special attribute used to tell the software that you wish to add conditional text to the running headers. Make sure you use a dash (-) and not a hyphen (-) when you enter table—continued.*

*Your property sheet should now resemble the one shown in Figure 5.*

6. Execute *Apply*.
7. Close the property sheet.
8. Go back to page 1 of your table (if you are not already there).

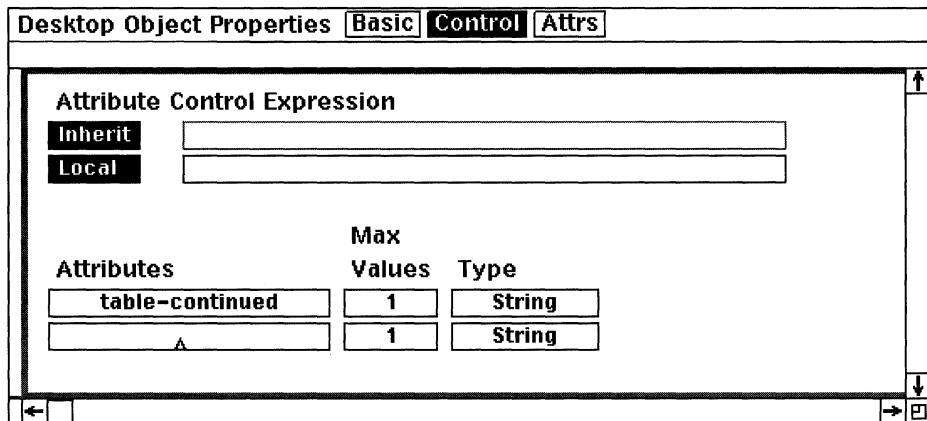


Figure 5

9. Move the mouse cursor to the end of the text in the running header row and click the select button twice.

*The cell opens. Make sure that the text caret is at the end of the text in the open cell.*

10. Press the space bar once.

*A space is added to the end of the text in the cell.*

11. Execute *Create→Ref→Attrs→table-continued*.

*An attribute reference token appears. The attribute reference token is in a selected state.*

12. While the attribute reference token is still selected, execute *Props*.

*The attribute reference property sheet opens, as shown in Figure 6.*

13. In the open property sheet, move the mouse cursor into the *Value* box, click the select button, and type:

**1**

14. Move the mouse cursor into the *Show* box, click the select button and type:

**(Continued)**

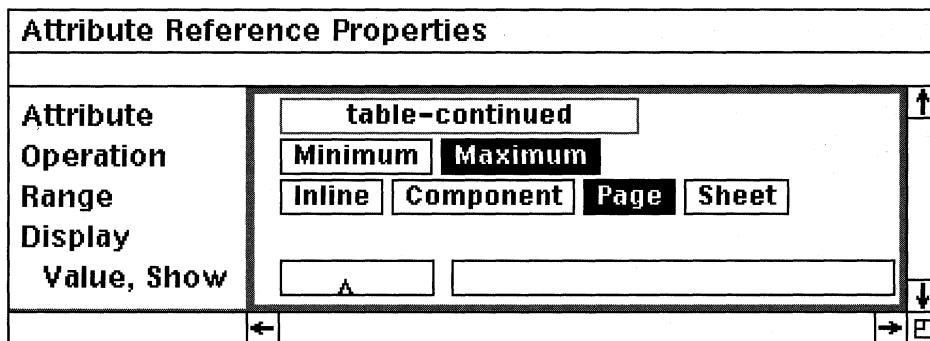


Figure 6

Your property sheet should now resemble the one shown in Figure 7.

The text in the *Show* field will be displayed on all but the first page. The number 1 in the *Value* box indicates true, which means that the contents of the *Show* box is added to all continued pages, but not page 1.

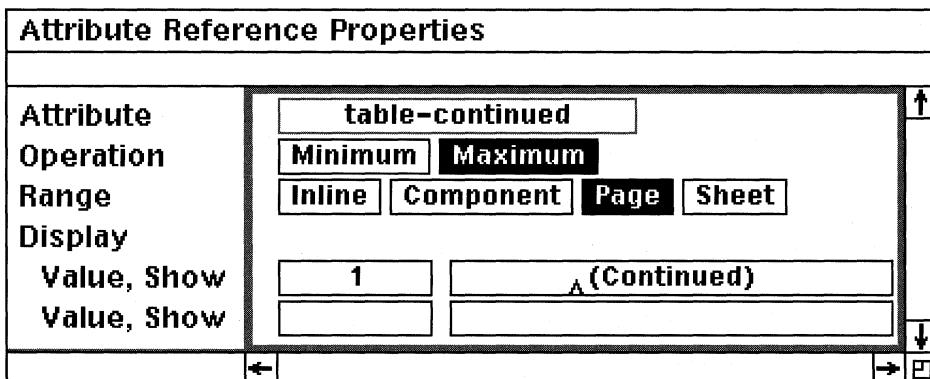


Figure 7

15. Execute *Apply*.
16. Close the property sheet.
17. Go to page 2 of your table.

Notice that the table heading on page 2 contains the text *(Continued)* at the end of the title text, but the heading on page 1 does not. Any new pages added to the table will automatically have the text *(Continued)* appended to the text in the running table header.

There is also a *table-continued-next* attribute that allows you to have text on all table pages, except the last page. Use this attribute if you wish to add the text “Continued on next page” on all table pages except the last.

**How do I number the pages in my table, *page x of y*, where x is the current table page number and y is the total number of pages in the table?**

Numbering your table pages is completely independent of numbering document pages. If, for example, you have 10 pages in a document, and a table starts on page 5 and runs until page 9, your table pages are 1 through 5, while your document pages are 1 through 10.

The best way to make use of table page numbering is to put the table pages in a running footer. That way, the table page numbers appear in the last row of every page the table spans.

To add table page numbers in a running footer, follow these simple steps:

1. Create a running footer row.
2. Open the cell in the running footer row by double-clicking the mouse button anywhere in the running footer row.
3. In the open cell, position the text caret where you want your page numbers to appear, and type:

**Page**

4. Press the space bar once and execute *Create→Ref→Misc→Table Page #*.

*The Table Page property sheet opens, as shown in Figure 8.*

*There are two ways you can reference a page number in a table: the current page or the total number of pages in the table. By default, the Current Page field is selected. In this case, you want the current page of the table to be indicated at this point in the footer. Therefore, you do not have to change the Table Page # property sheet at this time.*

5. Close the property sheet.

*Notice that a table page number appears in the footer at the position of the text caret. This indicates the current table page number. Hence, if you are on page 2, the number 2 will appear.*

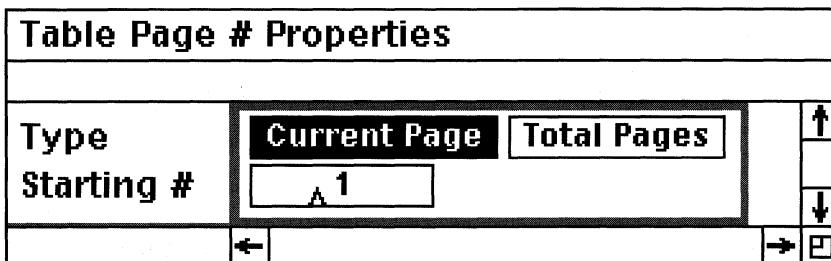


Figure 8

6. Press the space bar once and type:

of

7. Press the space bar again and execute *Create*→*Ref*→*Misc*→*Table Page #*.

*The Table Page property sheet opens again.*

8. In the *Type* field of the property sheet, click the select button in the *Total Pages* box, as shown in Figure 9.

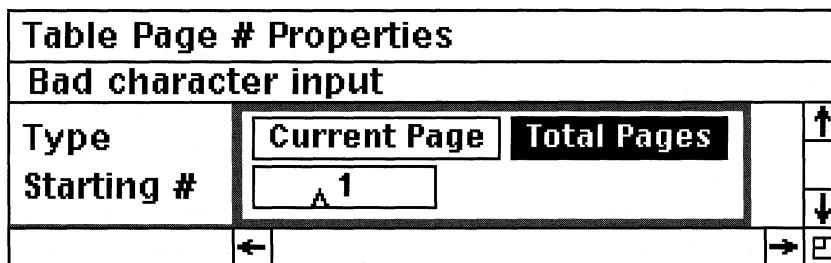


Figure 9

*The Total Pages box causes the total number of pages in the table to be displayed.*

9. Execute *Apply*.
10. Close the property sheet.

*Notice that the table now contains a footer row that indicates the current table page number and the total number of pages in the table. If you put this information in a running footer, each page will be numbered with the current table page number and the total number of pages in the table.*

*For example, if you had 10 pages in a table, and you were on page 3, the information in the footer would say, Page 3 of 10. (Remember, these are table page numbers, not document page numbers.)*

## Columns

### How do I create a new column?Tables

I have to admit, this is a little trickier than creating a new row. To create a new column in an existing table, you must select an existing column and execute *Copy*. Move the table caret to where you wish to insert the new row and execute *Paste*. Even though there is a *Create→row* command from the component bar, there is no *Create→column* command from the text area. The only way to create a new column is to copy an existing one.

### Is there a way to get rid of unwanted text in a column that I just copied?

Yes. If you wish to rid the entire column of text, select the column and execute *Misc→Empty→All Rows*. All of the text in the selected column will be deleted.

If you wish to eliminate only some of the text in the column select the rows (from the component bar) that contain the text you want to delete, and then, while the rows are selected, select the entire column. While both column and row components are selected, move the mouse cursor into the table and execute *Misc→Empty→Selected Rows*. Only the text in the selected rows will be deleted.

It is important to note that if you delete text using the *Misc→Empty* command, the text is non-recoverable. Once it's deleted, it's gone. The only way to get it back is to either copy it from an original source or from tape backup.

### Are Interleaf table columns sized as proportional width or fixed width?

Both. You can make the width of a table column proportional or fixed. All the columns in a table do not have to be one or the other. You can have some columns fixed and some proportional.

If a column is specified as fixed width, you tell the table exactly how wide you want the column to be. If the column is proportional, Interleaf determines the size of the column, based on the size of the other columns in the table. In either case, the way a column is sized is determined by the *Width* field on column's property sheet.

### How do I change the width of a column?

There is only one way you can change the width of a column, and that's via the column's property sheet, as follows:

1. Move the table caret into the column you wish to change and execute *Select→Column*.

*The current column is selected.*

2. While the column is selected, execute *Props*.

*The property sheet for the column appears on the desktop, as shown in Figure 10.*

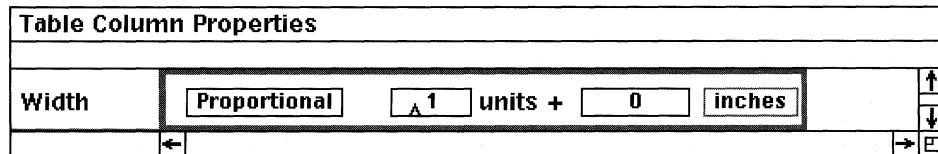


Figure 10

*By default, table columns in Interleaf are proportional, meaning that if one column decreases in width, or is eliminated completely, the remaining columns grow in width to take up the slack. Similarly, if one column increases in width, the rest of the columns shrink to accommodate the larger column.*

In a default table, all columns are proportional and each column is one unit wide. A unit is an arbitrary unit of measurement that defines the size of the columns when they are all the same width. For example, if you have four equally sized proportional columns in a document, as shown in Figure 11, each column is one unit wide.

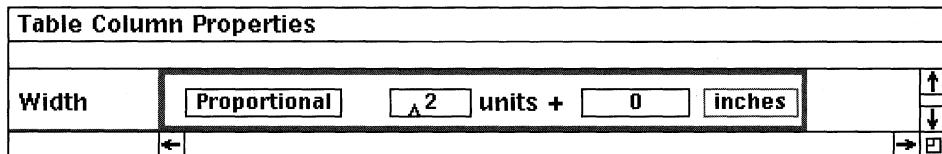
<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>

*Figure 11*

Let's assume that the open property sheet in Figure 10 is for Column 2 in Figure 11.

3. In the open property sheet, let's change the value in the units box from 1 to 2, as shown in Figure 12, and execute *Apply*.

*Column 2 is now twice as wide as any other single-unit proportional column in the table, as shown in Figure 13.*

*Figure 12*

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>

*Figure 13*

## How do I change a column from proportional to fixed width?

1. Select the column and execute *Props*.

*The property sheet for the column appears on the desktop, as shown in Figure 14.*

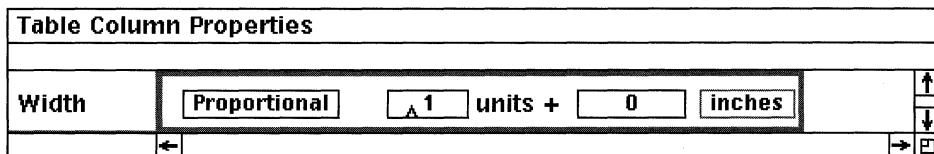


Figure 14

2. Move the mouse cursor into the *Width* box (which currently contains the text *Proportional*), hold down the menu button, and select *Fixed*.

*The Width field changes, as shown in Figure 15. The inches box on the right specifies the current width of the column in fixed inches.*

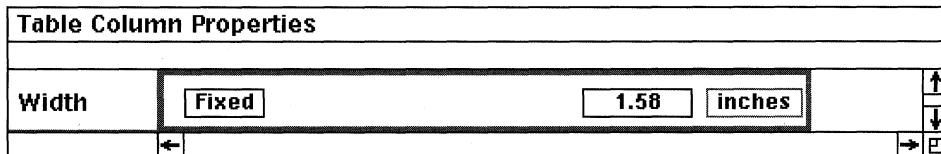


Figure 15

3. Move the mouse cursor into the inches box on the right, click the select button, and type in the column's new width (in inches).
4. Execute *Apply* and close the property sheet.

*A fixed width column will remain its specified width, regardless of how much the other columns change in width. The software will not change a fixed width column. Only you can change the size of a fixed width column.*

## How can I tell if a column is proportional or fixed?

You can always look at a column's property sheet to tell if its width is proportional or fixed. But an easier way is to select the column and then read the sta-

tus bar in the document header. If the column is proportional, the message in the status bar will indicate so and display the column's current size, as shown in Figure 16. If the column is fixed, the message will say that the column is fixed, and display the column's size, as shown in Figure 17.

document	Print	Page 1 of 1	Rev Tracking Off
View x1	Times	12	Bold Italic <Default Text Props>
<b>Column 1 of 2. (Proportional) 3.25 inches wide.</b>			

Figure 16

document	Print	Page 1 of 1	Rev Tracking Off
View x1	Times	12	Bold Italic <Default Text Props>
<b>Column 1 of 2. (Fixed) 3.25 inches wide.</b>			

Figure 17

## How do I vertically align numbers in a table column?

Number alignment in a table column is controlled from the cell component property sheet. Here's how it's done:

1. Open the first cell in the column.
2. Select the cell component (from the component bar) and open its property sheet.
3. Move the mouse cursor in to the *Tab* box at the top of the property sheet and click the select button.

*The Tab page of the property sheet appears, as shown in Figure 18. By default, table cells have three tab settings every half inch, starting at 0.5". The tab settings in your cell property sheet may look different, if someone has already modified the default tabs in the table cell.*

4. If your numbers use a decimal point (as in 10.0), then select the *Dec* box in the tab sheet for the 0.5 tab setting. If your numbers do not use a decimal point (as in 10), then select the *Numeric* box in the tab sheet for the 0.5 tab setting.

5. Execute *Apply→to Column*, and close the property sheet.

*The new tab changes have been applied to all the cells in the column.*

6. In the open cell, press the tab key and enter the first number.

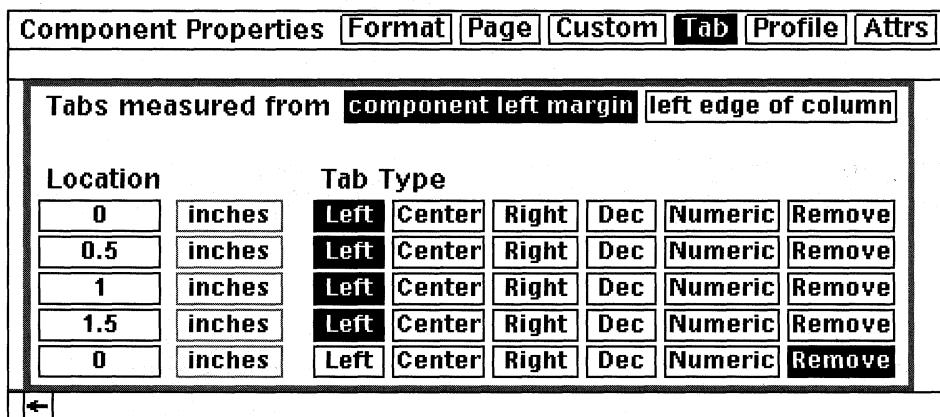


Figure 18

7. Open the next cell down in the column, press the tab key, and enter the second number.
8. Repeat the previous step until all of the numbers in the column have been entered.

*The tab aligns the rightmost digit in the numbers if no decimal point exists, or aligns the number at the decimal point if a decimal point does exist.*

*You can go back to the Tab page of the property sheet at any time to adjust the tab setting from 0.5" to one that best suits your needs.*

## Cells

### How do I horizontally center text in a cell?

1. Double-click the select button in the cell that contains the text you wish to center.

*The cell opens. The row components disappear, and the cell component appears in the component bar.*

2. Select the cell component and execute *Props*.

*The cell component's property sheet opens, as shown in Figure 19.*

3. Move the mouse cursor into the *Alignment* box, hold down the menu button, and select *Centered*.

Component Properties		Format	Page	Custom	Tab	Profile	Attrs	
Name	My Table:cell							
Margins								
Top	0.03	inches						
Bottom	0.03	inches						
Left	0	inches						
Right	0	inches						
Initial Indent	0	inches						
Number	Default	1	lines					
Alignment	Flush Left							
Font	Times	12	Bold	Italic				
Line Spacing	Largest Font on Line				+	0.11	lines	
Text Props	<Defaults>							
	<input type="button" value="←"/>							

Figure 19

4. Execute *Apply→to Table* if you want all the cells (named *cell*) in the table to have centered text; execute *Apply→to Instance* if you want only that cell to have centered text; execute *Apply→to Column* if you want all the cells in the current column to have centered text; execute *Apply→to Row* if you want all the cells in the current row to have centered text.
5. Close the property sheet.

### How do I vertically center text in a cell?

1. Move the table caret into the cell whose text you wish to center (do not open the cell), hold down the menu button and execute *Select→Cell*.

*The cell becomes selected.*

2. While the cell is selected, execute *Props*.

*The table cell property sheet opens, as shown in Figure 20.*

*Notice that the Vert. Alignment box contains the text “Top.” This means that the text is vertically top-aligned.*

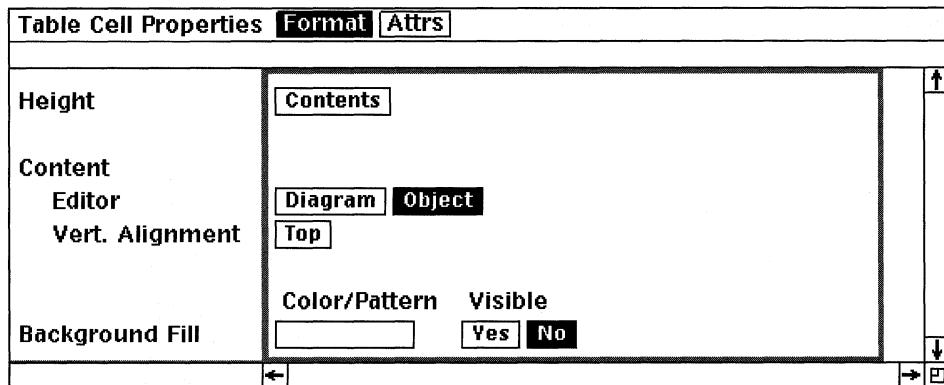


Figure 20

3. Move the mouse cursor into the *Vert. Alignment* box, hold down the menu button, and select *Center*.
4. Execute *Apply→to Instance*.

*The text in this cell instance becomes vertically centered. If you want all cells in the row to be vertically centered, execute *Apply→to Row*. If you want all cells in the column to be vertically centered, execute *Apply→to Column*.*

#### What happens if my text is too big to fit in a cell.

You can always open a cell and type in text. If the text is physically larger than the height of the cell, the cell (and thus the entire row that contains the cell) will grow vertically to accommodate the big text, as shown in Figure 21.

Original Cell Size		

Big Text Inserted		
<b>Big Text Here</b>		

*Figure 21*

If the text string is wider than the cell, the text wraps vertically in the cell, once again forcing the cell to grow in height, as shown in Figure 22. The cell width will never increase automatically when text is entered. The only way you can control the width of a cell is through the column property sheet.

Original Cell Size		

Big Text Inserted		
When a lot of text is entered into a cell, the text wraps, forcing the cell (and thus, the row) to grow vertically.		

*Figure 22*

### How do I put a graphic in a cell?

The trick to inserting a graphic into a cell is to change the cell's content editor from text to graphics. This is accomplished through the table cell property sheet, as follows:

1. Move the table caret into the cell you want to change (do not open the cell), and execute *Select→Cell*.

*The cell property sheet opens, as shown in Figure 23.*

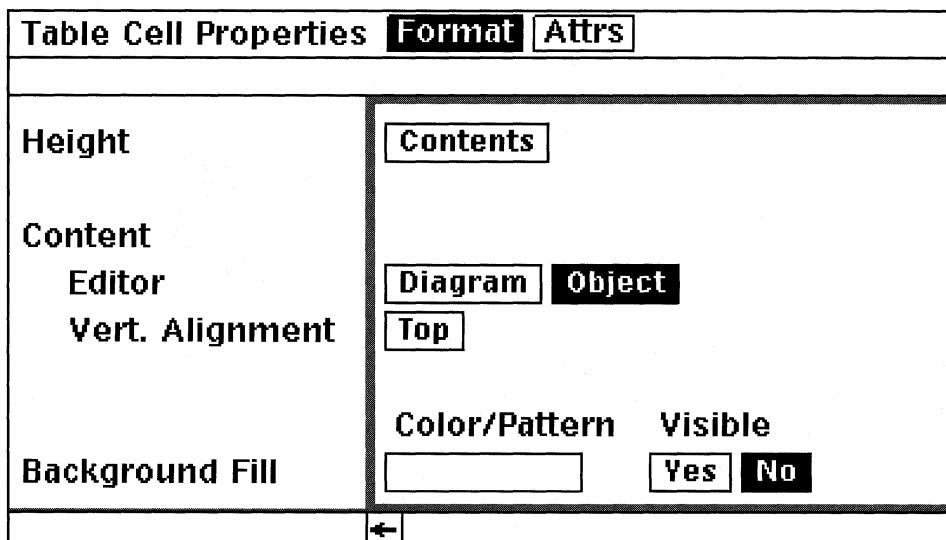


Figure 23

2. Click the select button into the *Diagram* box in the *Editor* field, as shown in Figure 24, and execute *Apply*.

*Changing the Content Editor from Object to Diagram changes the cell input from text to graphics.*

3. Close the property sheet.
4. Open the cell.

*Notice that an open frame appears inside the cell. When this open frame appears, you can input any graphic or scanned image into the cell. The cell will size vertically (in height) to accommodate the graphic, and the graphic will size horizontally (in width) to fit within the cell. Both of these sizing defaults can be changed from the table cell property sheet.*

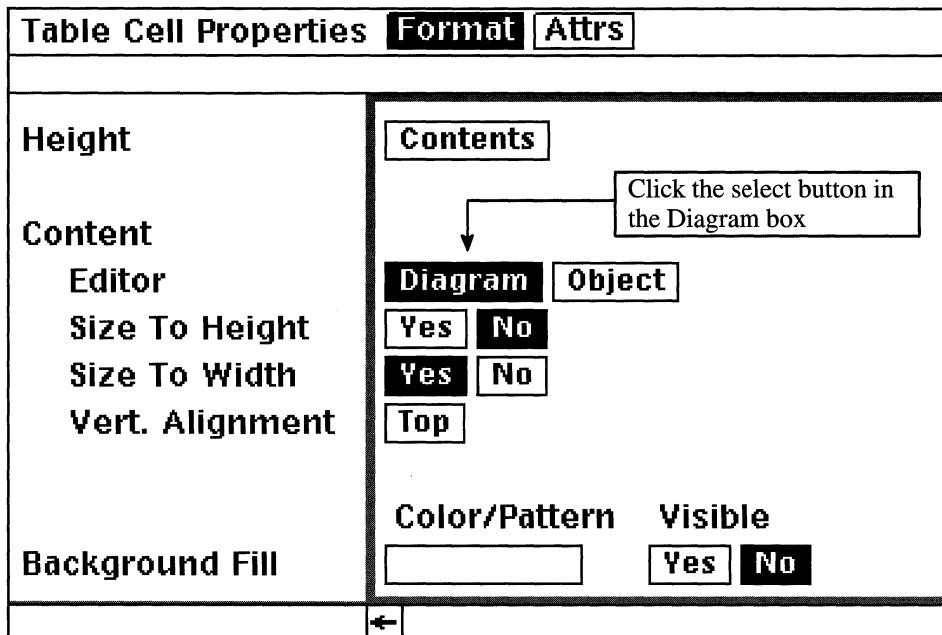


Figure 24

### How do I join cells?

Sometimes it's necessary to join two cells into one large cell. To accomplish this you use the *Join Cells* command from the table pulldown menus.

#### To Join Cells Horizontally

1. In a table, move the mouse cursor between the two cells you wish to join, and click the select button.

*The table caret moves to the position of the mouse cursor.*

*For the sake of this example, let's assume that you want to join the last two cells of Column 1 and Column 2, as shown in Figure 25.*

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>
	►		

*Figure 25*

2. Hold down the menu button and execute *Join Cells→Horizontal*.

*Notice that the first two cells at the bottom of Columns 1 and 2 have been joined into one big cell, as shown in Figure 26. The cell resulting from the Join Cells command is called a straddle cell (because the new larger cell straddles what used to be two smaller cells).*

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>
	►		

*Figure 26*

3. Hold down the menu button and execute *Join Cells→Horizontal* again.

*Now three cells are joined into one straddle cell.*

4. Hold down the menu button and execute *Join Cells→Horizontal* again.

*Now four cells are joined into one straddle cell, as shown in Figure 27.*

Column 1	Column 2	Column 3	Column 4

*Figure 27***To Join Cells Vertically**

1. Move the mouse cursor into the topmost of the two cells you wish to join.

*For the sake of this example, let's assume that you want to join the second and third cell from the bottom of Column 4, as shown in Figure 28. In this case, you would move the table caret into the third cell from the bottom in column 4.*

Column 1	Column 2	Column 3	Column 4
			►
			►

*Figure 28*

2. Hold down the menu button and execute *Join Cells→Vertical*.

*Notice that the two vertical cells in Column 4 have been joined into one big cell, as shown in Figure 29. This time there is an invisible straddle that is used to vertically divide the one large cell into two.*

Column 1	Column 2	Column 3	Column 4

*Figure 29*

3. Press the *down arrow* key once so that table caret is at the bottom of the joined cell, as shown in Figure 30.

Column 1	Column 2	Column 3	Column 4

*Figure 30*

4. Hold down the menu button and execute *Join Cells→Vertical* again.

*The large cell at the bottom of the table is not vertically joined with the current cell. Instead, you get the following warning message in the status bar of the document header, as shown in Figure 31.*

Chapter 12	Print	Page 14 of 18	Rev Tracking Off
View x1	Thames	12	Bold   Italic   <Default Text Props>
<b>Cells must have matching horizontal straddles.</b>			

*Figure 31*

*This is because the two cells we tried to join were of different sizes. In order to join cells vertically (or horizontally) the two cells being joined must be of the same size.*

## How do I split cells?

Once cells have been joined, they can then be split apart, into their original size.

### To Split Cells Horizontally

Let's assume that you want to split the large cell in the last row of Figure 32.

1. Move the mouse cursor into the last row, and click the select button.

*The table caret moves into the cell, as shown in Figure 32.*

Column 1	Column 2	Column 3	Column 4
►			

Figure 32

2. Move the mouse cursor on top of the invisible straddle between Columns 2 and 3, hold down the menu button, and execute *Misc→Split Cell→Horizontal*.

Column 1	Column 2	Column 3	Column 4
►			

Figure 33

*The invisible straddle between Columns 2 and 3 returns, as shown in Figure 33, splitting the one large cell into two smaller cells.*

When you split cells, you must make sure that the mouse cursor is sitting on top of an invisible straddle in the cell you wish to split. If you try to use the *Split Cells* command and the mouse cursor is not on a straddle, you will get a warning in the status bar of the document header, as shown in Figure 34.

Chapter 12	Print	Page 16 of 18	Rev Tracking Off
View x1	Helvetica	12	<b>Bold</b> <i>Italic</i> <Default Text Props>
<b>To Split, cursor must be over a straddle cell.</b>			

*Figure 34*

### **To Split Cells Vertically**

1. Move the mouse cursor into the bottom half of the third cell from the bottom in Column 2.

*The table caret is positioned as shown in Figure 35.*

Column 1	Column 2	Column 3	Column 4
	►		

*Figure 35*

2. Move the mouse cursor over the vertical straddle of the large cell in column 2, hold down the menu button and execute *Misc→Split Cell→Vertical*.

*The single large cell is vertically split into two cells, as shown in Figure 36.*

Column 1	Column 2	Column 3	Column 4
	►		

Figure 36

3. Move the mouse cursor into row 4, column 4, and click the select button.

*The table caret is positioned as shown in Figure 37.*

Column 1	Column 2	Column 3	Column 4
			►

Figure 37

4. Move the mouse cursor over the vertical straddle of the large cell in column 4, hold down the menu button, and execute *Misc→Split Cell→Vertical*.

*The single large cell is vertically split into two cells, as shown in Figure 38.*

<b>Column 1</b>	<b>Column 2</b>	<b>Column 3</b>	<b>Column 4</b>
			►

*Figure 38*

You cannot split a cell, horizontally or vertically, that has not been previously joined at least once. Cells can only be split if the cell contains an invisible straddle that was created as the result of a join.

**When I join two cells that contain text, sometimes the text is combined as one component, and sometimes it's not. Why the inconsistency?**

When you join two cells that contain text, the two blocks of text are joined into one block of text, *if and only if* the two blocks of text are identical *in every way*. This means that not only must the text characters be the same, but the text font type, size, and face (bold or italic) must also be identical.

For example, let's assume you were working with the table shown in Figure 39.

<b>Row #</b>	<b>Vegetables</b>	<b>Fruits</b>
1.	Turnips	Apples
2.	Avocados	Avocados
3.	Potatoes	Pears
4.	Celery	Peaches

*Figure 39*

If you join the two cells containing the text *Avocados* (in Row 2), the two cells and the text would join into one, as shown in Figure 40.

Row #	Vegetables	Fruits
1.	Turnips	Apples
2.	Avocados	
3.	Potatoes	Pears
4.	Celery	Peaches

Figure 40

This is because the text in the two cells are identical in every way. Both blocks of text are written in Swiss, 12 point, no bold, no italic.

If, however, your table looked like the one shown in Figure 41 and you joined the same two cells, the resulting cell would contain two blocks of text, as shown in Figure 42.

Row #	Vegetables	Fruits
1.	Turnips	Apples
2.	Avocados	Avocados
3.	Potatoes	Pears
4.	Celery	Peaches

Figure 41

Row #	Vegetables	Fruits
1.	Turnips	Apples
2.	Avocados Avocados	
3.	Potatoes	Pears
4.	Celery	Peaches

*Figure 42*

This is because the text in the two cells in Figure 41 were not of the same font face. One cell used a Swiss-bold font, while the other used a regular Swiss font. Even though characters in the two blocks of text are identical, Interleaf considers them different as night and day.

The moral of the story is this: If you join two cells and you get two blocks of text in the resulting cell, it's because the two blocks of text were not identical. If they look identical, check the font type. Times and Thames are often mistaken for the same font, as are Swiss and Helvetica. Also check to make sure that the font size is the same and that one block of text is not bold and/or italic while the other block of text is. If you do end up with duplicates of the text when you join cells, simply cut the unwanted cell component from the component bar.

## Sizing a Table

**In a multi-column document, how do I size a table to fit in a single column?**

By default, tables already squeeze themselves into the column in which they reside. If, however, someone has changed that default on you, here's how to change it back:

1. Select any row component in the table and execute *Props→Table*.

*The table property sheet opens, as shown in Figure 43. (Your table will undoubtedly have a different name and properties.)*

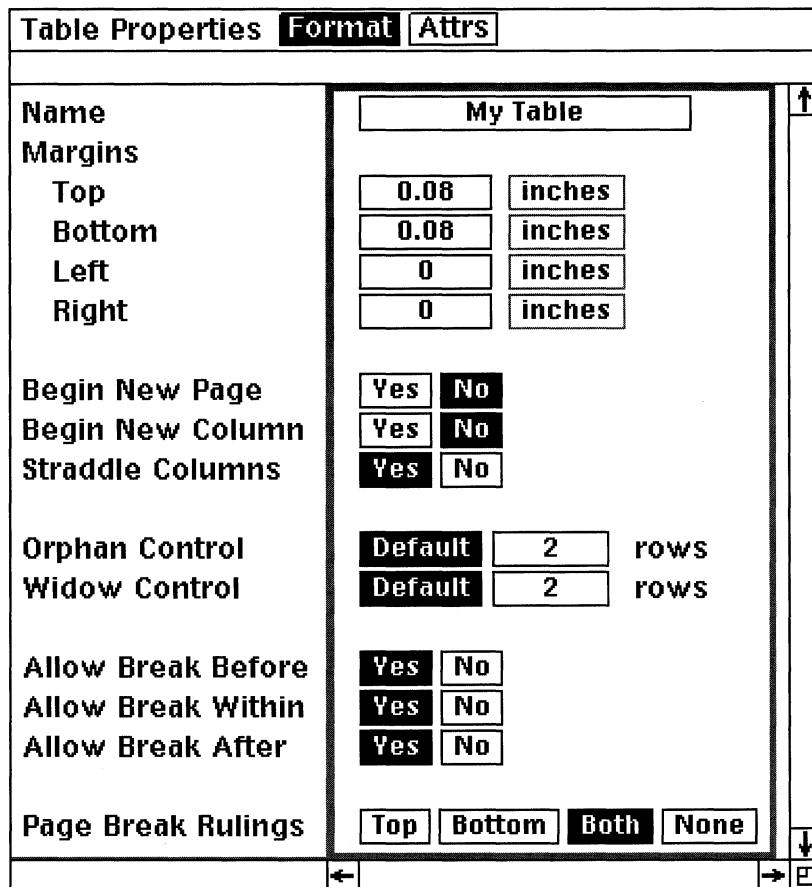


Figure 43

2. Select the *No* box in the *Straddle Columns* field, as shown in Figure 44.

*The Straddle Columns field determines if the table positions itself between the left and right page margins, or between the left and right edges of the current column.*

3. Execute *Apply*.

*If Straddle Columns is set to No, the table will size itself proportionately to fit into the column in which it resides, if the table columns are proportional width. If the columns are fixed width, the table will left justify itself with the left page margin (in a single-sided document).*

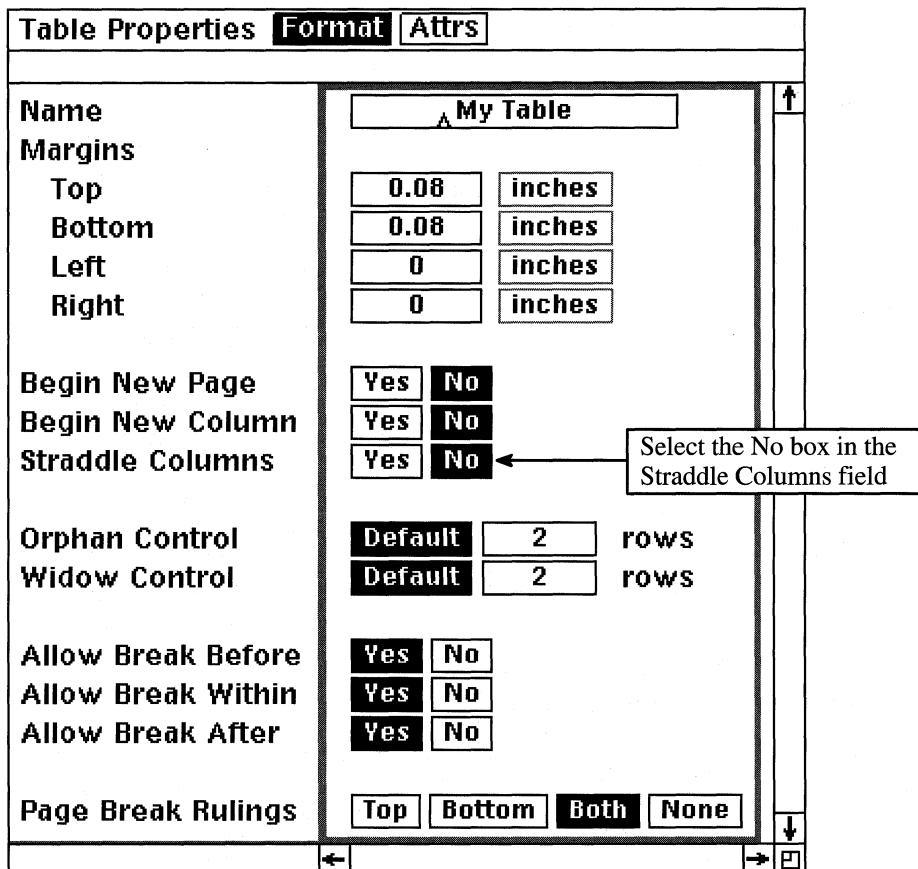


Figure 44

## How do I make my table extend across all columns in the document?

By default, tables shrink down to fit within the column in which they reside. If you want a table to straddle across all the columns in a document (meaning that the table extends from left margin to right margin, while the rest of the text in the document remains in columns), then follow these simple steps:

1. Select any row component in the table and execute *Props→Table*.

*The table property sheet opens, as shown in Figure 45. (Your table will undoubtedly have a different name and properties.)*

<b>Table Properties</b>	
<b>Format</b>	
<b>Attrs</b>	
<b>Name</b> <input type="text" value="My Table"/>	
<b>Margins</b>	
Top	<input type="text" value="0.08"/> inches
Bottom	<input type="text" value="0.08"/> inches
Left	<input type="text" value="0"/> inches
Right	<input type="text" value="0"/> inches
<b>Begin New Page</b>	
<input checked="" type="checkbox" value="Yes"/> Yes	<input type="checkbox" value="No"/> No
<input checked="" type="checkbox" value="Yes"/> Yes	<input type="checkbox" value="No"/> No
<input checked="" type="checkbox" value="Yes"/> Yes	<input type="checkbox" value="No"/> No
<b>Orphan Control</b>	
<input type="checkbox" value="Default"/> Default	<input type="text" value="2"/> rows
<b>Widow Control</b>	
<input type="checkbox" value="Default"/> Default	<input type="text" value="2"/> rows
<b>Allow Break Before</b>	
<input checked="" type="checkbox" value="Yes"/> Yes	<input type="checkbox" value="No"/> No
<input checked="" type="checkbox" value="Yes"/> Yes	<input type="checkbox" value="No"/> No
<input checked="" type="checkbox" value="Yes"/> Yes	<input type="checkbox" value="No"/> No
<b>Allow Break Within</b>	
<b>Allow Break After</b>	
<b>Page Break Rulings</b>	
<input type="checkbox" value="Top"/> Top	<input type="checkbox" value="Bottom"/> Bottom
<input type="checkbox" value="Both"/> Both	<input checked="" type="checkbox" value="None"/> None

Figure 45

2. Select the Yes box in the *Straddle Columns* field, as shown in Figure 46.

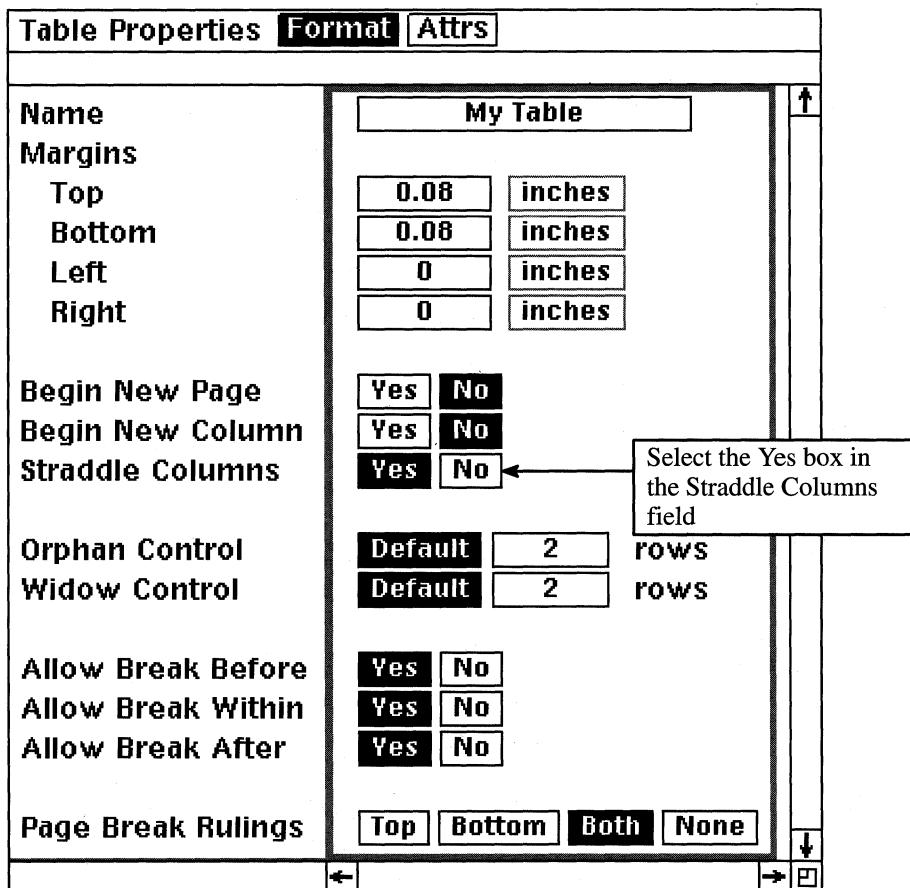


Figure 46

*The Straddle Columns field determines if the table positions itself between the left and right page margins, or between the left and right edges of the current column.*

3. Execute *Apply*.

*If Straddle Columns is set to Yes, the table will size itself between the left and right margin, regardless of the number of columns in the document.*

### How can I move my table left or right on the page?

By default a table always centers itself between the left and right margins. If you wish to add a little extra white space on either side of the table (so that the

table does not look centered), you can do so by increasing the left or right margins from the table property sheet, as follows:

1. Select any row in the table and execute *Props→Table*.

*The table property sheet opens.*

2. To add a half inch more white space to the left side of the table, increase the value of the *Left* margin from 0 to 0.5, as shown in Figure 47, execute *Apply*, and close the property sheet.

*You can do the same on the right side of the table by increasing the right margin instead of the left.*

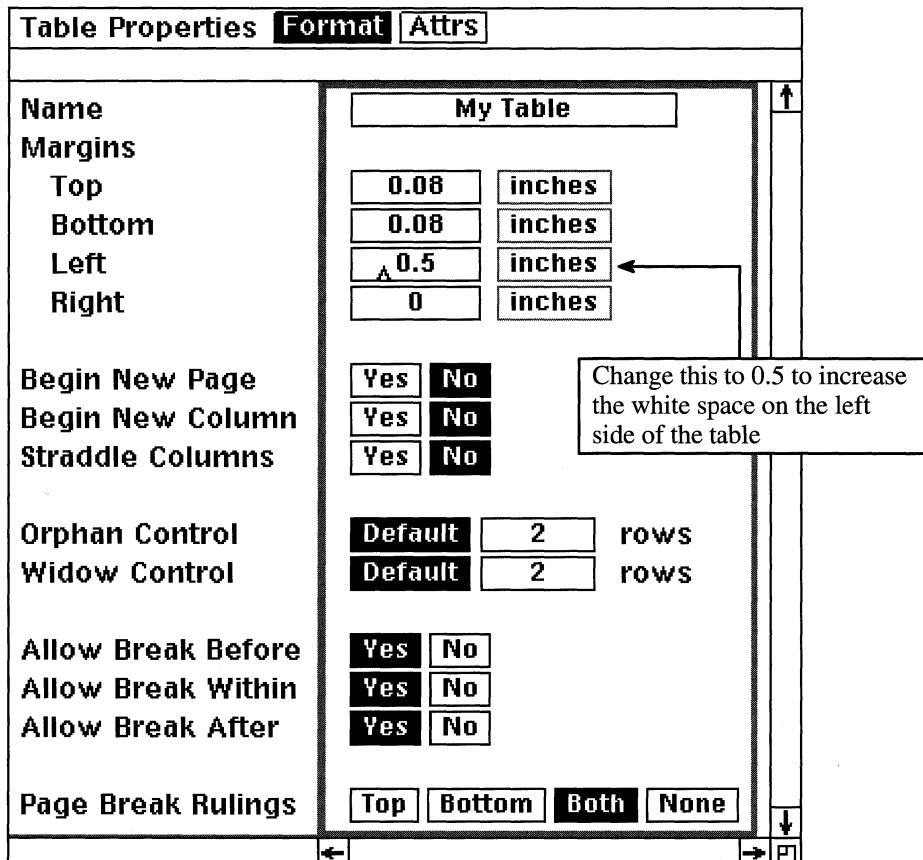


Figure 47

It is important to note that if all of your columns are proportional, and you change the left or right margin of the table, the columns will either shrink or grow in width to allow for the change in white space outside of the table.

If all of your columns are fixed, and you change either table margin, the columns will not shrink; however, the entire table will move left or right (depending on which table margin you changed).

If your columns are a combination of proportional and fixed widths, and you change either table margin, the proportional width columns will either shrink or grow to allow for the change in white space outside of the table.

To obtain the effect you want, experiment with the left and right table margins on the table property sheet.

## Rulings

### How do I remove or modify selected lines in the table?

The lines that make up the table are called rulings. Rulings can be both vertical and horizontal. In Interleaf you are allowed to make minor modifications to the rulings, including:

- Remove all or selected rulings
- Change the ruling edge weight
- Change the ruling color
- Change the ruling style from single to double lines.

In order to make any modifications to the rulings in a table, you must get into *Rulings* mode as follows:

1. Move the table caret into any cell in the table.

*Make sure that you do not open a cell. You cannot get into Rulings mode if a cell is open. If you accidentally open a cell, close the cell before continuing with the next step.*

2. Hold down the menu button and execute *Rulings*.

*Notice that the cursor changes to cross-hairs.*

3. Move the cross-hairs cursor on top of any ruling in the table and click the select button.

*The ruling starts to flash. This tells you that the ruling is selected.*

4. While the ruling is selected, hold down the menu button and execute *Weight*→(pick a heavier edge weight).

*The selected ruling becomes thicker, taking on the edge weight that you selected.*

5. Move the cross-hairs cursor on top of another ruling in the table and click the select button.

*The ruling becomes selected.*

6. While the ruling is selected, hold down the menu button and execute *Number*→*Double*.

*The selected ruling style changes from one line to two.*

7. Move the cross-hairs cursor on top of another ruling in the table and click the select button.

*The ruling becomes selected.*

8. While the ruling is selected, hold down the menu button and execute *Visible*→*No*.

*The selected ruling becomes invisible. This is not to be confused with joining cells. When a ruling is invisible, the two cells on either side of the invisible ruling are still considered two cells; it's just that the ruling that separates them has been turned off. On the other hand, when two cells are joined with the *Join Cell* command, the result is the two cells are actually joined into one. There is no invisible ruling that you can select and turn on.*

9. Move the cross-hairs cursor on top of another ruling in the table and click the select button.

*The ruling becomes selected.*

10. While the ruling is selected, hold down the menu button and execute *Color*→(pick another color).

*The selected ruling changes to the color you selected from the menu.*

11. To get out of *Rulings* mode, hold down the menu button and execute *Close*.

*The table caret reappears in the table.*

### **Can I select more than one ruling at a time?**

Yes. Select the first ruling with the select button and then select all subsequent rulings with the extend button.

### **Can I select all of a table's vertical or horizontal rulings at one time?**

Yes. While in *Rulings* mode, hold down the menu button and execute *Select→Columns* to select all of the vertical lines in the table or *Select→Rows* to select all of the horizontal lines in the table.

If you wish to select all of the border rulings (the lines around the perimeter of the table), hold down the menu button and execute *Select→Borders*.

If you wish to select all of the rulings in the table, hold down the menu button and execute *Select→All*.

### **How can I turn off the rulings in the top row of a table?**

When you turn off the rulings in the top row of a table, it looks like the text in the first row is outside of the table. Many people like this feature because the title appears to be separate from the table, yet the title can never become accidentally separated from the table because the title is actually the first row of the table.

For example, let's assume that you created the table shown in Figure 48.

This is the table title			
▶			

*Figure 48*

Now let's assume that you wanted to remove the rulings in the first row, making the title look like it appears outside of the table, as shown in Figure 49.

**This is the table title**

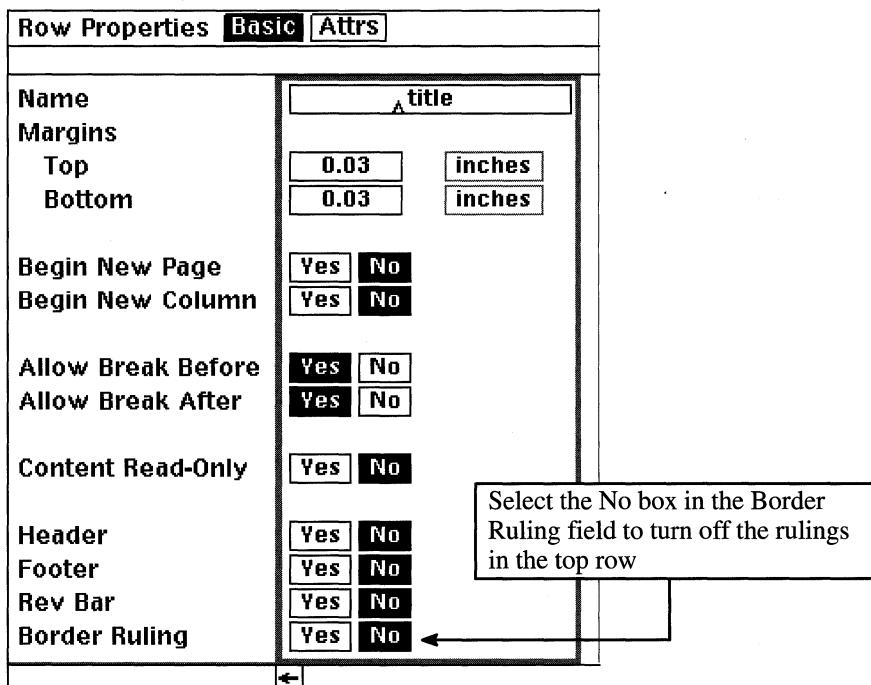

*Figure 49*

To accomplish this effect, follow these simple steps:

1. Select the row component in which the title is typed and execute *Props→Row*.

*The row property sheet opens.*

2. In the row property sheet, select the *No* box in the *Border Ruling* field at the bottom of the property sheet, as shown in Figure 50.



*Figure 50*

3. Execute *Apply* and close the property sheet.

*The border rulings in the top row disappear, making the title in the top row appear as if it were entered outside of the table, as shown in Figure 49.*

## Frames and Tables

### How do I add a vertical axis label to a table?

Vertical axis labels are often a helpful way to annotate table data, as shown in Figure 51. Vertical axis labels can be either horizontal or vertical text and can be on the left or right side of the table. The key to adding a vertical axis label to a table is to create a fullpage frame and then size and position the frame on either side of the table (depending on which side you want the vertical axis label to appear).

The best way to illustrate how to add a vertical axis label is to look at an example. Let's assume that you wanted to create the vertical axis label shown in Figure 51. To accomplish this, follow these simple steps.

1. Move the table caret to the second column of the third row (the one with the text *Public Telephone*).
2. Hold down the menu button and execute *Misc→Create Frame→fullpage*.

*A fullpage frame is created over the table. The frame is in a selected state.*

3. While the frame is still selected, execute *Props*.

Vertical Axis Label

1994 Data

Common International Symbols		
Symbol	Meaning	Location
	Public telephone	Government, public buildings, gas stations, airports, terminals
	No parking	City streets, roadways
	First aid	Airports, terminals
	Food, dining	Airports, terminals, plazas, roadways
	No smoking	Airports, terminals, public buildings, restaurants

Figure 51

The frame property sheet opens, as shown in Figure 52.

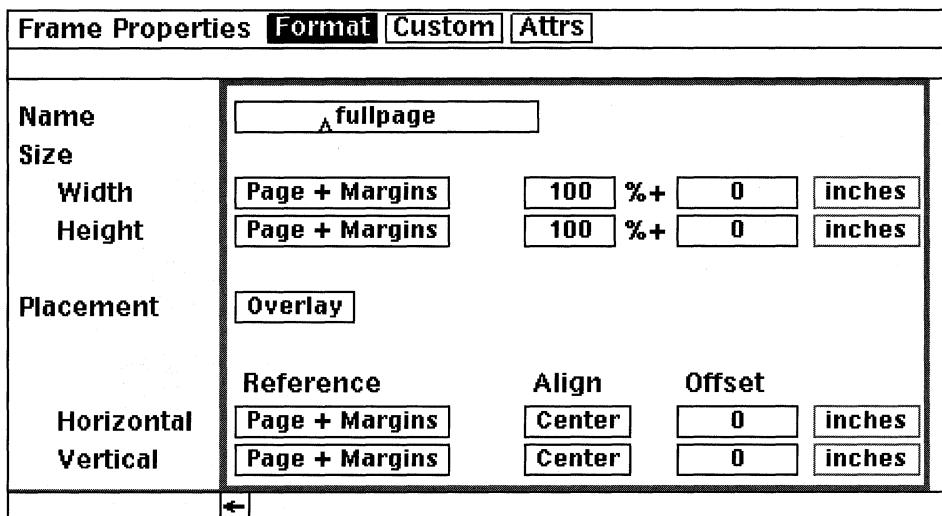


Figure 52

4. In the open frame property sheet, change the frame name to table\_axis.

*You can name the frame anything you want. We will use the name table\_axis for the sake of the example.*

5. Move the mouse cursor into the width field, hold down the menu button, and select Margin→page left.
6. Move the mouse cursor into the height field, hold down the menu button, and select Fixed.
7. Move the mouse cursor into the *inches* field for the fixed height field, click the select button, and type:

**2**

*You have just made the width of the frame the size of the left page margin, and the height of the frame fixed at 2 inches.*

8. Move the mouse cursor into the Placement field (in the middle of the property sheet), hold down the menu button, and select Side.

Your property sheet should now resemble the one shown in Figure 53.

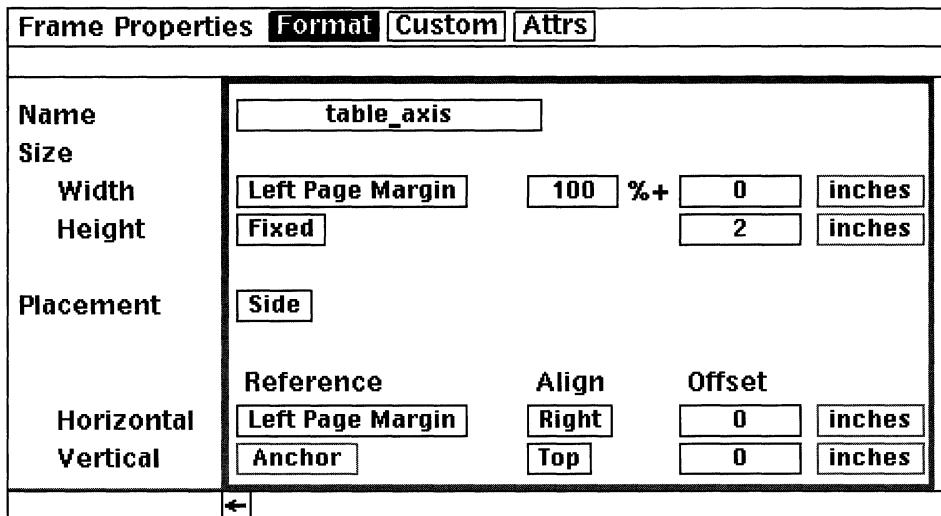


Figure 53

9. Execute *Apply*.
10. Select *Confirm* from the stickup window.
11. Close the property sheet.

*Notice that two things happen:*

(1) *The frame anchor is placed at the end of the row, outside the table, even though you were in the middle of the table when you issued the Create Frame command. This is because frame anchors cannot be placed in a table cell.*

(2) *The newly created frame is in the left page margin. This is because you specified the width of the frame to be the same width as the left margin, and you specified the frame's placement to be on the side of the page. The software places the frame on the left side of the page because you specified the frame's placement to be "side," and the Horizontal Reference was already "Left Page Margin," as shown in Figure 53.*

12. Open the newly created frame.

13. Inside the open frame, execute *Create*→*Misc*→*Text*→*Left Aligned*.

*A left aligned text anchor appears in the open frame.*

14. While the text anchor is selected, type:

#### **1994 Data**

15. While the text is still selected, execute *Edit*→*Font*→*Family*→*Helvetica*.
16. While the text is still selected, execute *Edit*→*Font*→*Size*→*14*.
17. Select the text again and execute *Rotate*→*Numeric*.

*A stickup window appears, asking you to enter a rotation factor.*

18. In the stickup window, type:

**-90**

*The text string rotates 90 degrees counterclockwise.*

19. Select the text again and execute *Misc*→*Align*→*to Frame*→*Center*.

*The Vertical axis label now appears to the left of the table, as shown in Figure 51.*

#### **How do I add a footnote frame to a table?**

When you create a frame in a table, the frame anchor always positions itself outside of the table, regardless of which cell you were in when you created the frame. This creates something of a dilemma if you are trying to use a numbered footnote frame inside of a table cell. The autonumber in a numbered footnote frame *is* the frame anchor. Since frame anchors cannot be inserted in a cell, this means that footnote anchors (from a footnote frame) cannot be inserted in a cell.

To overcome this minor setback, you can instead use unnumbered footnote frames along with autonumbers. First you create an unnumbered footnote frame, open it, and add an autonumber along with your footnote text. Next create an autoreference to the autonumber, and paste it in the cell that is to contain a superscripted footnote. The steps detailing this process are as follows:

1. Move the the table caret into the cell where you wish to add the footnote (do not open the cell).

2. Hold down the menu button and execute

*Misc→Create Frame→footnote:→unnumbered*

*An unnumbered footnote frame is added to the bottom of the page, and a frame anchor is placed at the end of the current row, outside of the table. Frame anchors cannot exist within a table cell. Therefore, the anchor for the frame created in the table appears at the end of the row in which the frame was created.*

3. Move the mouse cursor into the open *micro:footnote* frame at the bottom of the document, hold down the menu button, and execute *Create→Auto#→list→Level 1*.

*An autonumber is created in the footnote frame.*

4. Press the tab key and enter your footnote text.

5. Select the autonumber in the footnote frame and execute *Misc→Autoref*.

*A reference to the autonumber in the footnote is created on the clipboard.*

6. Open the cell that is to contain the superscripted footnote.

7. In the open cell, place the text caret at the position in which you wish to insert the superscripted footnote, hold down the menu button, and execute *Paste*.

*The autoreference is pasted in the cell at the position of the text caret.*

8. Select the autoreference, move the mouse cursor up to the *<Default Text Props>* box in the document header, hold down the menu button, and select *Super→Toggle*.

*The selected autoreference is superscripted.*

*You now have a footnote in a table cell.*

## Converting Text to Tables

### How do I convert tabbed text into a table?

When you convert tabbed text into a table, each tab setting results in a new table cell. For example, let's assume you had a block of text that was separated by tabs, as shown in Figure 54.

Apple Computer .....,AAPL .....,46.75 .....,500 .....,23,3  
Digital Equipment.....,DEC .....,39.75 .....,100 .....,24.4  
Hewlett Packard.....,HWP .....,73.50 .....,400 .....,29,4  
Intl Business Machines .....,IBM .....,94.75 .....,100 .....,9,47  
Microsoft MSFT.....,72.75 .....,200 .....,14,550 .....,0.00  
Sun Microsystems.....,SUNW .....,26.75 .....,300 .....,8,02

Figure 54

If you converted the tabbed text to a table, each tab setting creates a new cell in the table, as shown in Figure 55.

Apple Computer	AAPL	46.75	500	23,3
Digital Equipment	DEC	39.75	100	24.4
Hewlett Packard	HWP	73.50	400	29.4
Intl Business Machines	IBM	94.75	100	9,47
Microsoft MSFT	72.75	200	14,550	0.00
Sun Microsystems	SUNW	26.75	300	8,02

Figure 55

There are two ways you can convert tabbed text into a table: from the text area and from the component bar.

### **From the Text Area**

To convert tabbed text from the text area of a document, select the block of text that you wish to convert into a table, and execute *Misc→Convert→to Table→<Default>*.

*Each line of data in the component is converted to a row in a table.*

### **From the Component Area**

To convert tabbed text from the component bar of a document, select the components (from the component bar) that contain the text you wish to convert, and execute *Misc→Convert to Table→<Default>*.

*Each component is converted to a row in a table.*

## What's the difference between converting from the text area and converting from the component bar?

If you select components and convert them to a table, each component is converted to a row.

If you select a block of text and convert it to a table, each line in the text is converted to a row.

For example, let's examine the two conversion methods by using both to convert the text shown in Figure 56.

The screenshot shows a software application window titled "Stock Portfolio". The menu bar includes "Print", "Page 1 of 1", "Rev Tracking", "View x1", "Thames", "20", "Bold", "Italic", and "<Default Text Props>". The main area contains a table of text components:

	<i><b>Financial Data Analysis</b></i>
title	
para	<b>Apple Computer:</b> Apple Computer is based in Sunnyvale, California. They currently employ approximately 15,000 employees, and have annual revenues of over 30 million.
para	<b>Digital Equipment:</b> Digital Equipment Corp. (sometimes referred to as DEC) is based in Boston, MA. They currently employ approximately 20,000 employees, and have annual revenues of over 100 million.
para	<b>Hewlett Packard:</b> Hewlett Packard (sometimes referred to as HP) is based in Mountain View, California. They currently employ approximately 25,000 employees, and have annual revenues of over 100 million.
para	<b>International Business Machines:</b> International Business Machines (sometimes referred to as IBM) is based in Sunnyvale, California. They currently employ approximately 60,000 employees, and have annual revenues of over 10 billion.
para	<b>MicroSoft:</b> MicroSoft is based Seattle, Washington. They currently employ approximately 15,000 employees, and have annual revenues of over 100 million.
para	<b>Sun Microsystems:</b> Sun Microsystems (sometimes referred to as just Sun) is based Mountain View, California. They currently employ approximately 10,000 employees, and have annual revenues of over 90 million.

Figure 56

## Converting from the Component Bar

If you select all of the *para* components (from the component bar) and execute *Misc→Convert to Table→<Default>*, the resulting table will look like the one shown in Figure 57, where each selected component is converted to a row.

The screenshot shows the 'Stock Portfolio' application interface. At the top, there are menu items: 'Stock Portfolio', 'Print', 'Page 1 of 1', and 'Rev Track'. Below the menu is a toolbar with buttons for 'View x1', 'Times', '12', 'Bold', 'Italic', and '<Default Text Pro'.

The main area displays a table with the following data:

	<b>Financial Data Analysis</b>
■ row	<b>Apple Computer:</b> Apple Computer is based in Sunnyvale, California. They currently employ approximately 15,000 employees, and have annual revenues of over 30 million.
■ row	<b>Digital Equipment:</b> Digital Equipment Corp. (sometimes referred to as DEC) is based in Boston, MA. They currently employ approximately 20,000 employees, and have annual revenues of over 100 million.
■ row	<b>Hewlett Packard:</b> Hewlett Packard (sometimes referred to as HP) is based in Mountain View, California. They currently employ approximately 25,000 employees, and have annual revenues of over 100 million.
■ row	<b>International Business Machines:</b> International Business Machines (sometimes referred to as IBM) is based in Sunnyvale, California. They currently employ approximately 60,000 employees, and have annual revenues of over 10 billion.
■ row	<b>MicroSoft:</b> MicroSoft is based Seattle, Washington. They currently employ approximately 15,000 employees, and have annual revenues of over 100 million.
■ row	<b>Sun Microsystems:</b> Sun Microsystems (sometimes referred to as just Sun) is based Mountain View, California. They currently employ approximately 10,000 employees, and have annual revenues of over 90 million.

Figure 57

## Converting from the Text Area

If, on the other hand, you select all of the text from the text area and execute *Misc→Convert→to Table→<Default>*, the resulting table will look like the one shown in Figure 58, where each line of selected text is converted to a row.

### Why am I having trouble converting my tabbed text into a table?

Didn't anybody ever tell you about the rules? (Rules? What rules?)

If you have trouble converting your tabbed text to a table, it could be because your text violates one or more of the conversion rules. When you convert tabular text to a table, each line of text or component that participates in the conversion must adhere to the following:

Stock Portfolio	Print	Page 1 of 1	Rev Trackin																
View x1	Times	12	Bold Italic																
<Default Text Prop>																			
<b>Financial Data Analysis</b>																			
<table border="1"> <tr> <td>■ row</td><td>Apple Computer: Apple Computer is based in Sunnyvale, California. They currently employ approximately 15,000 employees, and have annual revenues of over 30 million.</td></tr> <tr> <td>■ row</td><td>Digital Equipment: Digital Equipment Corp. (sometimes referred to as DEC) is based in Boston, MA. They currently employ approximately 20,000 employees, and have annual revenues of over 100 million.</td></tr> <tr> <td>■ row</td><td>Hewlett Packard: Hewlett Packard (sometimes referred to as HP) is based in Mountain View, California. They currently employ approximately 25,000 employees, and have annual revenues of over 100 million.</td></tr> <tr> <td>■ row</td><td>International Business Machines: International Business Machines (sometimes referred to as IBM) is based in Sunnyvale, California. They currently employ approximately 60,000 employees, and have annual revenues of over 10 billion.</td></tr> <tr> <td>■ row</td><td>MicroSoft: MicroSoft is based Seattle, Washington. They currently employ approximately 15,000 employees, and have annual revenues of over 100 million.</td></tr> <tr> <td>■ row</td><td>Sun Microsystems: Sun Microsystems (sometimes referred to as just Sun) is based Mountain View, California. They currently employ approximately 10,000 employees, and have annual revenues of over 90 million.</td></tr> <tr> <td>■ row</td><td></td></tr> <tr> <td>■ row</td><td></td></tr> </table>				■ row	Apple Computer: Apple Computer is based in Sunnyvale, California. They currently employ approximately 15,000 employees, and have annual revenues of over 30 million.	■ row	Digital Equipment: Digital Equipment Corp. (sometimes referred to as DEC) is based in Boston, MA. They currently employ approximately 20,000 employees, and have annual revenues of over 100 million.	■ row	Hewlett Packard: Hewlett Packard (sometimes referred to as HP) is based in Mountain View, California. They currently employ approximately 25,000 employees, and have annual revenues of over 100 million.	■ row	International Business Machines: International Business Machines (sometimes referred to as IBM) is based in Sunnyvale, California. They currently employ approximately 60,000 employees, and have annual revenues of over 10 billion.	■ row	MicroSoft: MicroSoft is based Seattle, Washington. They currently employ approximately 15,000 employees, and have annual revenues of over 100 million.	■ row	Sun Microsystems: Sun Microsystems (sometimes referred to as just Sun) is based Mountain View, California. They currently employ approximately 10,000 employees, and have annual revenues of over 90 million.	■ row		■ row	
■ row	Apple Computer: Apple Computer is based in Sunnyvale, California. They currently employ approximately 15,000 employees, and have annual revenues of over 30 million.																		
■ row	Digital Equipment: Digital Equipment Corp. (sometimes referred to as DEC) is based in Boston, MA. They currently employ approximately 20,000 employees, and have annual revenues of over 100 million.																		
■ row	Hewlett Packard: Hewlett Packard (sometimes referred to as HP) is based in Mountain View, California. They currently employ approximately 25,000 employees, and have annual revenues of over 100 million.																		
■ row	International Business Machines: International Business Machines (sometimes referred to as IBM) is based in Sunnyvale, California. They currently employ approximately 60,000 employees, and have annual revenues of over 10 billion.																		
■ row	MicroSoft: MicroSoft is based Seattle, Washington. They currently employ approximately 15,000 employees, and have annual revenues of over 100 million.																		
■ row	Sun Microsystems: Sun Microsystems (sometimes referred to as just Sun) is based Mountain View, California. They currently employ approximately 10,000 employees, and have annual revenues of over 90 million.																		
■ row																			
■ row																			

Figure 58

- Each line or component must have the same left margin.
- Each line or component must have the same tab settings.
- Each line or component must have flush left, outer, or justified alignment (they cannot have flush right, inner, or center alignment).
- Each line or component cannot contain empty tabs (in other words, you can't tab two times in a row without entering text between the two tabs).
- Each line or component cannot contain microdocuments, inline components, frames, or tables.
- Each line or component cannot be included in a microdocument.
- Each line or component cannot include a tab that extends all the way to the right margin.

If any of the text you're trying to convert violates any of the above rules, correct the situation and try again.

**Can I convert my table back to tabbed text?**

No. Once you convert tabbed text into a table, it cannot be converted back. So be sure a table is what you really want when you make the conversion.

# 14. Conditional Control

---

Wouldn't it be nice if you could make documents smart enough to assemble themselves? Well in Interleaf you can. (See how easy that was? Just ask.) Conditional document control has been around for a long time in Interleaf; it's just that people usually don't know what to do with it. This is a big shame, since conditional control can save time, disk space, and a lot of retyping.

In previous versions of Interleaf, conditional control of a document was referred to as effectivity. The name effectivity came about because the technology works like this: You make selected portions of a document either "effective" (visible) or "ineffective" (invisible) based on certain conditions.

When Interleaf 5 came out, its developers and marketers decided the term *conditional control of a document* described the feature better than *effectivity*. This name change was due in part to the fact that users were scared of effectivity. They thought it was hard, and as a result, very few used it. It seems the name change helped. I've noticed that more people use conditional control of a document in Interleaf 5 than effectivity in TPS 4.

Effectivity or conditional control (whatever you want to call it; a rose is still a rose...) is not hard to use. The concept of this feature simple:

- Put the text for many topics into one document.
- Tag the topic-specific components with topic-specific attribute tags.
- Write a control expression to determine which tagged components are visible (effective) and which are invisible (ineffective). Components that are not tagged will automatically be visible.

Obviously this is an oversimplified model, and there are a lot of little steps that go in between the big bulleted steps above. But the concept is there.

In this chapter, I'll take this concept further. You'll see how to combine multiple documents, that have a lot of common text into one large document. We'll then show you how to use conditional control to tag the dissimilar text, and view and/or print smaller subset documents from the large master document. This feature is extremely efficient because you can store multiple documents in one file without duplicating text.

## Defining Terms

### What is effectivity?

In Interleaf 5 effectivity is now known as conditional control of a document. No matter what you call it, effectivity allows you to make specific components in a document, and their associated text effective (visible) or ineffective (invisible). You place conditions upon selected components by tagging their property sheets with attribute values, and if those conditions are met, the text in the tagged components remains visible. If those conditions are not met, the component and its text becomes invisible, as if it had been cut from the document.

### Why would I want to use effectivity?

One good reason is so that you don't have to duplicate information that appears in multiple documents. For example, let's assume you are responsible for producing three printer manuals for three different printer models. All three models are made by the same manufacturer, and all three models are so similar, that 75 percent of the manual is the same for all three printers. In this case, you wouldn't want to create three documents where each consisted of 75 percent of the same material.

Instead you could create one document that supported all three printer models and then use effectivity to tag the variable information; the information that's common to all three manuals remains untagged. For example, you could tag components that appear only in the Printer A manual with an attribute value of *Printer\_A*, tag components that appear only in the Printer B manual with an attribute value of *Printer\_B*, and tag components that appear only in the Printer C manual with an attribute value of *Printer\_C*. Then you would write a control expression to tell the software which type of manual you want it to assemble.

### What's a control expression?

A control expression is the mechanism you use to place a condition upon the document. A control expression equates an attribute with a particular value. As a result, all components tagged with the value specified in the control expression will be visible. All components tagged with attribute values not used in the control expression will be invisible. And all components that are not tagged with any attribute values will remain visible.

## Setting Up Conditions

### How do I add effectivity to a document?

The steps for adding effectivity to a document are as follows:

1. Define an attribute from the control sheet of the object property sheet.
2. Tag the components that contain variable information with attribute values.
3. Enter a control expression (from the control sheet of the object property sheet) that equates the attribute with one or more attribute values.

Admittedly, this is a hard concept to grasp, so the best way to explain it is with an example. Let's once again turn to the printer scenario described in the previous discussion on effectivity. In this example, you have one document that supports all three printers. For the sake of the example, we'll call this document *Manuals*. Seventy-five percent of the information in the *Manuals* document is the same for all three printers. In this case, you must use effectivity to tell Interleaf how to assemble three different printer manuals from one document.

### **Step 1: Define an attribute**

The first thing you need to do is define an attribute on the document's object property sheet.

1. Open the *Manuals* document.
2. Move the mouse cursor into the document name box, hold down the menu button, and execute *Props*.

*The document's object property sheet opens, as shown in Figure 1.*

3. Click the select button into the *Control* box at the top of the property sheet.

*The Control window of the property sheet opens, as shown in Figure 2.*

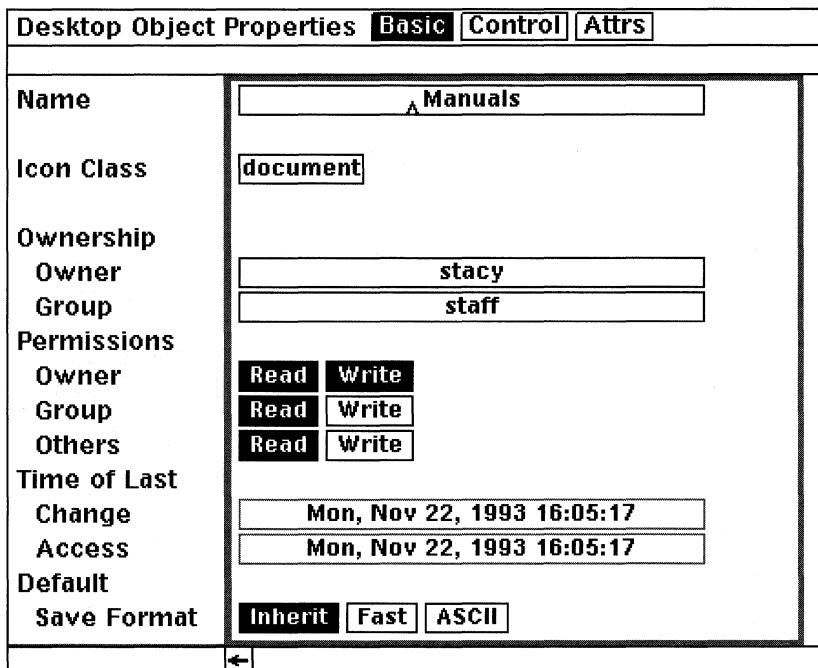


Figure 1

4. Move the mouse cursor into the *Attributes* box (near the bottom of the property sheet), click the select button, and as shown in Figure 3, type:

**printers**

*You have just created an attribute called "printers." You can give attributes any name you want; however, it is a good idea to make attribute names correspond somewhat with the information on which you are applying conditions. In this case, we are creating an attribute that will be used to assemble different printer manuals, therefore, we called the attribute "printers."*

5. Move the mouse cursor into *Type* box (the *Type* box currently contains the text *String*), and click the select button once.

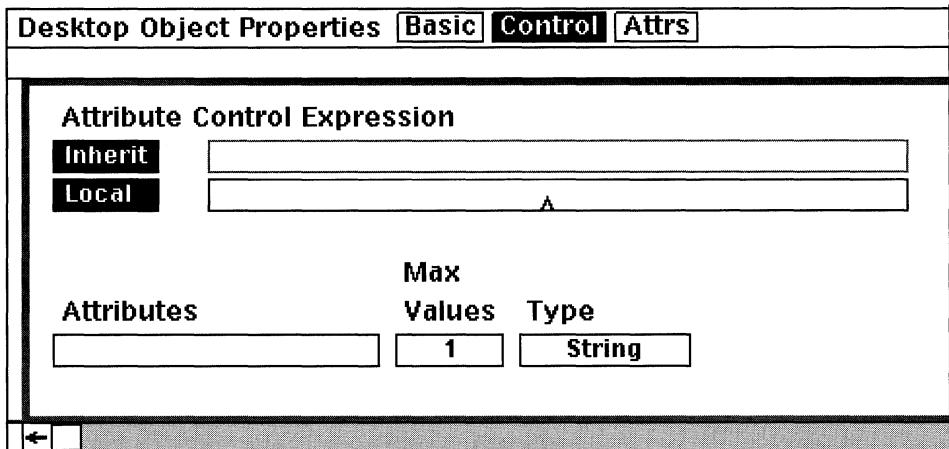


Figure 2

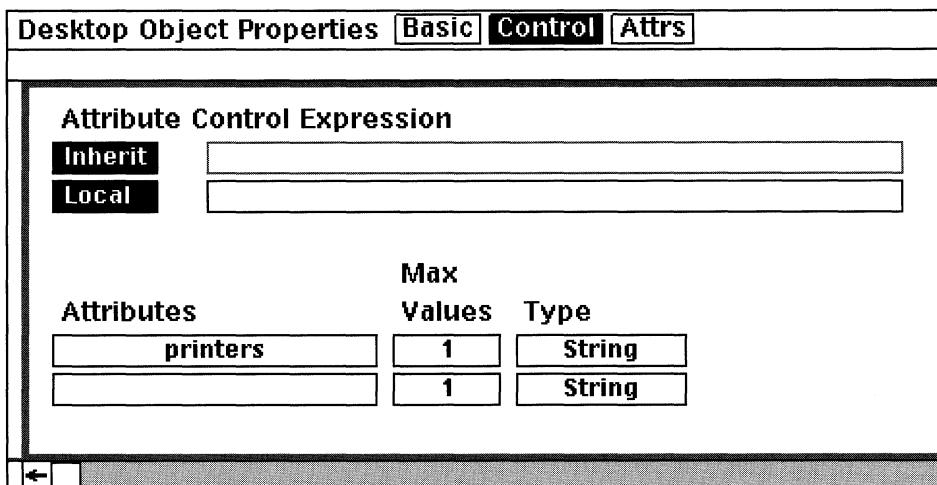


Figure 3

The text in the Type box changes from String to Enumerated. Furthermore, a new empty box appears to the right of the Type box, as shown

in Figure 4. This empty box is created so that you may enter a valid attribute value for the “printers” attribute.

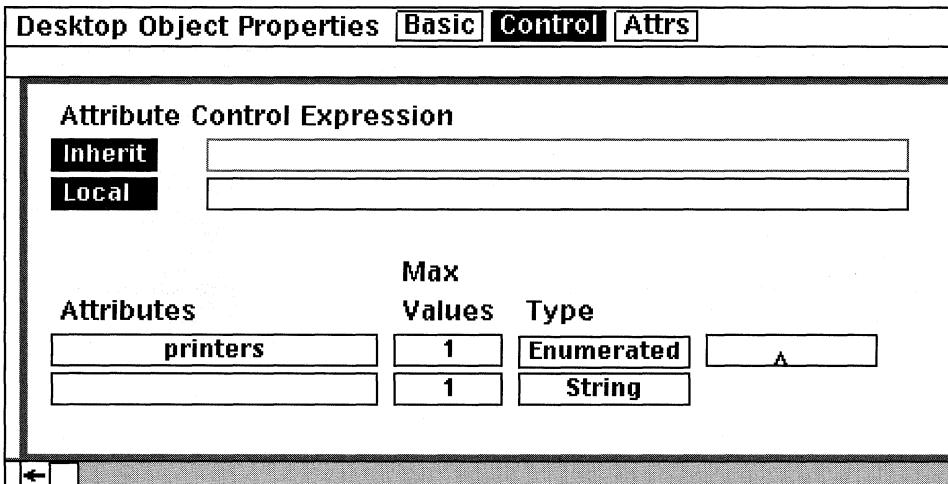


Figure 4

6. Move the mouse cursor into the new empty attribute value box, click the select button, and type:

### **Printer\_A**

*You have just created an attribute value called “Printer\_A.” You can name your attribute values anything you want; however, it is a good idea to make them correspond somewhat with the information on which you are applying conditions. In this case, one of the printers we are creating a manual for is called Printer A, therefore, we created an attribute value called “Printer\_A.”*

7. Move the mouse cursor out of the attribute value box and click the select button (or press the Tab key).

*A new attribute value box appears to the right of the one in which you just typed, as shown in Figure 5.*

8. Move the mouse cursor into the new empty attribute value box, click the select button, and type:

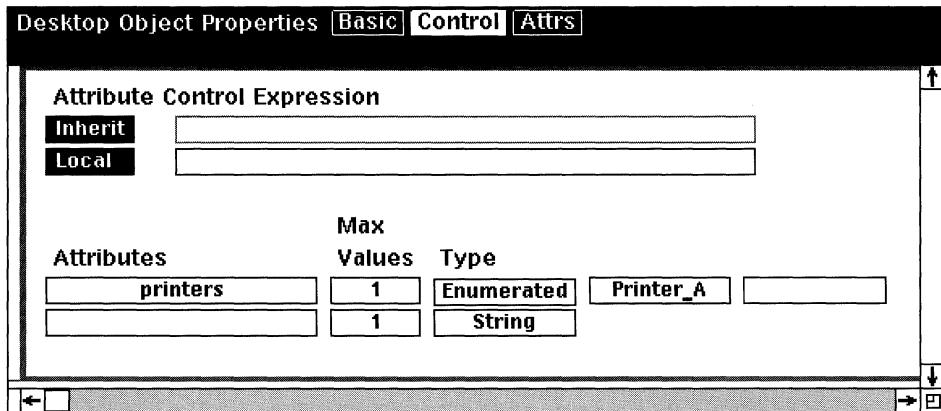


Figure 5

**Printer\_B**

*You have just created an attribute value called "Printer\_B."*

9. Move the mouse cursor out of the attribute value box and click the select button.

*A new attribute value box appears to the right of the one in which you just typed, as shown in Figure 6.*

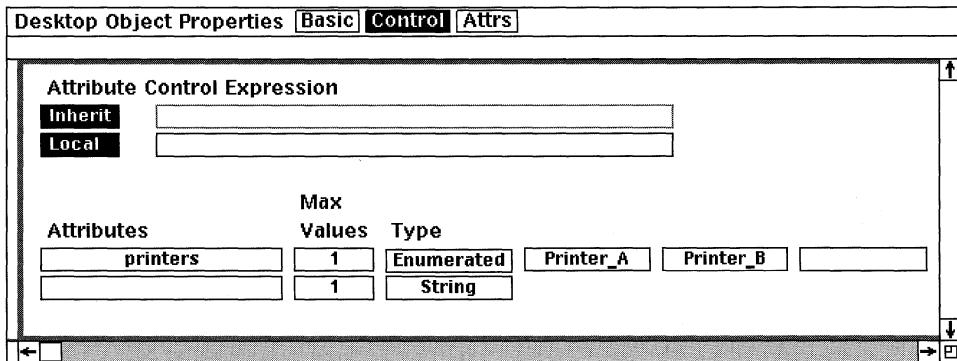


Figure 6

10. Move the mouse cursor into the new empty attribute value box, click the select button, and type:

**Printer\_C**

*You have just created an attribute value called "Printer\_C."*

11. Move the mouse cursor out of the attribute value box and click the select button.

*A new attribute value box appears to the right of the one in which you just typed, as shown in Figure 7.*

12. In the open property sheet, execute *Apply*.

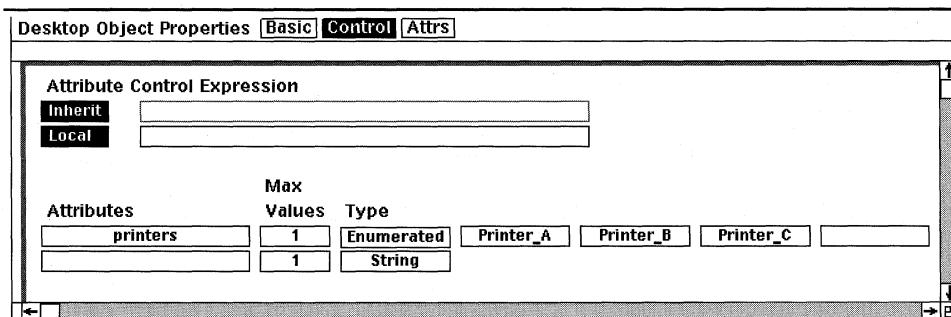
*For this document, you have just defined an attribute called "printers" and assigned three valid values for "printers": Printer\_A, Printer\_B and Printer\_C.*

13. Close the property sheet.

## **Step 2: Tag the components that contain variable information with attribute values**

Once you have defined an attribute and its valid values, you need to assign those attribute values to specific components in the document. In this example, the way the tagging works is like this: Tag all components that are Printer A specific with the *Printer\_A* attribute, tag all components that are Printer B specific with the *Printer\_B* attribute, and tag all components that are Printer C specific with the *Printer\_C* attribute. Do not tag any of the attributes that are common to all three printer manuals.

1. Find the first component in the document that is specific to the Printer A manual and open its property sheet.



*Figure 7*

2. Move the mouse cursor into the *Attrs* box at the top of the property sheet and click the select button.

*The Attrs portion of the property sheet opens, as shown in Figure 8.*

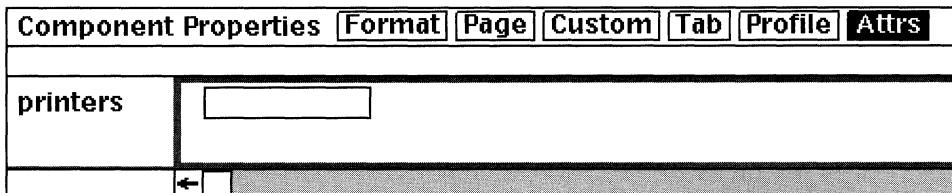


Figure 8

*Notice that the "printers" attribute is already present on the property sheet. This is because you defined the "printers" attribute on the object property sheet for the entire document.*

3. Move the mouse into the empty attribute value (*printers*) box on the property sheet, hold down the menu button, and select *Printer\_A*.

*Notice that when you hold down the menu button while the mouse cursor is in the empty attribute value box, all of the valid attribute values that you defined on the object property sheet are present as menu items on the pulldown menu.*

4. In the open property sheet, execute *Apply*.

*You have just tagged the component with the *Printer\_A* attribute value.*

5. Close the property sheet.
6. Repeat steps 1 through 5 for any component or object that is to appear in the *Printer\_A* manual only.

Now let's tag the *Printer\_B* specific information.

7. Find the first component in the document that is specific to the *Printer\_B* manual and open its property sheet.
8. Move the mouse cursor into the *Attrs* box at the top of the property sheet and click the select button.

*The Attrs portion of the property sheet opens.*

*Once again, notice the the “printers” attribute is already present on the property sheet. This is because you defined the “printers” attribute on the object property sheet for the entire document.*

9. Move the mouse into the empty attribute value box on the property sheet, hold down the menu button, and select *Printer\_B*.

10. In the open property sheet, execute *Apply*.

*You have just tagged the component with the *Printer\_B* attribute value.*

11. Close the property sheet.

12. Repeat steps 7 through 11 for any component or object that is to appear in the *Printer B* manual only.

Now let's tag the *Printer C* specific information.

13. Find the first component in the document that is specific to the *Printer C* manual and open its property sheet.

14. Move the mouse cursor into the *Attrs* box at the top of the property sheet and click the select button.

*The Attrs portion of the property sheet opens.*

*Once again, notice the the “printers” attribute is already present on the property sheet. This is because you defined the “printers” attribute on the object property sheet for the entire document.*

15. Move the mouse into the empty attribute value box on the property sheet, hold down the menu button, and select *Printer\_C*.

16. In the open property sheet, execute *Apply*.

*You have just tagged the component with the *Printer\_C* attribute value.*

17. Close the property sheet.

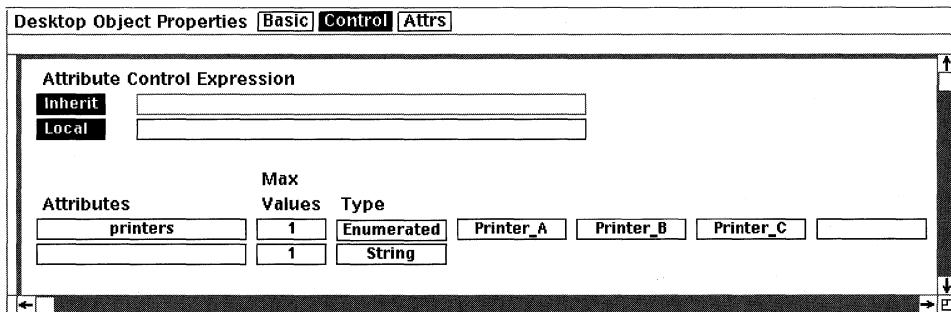
18. Repeat steps 13 through 17 for any component or object that is to appear in the *Printer C* manual only.

### **Step 3: Enter a control expression that equates the attribute with one or more attribute values**

As stated earlier, the control expression is the condition you place upon the document. In other words, you use the control expression to tell Interleaf which manual you wish to assemble Printer A, Printer B, or Printer C. If the control expression says that a Printer A manual is to be assembled, all components and associated text tagged with the *Printer\_B* and *Printer\_C* attribute values will be hidden. Similarly, if the control expression says that a Printer B manual is to be assembled, all components and associated text tagged with the *Printer\_A* and *Printer\_C* attribute values will be hidden, and so on.

1. Move the mouse cursor into the document name box, hold down the menu button, and execute *Props*.

*The Control page of the document's object property sheet opens, as shown in Figure 9.*



*Figure 9*

2. Move the mouse cursor into the empty control expression box to the right of the *Local* button and type:

**printers = Printer\_A**

*The open property sheet should now look like the one shown in Figure 10. The equation you just typed is the control expression for the document. In this case, the control expression is telling Interleaf to assemble a Printer A manual.*

3. In the open property sheet, execute *Apply*.

*All components not tagged with the *Printer\_A* attribute value disappear from the document. This means all of the components that you*

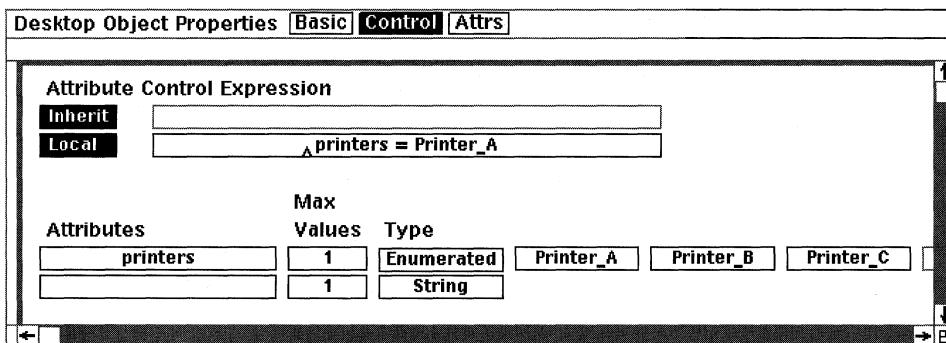


Figure 10

tagged with *Printer\_B* and *Printer\_C* attribute values become hidden, and all text following the hidden components rolls up in the document, as if the hidden components had been cut.

To create a *Printer B* manual, you would change the control expression on the object property sheet to read *printers = Printer\_B*. In this case, all components not tagged with the *Printer\_B* attribute value would become hidden.

### What's the difference between *String* and *Enumerated*?

The attribute types defined on the *Control* page of the object property sheet can be either *String* or *Enumerated*. The difference between the two types is this: *Enumerated* allows you to predefined attribute values to use later for tagging. *String* does not allow you to predefined attribute values.

If you change the attribute type to *Enumerated*, boxes appear to the right of the *Type* box in which you can enter valid attribute values, as shown in Figure 11. The attribute values that you define on the object property sheet will show up as menu items on the *Attrs* page of the component property sheet. For example, let's assume that the attribute *printers* is defined as *Enumerated* and the attribute values are listed *Printer\_A*, *Printer\_B*, and *Printer\_C* on the object property sheet, as shown in Figure 11. As a result, when you open the *Attrs* page of the component property sheet, move the mouse cursor into the *printers* attribute box and hold down the menu button, the valid values *Printer\_A*, *Printer\_B*, and *Printer\_C* appear as menu items, as shown in Figure 12.

On the other hand, let's assume the attribute *keyboards* is defined as type *String*. When an attribute is of type *String*, no value boxes appear to the right of the *Type* box on the object property sheet. In this case, when you open the *Attrs* page of the component property sheet, move the mouse cursor into the

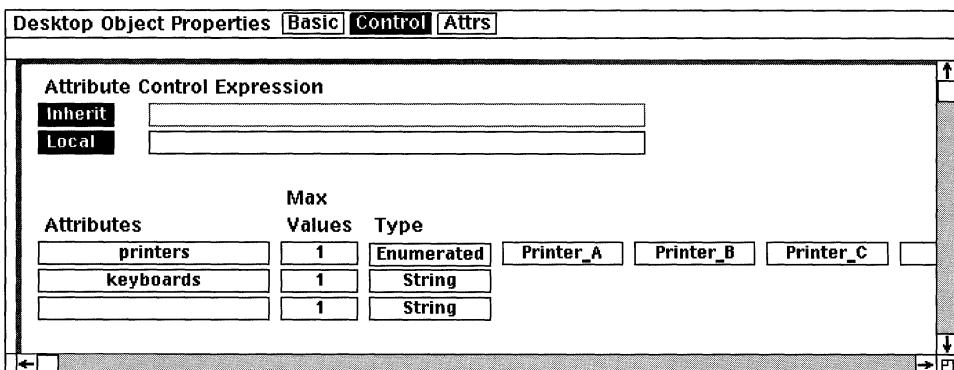


Figure 11

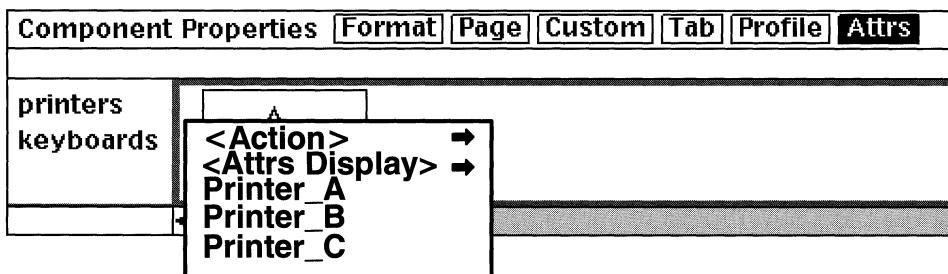


Figure 12

*keyboards* attribute box, and hold down the menu button, no valid attribute values appear as menu items, as shown in Figure 13.

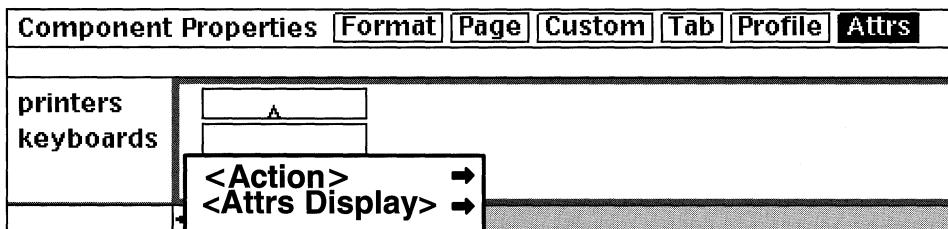


Figure 13

The moral of the story is this: If you want to predefine the attribute values for a particular attribute, change the attribute type to *Enumerated* and define the

valid values on control sheet of the object property sheet. If you want to be able to enter attribute values “on the fly” from the *Attrs* page of the component property sheet, change the attribute type to *String* (if it is not already *String*) on the control sheet.

### Can I write a control expression that uses “not-equals” instead of “equals”?

Yes. To indicate “not equals” in a control expression, you use the # sign instead of the = sign. The easiest way to understand how “not equals” works in a control expression is look at an example.

To illustrate, the control expression shown in Figure 14 states, “If an object is tagged with the *Printer\_A* attribute value, keep the object visible and hide all objects that are not tagged with *Printer\_A*.” This mean that any object tagged with the *Printer\_B* or *Printer\_C* attribute values will be hidden.

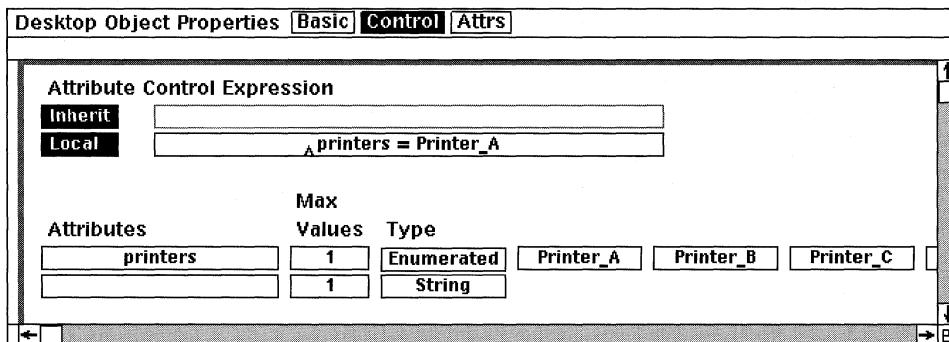


Figure 14

On the other hand, the control expression shown in Figure 15 states, “If an object is *not* tagged with the *Printer\_A* attribute value, keep the object visible and hide all objects that are tagged with *Printer\_A*.” This means that any object tagged with the *Printer\_B* or *Printer\_C* attribute values (or not tagged at all) will remain visible.

### What is the *Inherit* box (on the control sheet) used for?

The *Inherit* box (above the *Local* box) on the control sheet tells you if a control expression is being inherited from a book’s object property sheet. It works like this: If you have documents in a book, and want all the documents in the book to share the same control expression, then you open the book’s object property sheet and in the *Local* box, type in the control expression. That control expres-

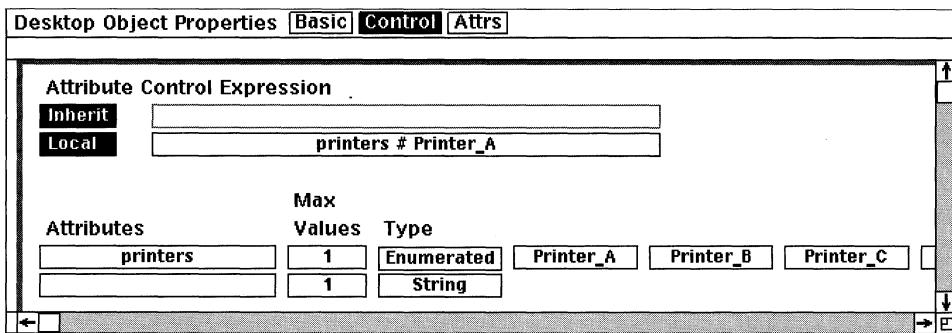


Figure 15

sion will then appear in the *Inherit* box for all of the documents in the book (including catalogs).

For example, let's assume you have a book called *Projects*. You open the book's object property sheet and type in a control expression, as shown in Figure 16.

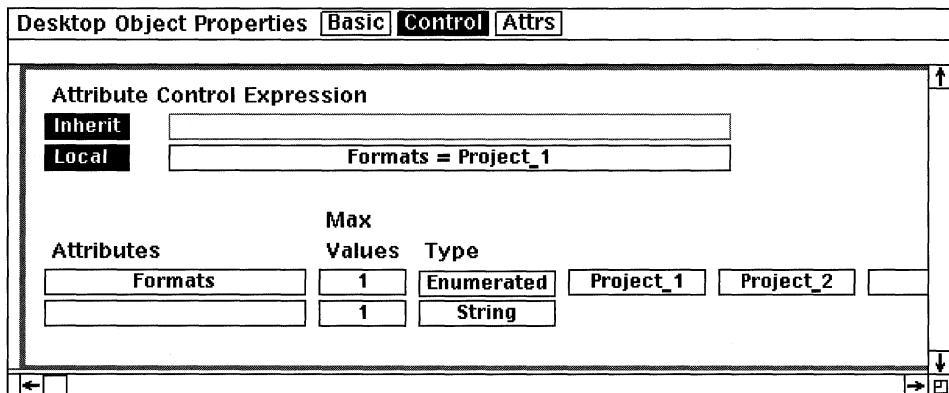


Figure 16

Now open the object property sheet for any document in the book. Notice the document's object property sheet displays the control expression in the *Inherit* box, as shown in Figure 17.

If the document has an control expression in the *Local* box and one in the *Inherit* box, the control expression in the *Inherit* box overrides the control expression in the *Local* box.

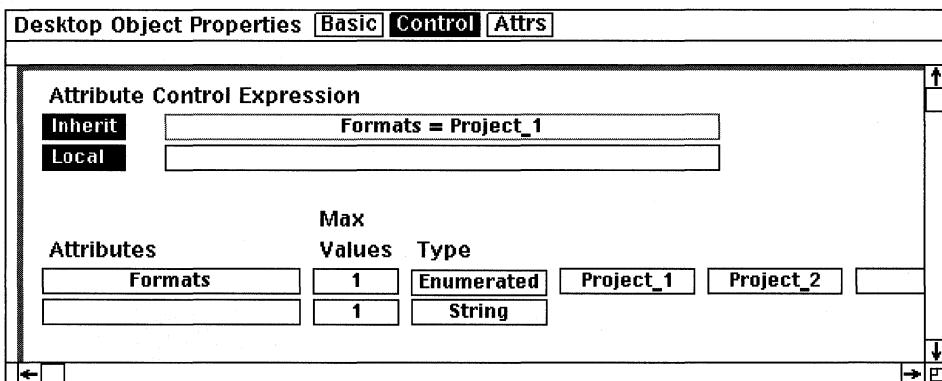


Figure 17

## Modifying Control Expressions and Attribute Values

**Why is it that every time I try to enter a control expression, I don't get *Apply* when I hold down the menu button?**

Because you're typing the control expression incorrectly. Case matters when entering a control expression. If the attribute is defined as *printers*, for example, you cannot enter a control expression that says *Printers = Printer\_A*. In this case, the attribute was defined with a lowercase *p* (as in *printers*), and the attribute in the control expression was typed in with an uppercase *P* (as in *Printers*). The same holds true for the attribute values. I know it's picky, but you must type the attribute and attribute values into the control expression exactly the way they are defined in the object property sheet.

### How do I globally add attribute values to many components?

If you want to add the same attribute value to all of the *para02* components, for example, add the attribute value to the *Attrs* sheet of the *para02* property sheet, and execute *Apply* (instead of *Global Apply*). Before you close the property sheet, execute *Unify→All→Attrs*, and select *Confirm* from the resulting stickup window. The same attribute value will be added to all occurrences of the *para02* component, as well as to the component's master definition. You cannot use *Global Apply* to globally add attribute values.

If you want to add the same attribute value to many components, where each component has a different name, then you must open each component proper-

ty sheet and enter the attribute. There is no shortcut way to add the same attribute value to many different component property sheets.

### How do I globally remove attribute values from many components?

This is definitely easier than globally adding them. If you wish to remove a particular attribute value from all of the components in a document, open the document's object property sheet, go to the *Control* sheet of the property sheet, delete the attribute name, and execute *Apply*. A stickup window will appear informing you that all values for the attribute will be deleted from the document. If this is what you want, select *Confirm All Deletions* from the stickup window.

For example, if you have an attribute called *printers* with valid attribute values of *Printer\_A*, *Printer\_B*, and *Printer\_C*, and you wanted to delete all of these values from all components in a document, then follow these easy steps:

1. Open the document's object property sheet.
2. Go to the *Control* sheet of the property sheet.
3. Move the mouse cursor into the attribute box of the attribute you wish to delete, click the select button, and type *Ctrl-k*.

*The entire attribute name disappears.*

4. Execute *Apply*.

*A stickup window appears informing you that deleting the "printers" attribute will delete all values of the attribute from the document.*

5. Select *Confirm All Deletions*.

*The stickup disappears.*

6. Close the object property sheet.

*The attribute "printers" and all of its associated values are removed from all components in the document.*

### Can I add more than one attribute value to a component property sheet?

Yes, if you increase the value in the *Max Value* box on *Control* sheet of the document's object property sheet, as shown in Figure 18.

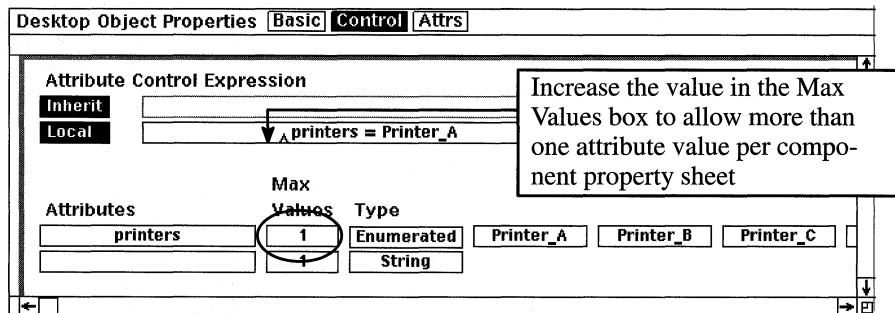


Figure 18

For example, if you want to enter two attribute values on a single component property sheet, then change the number in the *Max Values* box to 2, as shown in Figure 19.

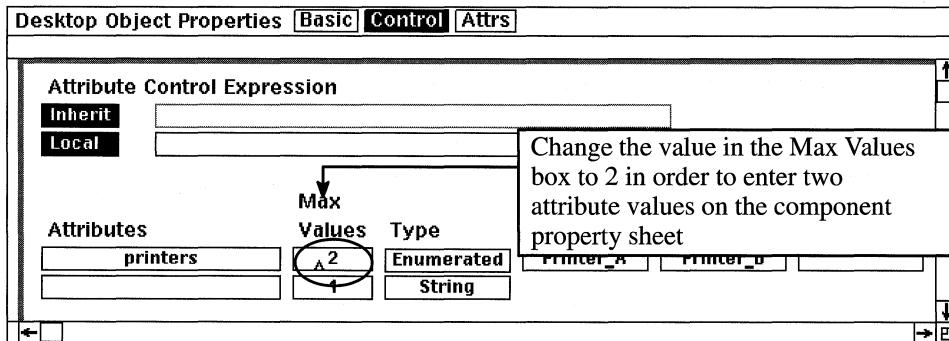


Figure 19

Now when you open any component property sheet for this document, you will be able to enter two attributes, as shown in Figure 20.

## Manipulating Hidden Text

### Does the spellchecker find spelling errors in hidden text?

No. Once text is hidden as a result of effectivity, the document considers the text gone (as if it had been cut). Therefore, spelling errors in hidden text will not be detected by the spellchecker.

Even though the spellchecker can't see the text, it doesn't mean that it's really gone. In fact, hiding text does not reduce the physical size of the document.

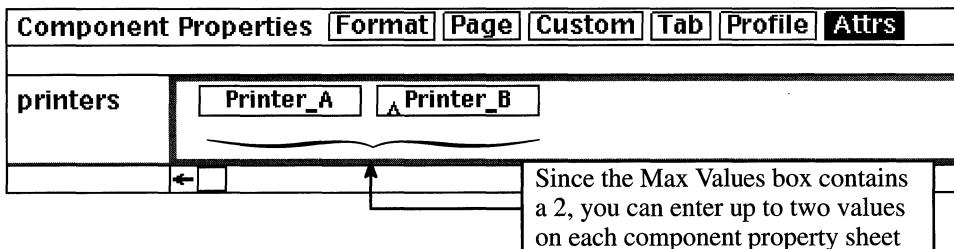


Figure 20

You cannot, for example, free up disk space by hiding text via effectivity. The document is the same size regardless if its text is hidden or not.

### **Does the Search & Replace facility find (or replace) characters in hidden text?**

No. As with the spellchecker, the Search & Replace does not detect hidden text. This means that you cannot search on or replace characters that are currently hidden.

### **How do I display all text that was previously hidden by a control expression?**

The easiest way to bring hidden text back is to turn off the *Local* button on the object property sheet. To accomplish this, follow these easy steps:

1. Open the document's object property sheet.
2. Go to the *Control* sheet of the property sheet.
3. Click the select button on the *Local* button.

*The button turns from dark to light, as shown in Figure 21. This means that the Local button is turned off.*

4. Execute *Apply*.

*When the Local button is turned off, the control expression in the box to the right is ignored by the software. As a result, all tagged components become visible, regardless of what the control expression indicates.*

Another way you can unhide all tagged components is to simply delete the control expression from the object property sheet, as shown in Figure 22, and

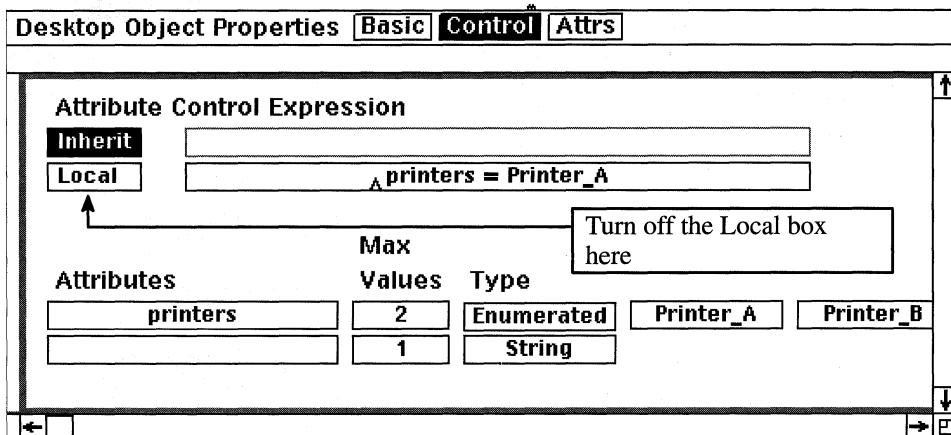


Figure 21

execute *Apply*. In this case, it doesn't matter if the *Local* button is turned on or off.

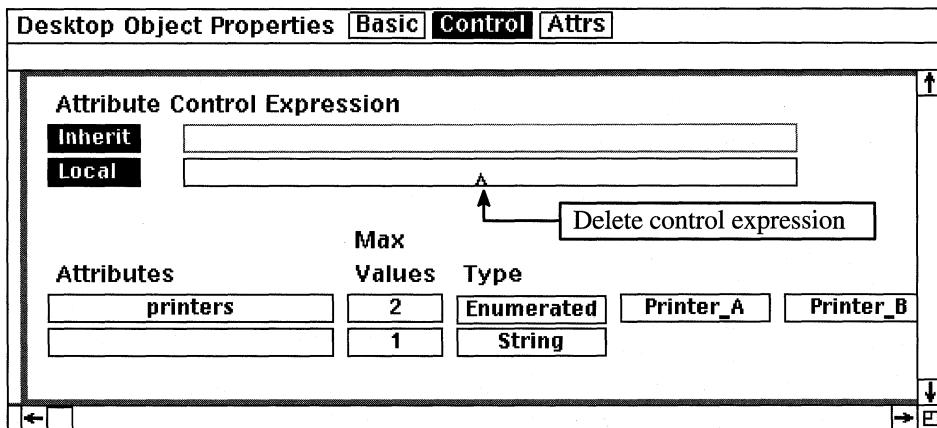


Figure 22

### In addition to components, can I tag other objects with attribute values?

Yes. You can tag any object that includes an *Attrs* page on its property sheet. This means that in addition to components, you can tag frames, named graphic objects, inline components, and microdocuments. If any of these objects are

tagged with an attribute value that does not appear in the control expression, the object will become hidden.

You can also tag catalogs. This comes in handy if you have more than one catalog in a book, as shown in Figure 23, and you want to tell the documents which specific catalog you want to reference.

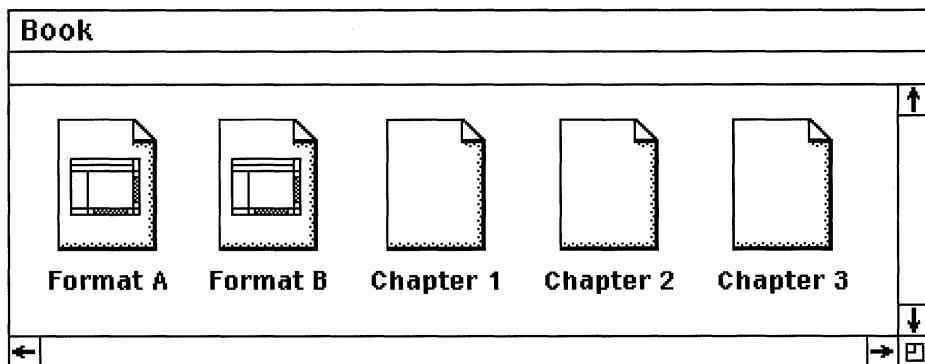


Figure 23

For example, let's assume that you wanted the chapter documents in Figure 23 to refer to the *Format A* catalog instead of *Format B*. (By default, the documents in this example look to *Format B* first for master definitions because *Format B* is the catalog closest to the documents.) If you want the documents to completely ignore *Format B*, and to use *Format A*, then follow these simple steps:

1. Open the object property sheet for the book and go to the *Control* sheet of the property sheet.
2. Create an attribute called *Formats* (this attribute can be called anything you want; we're just using *Formats* for the sake of the example).
3. Change the attribute type from *String* to *Enumerated*.
4. In the first empty attribute value box, type:  
**Format\_A**
5. In the next empty attribute value box, type:

5. In the next empty attribute value box, type:

### **Format\_B**

The property sheet should now resemble the one shown in Figure 24.

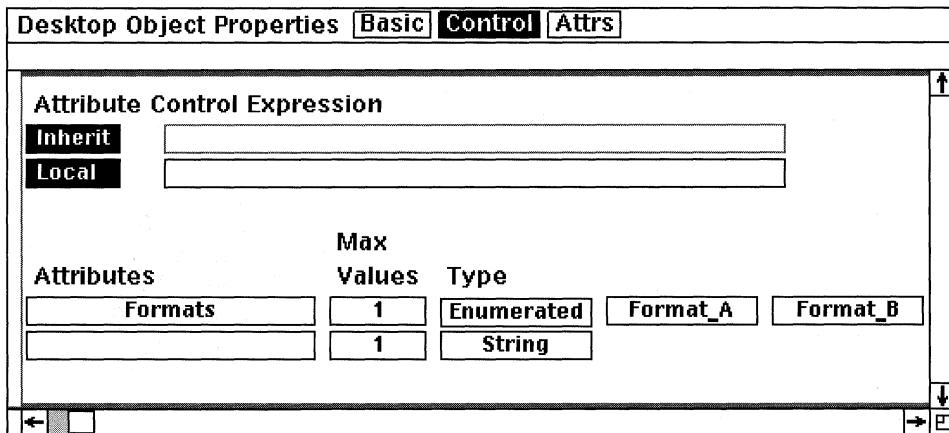


Figure 24

6. Execute *Apply* and close the property sheet.
7. Open the book.
8. Select the *Format A* catalog and execute *Props*.

*The catalog's object property sheet opens to the Control page.*

9. Move the mouse cursor into the *Attrs* box at the top of the property sheet and click the select button.

*The Attrs page of the property sheet opens.*

10. Move the mouse cursor into the *Formats* attribute box, hold down the menu button, and select the *Format\_A* value.
11. Execute *Apply* and close the property sheet.
12. Select the *Format B* catalog and execute *Props*.

*The catalog's object property sheet opens to the Attrs page.*

13. Move the mouse cursor into the *Formats* attribute box, hold down the menu button, and select the *Format\_B* value.
14. Execute *Apply* and close the property sheet.

15. Select the open book icon and execute *Props*.

*The object property sheet for the book opens on the Attrs page.*

16. Move the mouse cursor into the *Control* box at the top of the property sheet and click the select button.

*The Control sheet of the property sheet opens.*

17. In the empty *Local* field, type:

**Formats=Format\_A**

*Or you can type Formats = Format\_A. Spaces around the equal sign are optional.*

*Your book property sheet should look like the one shown in Figure 25.*

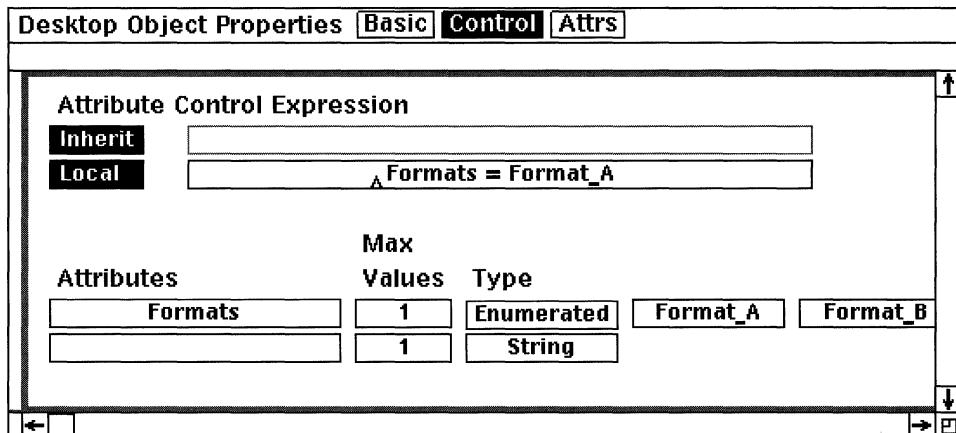
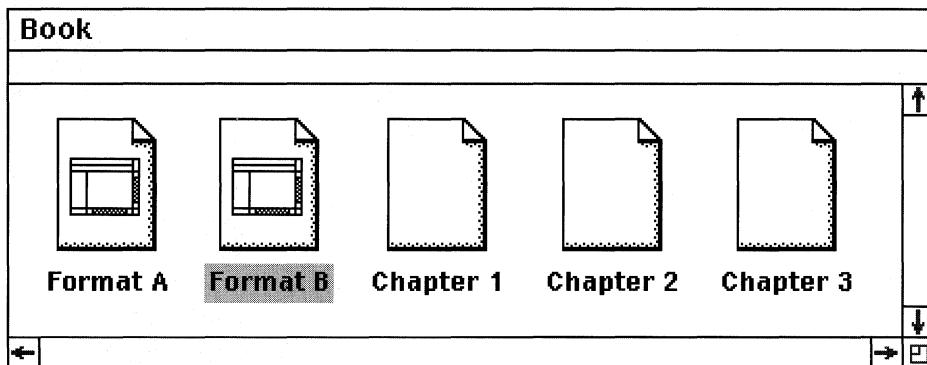


Figure 25

18. Execute *Apply*, and close the property sheet.

*Notice what happens to the name on the Format B icon in the open book window. The Format B icon name becomes shaded, as shown in Figure 26.*

*The dark icon name indicates that the documents are ignoring the Format B catalog and looking directly at the Format A catalog for their master definitions. This is because we assigned attribute values to the catalogs and then used a control expression at the book level to indicate which catalog is to be used. This technique is called conditional assembly of a book.*



*Figure 26*

# **15. *Lisp Programming***

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Lisp is a programming language used extensively throughout Interleaf. Interleaf 5 is a breakthrough product in that it actually allows you to reprogram how the application looks and functions by creating layered applications in Lisp.

In a nutshell, a layered application is a Lisp program that sits on top of Interleaf. The layered application will override whatever the Interleaf desktop does by default. You (the user) are the one who writes a layered application, thus you get to dictate how Interleaf operates (to a degree).

In this chapter, I will introduce you to the Interleaf Developer's Toolkit and show you how to use it to get started in writing Lisp applications. If, after reading this chapter, you decide that Lisp is something you would like to pursue further, I recommend you get a copy of *Adventurer's Guide to Interleaf Lisp* by David Weinberger (OnWord Press). The nice thing about Mr. Weinberger's book is that it is written for the intelligent person who just happens *not* to be a professional programmer. Granted, Lisp is a programming language, but don't let that scare you. And certainly don't let that stop you. I'm not a programmer, and I've been *hired* as a programmer in the past. (But don't tell anybody.) Regardless of your association with Interleaf, you can still do a lot with Interleaf Lisp, even if you've never developed applications before.

## **The Developer's Toolkit**

### **What is the Developer's Toolkit?**

Interleaf 5 allows you to write add-on Lisp applications for the Interleaf desktop. These are called layered applications, because they are layered on top of Interleaf. For example, the thesaurus and grammar check utilities in Avalanche Development Company's product, *Proof Positive*, are layered applications. Similarly, the desktop utilities (word count, window manager, sticky notes, etc.) provided in Saffire System's *Desktop Buddy* are all layered applications. Interleaf allows you to write layered applications so that you may enhance the Interleaf desktop to meet all of your publishing needs.

If you want to write your own layered applications, you will need the Developer's Toolkit. The Developer's Toolkit is a collection of Lisp application development tools, including a Lisp file editor, a Lisp compiler, a listener (a tool for evaluating Lisp expressions), an evaluator (also a tool for evaluating Lisp expressions), Lisp online help, and debugging and error handling utilities. The Developer's Toolkit also provides you with the instructions you need to package your layered application and incorporate it into the Interleaf software such that it runs seamlessly with the rest of Interleaf's functions.

The Developer's Toolkit does not automatically come with every copy of Interleaf. It is an option that you must purchase in addition to the base Interleaf package. If you don't have the Developer's Toolkit and are interested in purchasing it, contact your local Interleaf sales rep or VAR.

### **How do I know if I have the Developer's Toolkit on my system?**

The easiest way to find out if you have the Developer's Toolkit is to simply query the Interleaf desktop as follows:

1. Execute *Custom*→*Misc*→*Info* from the desktop (make sure nothing is selected on the desktop when you execute the command).

*A stickup window appears informing you of the version of Interleaf you are running and the operating system on which your are running it.*

2. Select the *Licensed Options* button on the stickup window.

*A new stickup window appears which displays the list of options available at your site, and whether or not those options are turned on. If you do not see the Developer's Toolkit as an available option, then you do not have it at your site. If you do see the Developer's Toolkit, but it is listed as Off, then you need to (nicely) ask your systems administrator to activate it for you by rerunning the licensing script with a password that installs the Developer's Toolkit on your system.*

### **We have the Developer's Toolkit, but I still can't access it. Why?**

Once your systems administrator has installed the Developer's Toolkit on the system, each user must run the *Tool Manager* to specifically activate the Developer's Toolkit on his or her desktop. To activate the Developer's Toolkit on your desktop, perform the follow steps:

1. Make sure that nothing is selected on the Interleaf desktop, hold down the menu button, and execute *Custom*→*Toolmgr*.

The Tool Manager window appears, as shown in Figure 1.

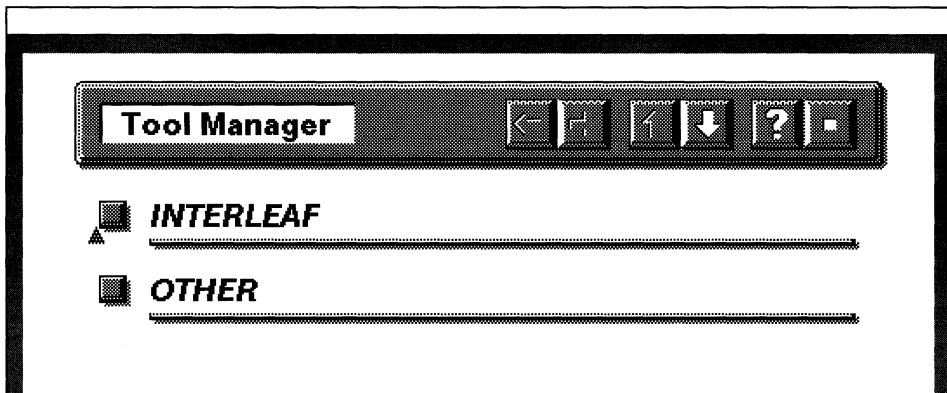


Figure 1

2. Select the *Interleaf* button.

The Interleaf Tools appear in the Tool Manager window, as shown in Figure 2.

Your Interleaf Tool Manager window may look different, depending upon the Interleaf options your site has purchased. In addition, you may have more tools turned on (which translates to more 1's, instead of 0's, in the boxes to the right of the tools).

3. Move the mouse cursor into the box to the right of the Developer's Toolkit, as shown in Figure 2, and click the select button once.

The zero turns into a one. This means that the Developer's Toolkit will be activated on your desktop when you execute *Apply*.

4. In the open Tool Manager window, execute *Apply*.

A Tool Managers Log window appears on the desktop, as shown in Figure 3.

Make sure that you see the message "Setup of 'Developer's Toolkit' Succeeded." If you do not get this message, show the message to your systems administrator.

If you see the message "Setup of 'Developer's Toolkit' Succeeded", you have successfully activated the Developer's Toolkit on your desktop.

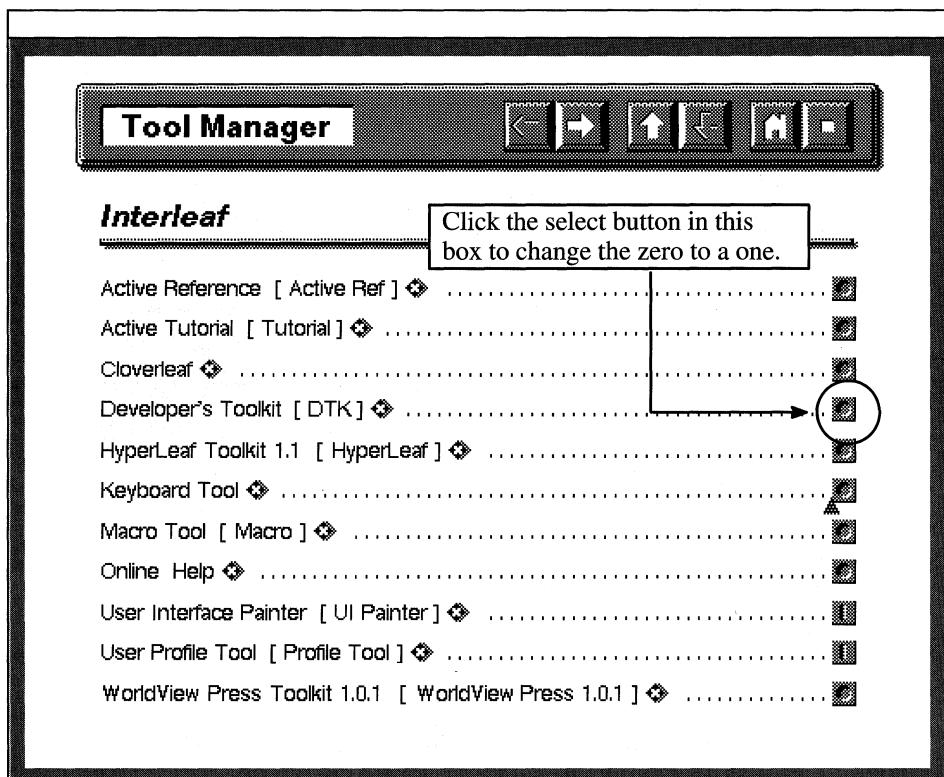


Figure 2

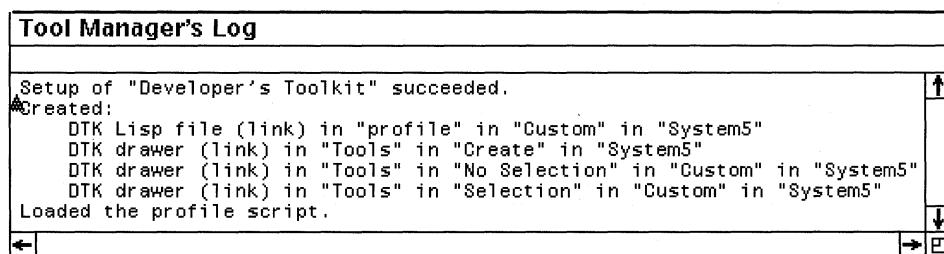


Figure 3

5. In the open *Tool Manager's Log* window, hold down the menu button and execute *Close*.

*The Tool Manager Log window closes.*

6. In the open *Tool Manager*'s window, hold down the menu button and execute *Close*.

*The Tool Manager window closes.*

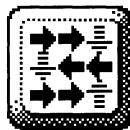
*You are now ready to use the Developer's Toolkit to write layered applications in Lisp for your Interleaf desktop.*

## Executing Lisp Code

### How do I start to write a Lisp program?

Move your mouse cursor to the desktop (make sure nothing is selected), hold down the menu button, and execute *Create*→*Misc*→*Lisp*. An icon is created on your desktop, as shown in Figure 4.

Whenever you see an icon that looks like the one shown in Figure 4, the icon represents a Lisp program.



**Lisp**

*Figure 4*

Select the icon and execute *Open*.

*The Lisp Editing window opens, as shown in Figure 5.*

*The Editing window is where you input your Lisp code.*

```
(lisp-set-implementation "Interleaf Lisp" "2.0")
;; Module name:
;; Purpose:
;; Notes:
;; Interfaces:

;; Audit:
;; DD-MON-YY USERNAME COMMENT
```

Figure 5

### How do I rename my Lisp program icon?

The same way you rename any other desktop icon. Select the icon name, press *Ctrl-d* to delete the current name, and type in the new name.

### How do I execute my Lisp program after I've typed in all the source code?

The easiest way is this: In the open *Editing* window, hold down the menu button and execute *Save→if Modified*. Close the *Editing* window. Select the Lisp icon, hold down the menu button and execute *Custom→Load*. Your newly created Lisp program will be executed.

If you have the Developer's Toolkit, you can issue *Lisp→Eval buffer* directly from within the *Editing* window to execute the Lisp program.

### Do I have to have the Developer's Toolkit to write and execute a Lisp program?

Yes and no (Interleaf Lisp has a hard time with commitment). If you do not have the Developer's Toolkit you can create a Lisp icon, put some Lisp code in it, and execute the program. And as long as you don't use any of the Interleaf Lisp functions supplied only in the Developer's Toolkit, your program will run.

If, however, you do not have the Developer's Toolkit, you cannot incorporate your Lisp program into Interleaf as a layered application, which is the whole point of creating the application in the first place. And you cannot use any of

the Interleaf Lisp functions contained in the Developer's Toolkit. Furthermore, debugging your application (if you have programming errors) is next to impossible without the Developer's Toolkit because you don't have the listener, the evaluator, and the debugging and error checking utilities. In other words, without the Developer's Toolkit you are really on your own, making it almost not worth the effort of writing Lisp applications for the desktop.

### **Can I execute one line of Lisp code without writing a program?**

Yes. Move the mouse cursor to the desktop (make sure nothing is selected), hold down the menu button and execute *Custom*→*ReadEval*. A stickup window appears in which you may enter one line of Lisp code. Once you enter an expression and select the *Enter* button from the stickup window, the line of Lisp code will be evaluated.

For example, let's say you wanted to create a drawer named *test* on your desktop using a Lisp expression (don't question the usefulness of this example, just take it for granted). Let's also assume that you didn't want to go through the trouble of creating a Lisp program icon for just one line of code. To evaluate a single Lisp expression from the desktop, execute the following steps:

1. Move the mouse cursor to the desktop (make sure nothing is selected) and execute *Custom*→*ReadEval*.

*The ReadEval stickup window appears.*

2. In the stickup window, type:

**(dt-create “test” :type ‘drawer)**

*This is the line of Lisp code you use to create a drawer named “test.”*

3. Select *Enter* from the stickup window.

*A second stickup window appears asking you to verify the line of code you entered.*

4. Select *Continue* from the stickup window.

*The stickup window disappears, and a drawer named “test” is created on your desktop, as shown in Figure 6.*

### **Do I need to have access to the Developer's Toolkit to use *Custom*→*ReadEval*?**

No. If you simply want to experiment with what I call “Lisp One-liners,” then you can do so by executing single lines of Lisp code via the *Custom*→*ReadEval* stickup window.

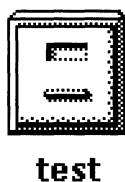


Figure 6

### **What are the resources available to me if I get stuck writing my Lisp application?**

In my opinion, the very best resource is to take a Lisp programming class. Interleaf offers such a class, as do a number of community colleges, VARs, and third party vendors (you just have to ask around).

If you can't afford the luxury of formal training, I suggest you buy a copy of *Adventurer's Guide to Interleaf Lisp* by David Weinberger (OnWord Press). Mr. Weinberger's book takes you through the step-by-step learning process of some of the more commonly used Lisp expressions. Each chapter builds on the previous chapter's concepts. Practical application examples are used as learning tools. This book provides an adequate starting point for learning Lisp programming and you don't have to have the Developer's Toolkit in order to do the exercises in the book.

### **Will the Interleaf hotline help me debug my Lisp program?**

No. You can hardly expect the people on the hotline to know what you had in mind when you decided to write your Lisp program. However, the Developer's Toolkit does come with some software support. For example, if you have a specific question about a specific Lisp function or expression, then the hotline can probably help you. But don't be so bold as to fax your Lisp source code to Interleaf and expect them to call you back with enlightening news on how to fix your program. If they have time, they may call you back, but it won't be with the advice you were hoping to hear.

### **How can I change the way my desktop popup menus look?**

Actually it only takes one line of Lisp code to change your popup menus. To illustrate how to change your menus, let's assume your eyes are tired from staring at the computer screen all day. To give your eyes a rest, you decide to make your popup menus bigger. Here's how to do it:

1. Move the mouse cursor to the desktop (make sure nothing is selected) and execute *Custom→ReadEval*.

*The ReadEval window appears on the desktop.*

2. In the stickup window, type:

**(popup-set-vars :font "dutch52")**

3. Select *Enter* from the stickup window

*A second stickup window appears asking you to verify the line of code you entered.*

4. Select *Continue* from the stickup window.

*The stickup window disappears.*

5. Hold down the menu button.

*Look at your menus! They are gigantic! This is because you changed the popup menu font type to “dutch52”, which is a 52-point size font.*

Be forewarned. If you use big popup menus frequently, you will notice that you eventually lose the slide-across arrows that indicate a menu item has a submenu. This is because the larger text in the popup menu literally pushes the slide-across arrows out of view. At present time, there is no remedy for this situation. If, therefore, you like to use the big popup menus, get used to doing without the slide-across arrows.

### **How do I get my menus back to default size?**

There are two ways you can do this:

1. Execute *Custom→ReadEval* again and enter the Lisp code that resets the default font size
2. Exit the Interleaf desktop and then reinvoke Interleaf.

#### ***Option 1: Execute Custom→ReadEval***

Just as there was a line of code that made the menus bigger, there is a similar line of code that resets the menus back to their default size. To load this line of code you must once again execute *Custom→ReadEval* as follows:

1. Move the mouse cursor to the desktop (make sure nothing is selected) and execute *Custom→ReadEval*.

*The ReadEval window appears on the desktop.*

2. In the stickup window, type:

**(popup-set-vars :font "wst:Ops14")**

3. Select *Enter* from the stickup window.

*A second stickup window appears asking you to verify the line of code you entered.*

4. Select *Continue* from the stickup window.

*The stickup window disappears.*

5. Hold down the menu button.

*Your menus are now back to default size.*

## **Option 2: Exit Interleaf**

Whenever you execute a line of Lisp code interactively with *Custom→ReadEval*, that line of code is evaluated and loaded into memory. Hence something happens on your desktop (for example, the menus get bigger).

When you exit the Interleaf desktop and then reinvoke Interleaf, everything that was loaded into memory in the previous session is cleared, and your desktop defaults are loaded. Evaluating a line of Lisp code with *Custom→ReadEval* does not permanently add that line of Lisp code to your desktop defaults. Therefore, when you use the *Custom→ReadEval* function to make your popup menus bigger, the menus will not stay big after you exit the Interleaf desktop. The next time you log in to Interleaf, the menus go back to their default size.

## **How do I make my popup menus stay big between Interleaf sessions?**

Instead of using *Custom→ReadEval* to evaluate the single line of Lisp code needed to make the menus big, you must put that line of code in a Lisp program and store the program's Lisp icon in the *Profile* drawer of your *System5* cabinet. Everything in your *Profile* drawer is loaded into memory when you invoke Interleaf. If, therefore, your *Profile* drawer contains a Lisp program that makes your popup menus big, your popup menus will be big every time you log on to Interleaf.

For example, to create a Lisp program called *Big Popups* that gets loaded every time you log on to Interleaf, follow these steps:

1. Move the mouse cursor to the desktop (make sure nothing is selected), and execute *Create*→*Misc*→*Lisp*.

*A Lisp icon appears on the desktop as shown in Figure 7.*



*Figure 7*

2. Rename the icon from *Lisp* to *Big Popups*.
3. Select the *Big Popups* icon and execute *Open*.

*The Lisp Editing window opens, as shown in Figure 8.*

Editing: Lisp.lsp	
<pre>(lisp-set-implementation "Interleaf Lisp" "2.0") ;; ;; Module name: ;; Purpose: ;; Notes: ;; Interfaces:  ;; ;; Audit: ;; DD-MON-YY USERNAME    COMMENT</pre>	
<input type="button" value="↶"/>	<input type="button" value="↷"/> <input type="button" value="□"/>

*Figure 8*

4. In the open window, move the mouse cursor to the right of the text *Module name:*, press the space bar once, and type:

### Big Popups

5. In the last line of code, delete the existing text, *DD-MON-YY USERNAME COMMENT* (but leave the semi-colons; they indicate a comment), and in its place type today's date and your name.
6. After you enter your name, press the *Return* key (or *Enter* key on some keyboards) once to create a new blank line at the end of the program.
7. In the new empty line, type:

**(popup-set-vars :font "dutch52")**

*Your Editing window should now look like the one shown in Figure 9 (except you'll use your own name, of course).*

```
(lisp-set-implementation "Interleaf Lisp" "2.0")
;; Module name: Big Popups
;; Purpose:
;; Notes:
;; Interfaces:

;; Audit:
;; 24-11-93 Stacy Dymalski
(popup-set-vars :font "dutch52")
```

Figure 9

8. In the open *Editing* window, hold down the menu button and execute *Save→if Modified*.
9. Close the *Editing* window.
10. Select the *Big Popups* icon and execute *Custom→Load*.

*The Big Popups program is loaded into memory.*

11. Hold down the menu button.

*Notice your popup menus are now big.*

Now let's put your *Big Popups* program in the *Profile* drawer so that your menus are always big whenever you log in to the Interleaf desktop.

12. Select the *Big Popups* icon and execute *Cut*.
13. Open the *System5* cabinet.
14. Open the *Custom* cabinet.
15. Open the *Profile* drawer.
16. In the open *Profile* drawer window, execute *Paste*.

*Now every time you log in to Interleaf, your Big Popups Lisp program will be loaded and, as a result, your menus will be big.*

17. Close the *Profile* drawer.
18. Close the *Custom* cabinet.
19. Close the *System5* cabinet.

## Interleaf and Lisp

### What does “Lisp” stand for?

Lisp is a contraction of the two words, List Processing. Originally introduced in the late 1950's by mathematicians and various universities, Lisp was primarily used to compute algebraic and logical expressions.

### Did Interleaf invent Lisp?

No. Lisp evolved into a (sort of) standardized language called Common Lisp. Interleaf came along much later and created their own flavor of the language called Interleaf Lisp.

### Is Interleaf Lisp an interpreted or compiled language?

It can be both. Common Lisp started out as an interpreted language, meaning that each line of code is sequentially evaluated during program execution. In this case, the executable module is the program source listing itself.

Eventually a compiler was developed for Common Lisp. A compiler takes the source code listing and converts it into a machine language module. This module is unreadable by humans but readable by computers. As a result, the compiled version of the source code is the executable module.

When Interleaf entered the Lisp market, they provided their own Lisp interpreter and later their own Lisp compiler. The interpreter is available when you buy the base Interleaf product, but the compiler is available only when you buy the Developer's Toolkit.

**Will an Interleaf Lisp program run under the Common Lisp interpreter or compiler?**

Probably not. Lisp is one of those languages where everyone who supports it seems to add their own little twist. There is Common Lisp and then there is Interleaf Lisp. Common Lisp has a specific set of functions. Enter a vendor like Interleaf, and they write additional function libraries and add development utilities that make the Lisp programmer's life a little bit easier when designing applications for the Interleaf desktop. What happens then is if you write a program in Interleaf Lisp (as opposed to Common Lisp), your program is dependent upon the Interleaf Lisp function libraries and therefore will not run under Common Lisp.

**Will a Common Lisp program run under the Interleaf Lisp interpreter or compiler?**

Probably not. Interleaf Lisp is only a subset of Common Lisp and thus does not support all of the Common Lisp functions and expressions.

**Is the source code for Interleaf included when you buy the software?**

No. But then again you don't need the source code in order to customize your desktop. That's the point of creating layered applications with the Developer's Toolkit. The Interleaf desktop remains the same, but your layered applications can alter the desktop functionality and even the user interface. For example, you can write new functions that are accessible from popup menus, or even change the way the popup menus look.

# **16. Document Format Conversions**

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If we were to refer back to that perfect world, there would only be one file format, and that format would be readable by every piece of software that ever existed. Unfortunately, file formats are not interchangeable (there goes that perfect world again), and thus we need a way to convert non-Interleaf documents into Interleaf documents. This is done through the use of filters.

Interleaf provides about 30 filters, most of which automatically come with the Interleaf software. (Some of the filters are optional purchases. Check with your sales rep or VAR.) Basically, the Interleaf filters provide you with a way of communicating with other software packages. For example, if a document was originally created in WordPerfect, but you had to edit and publish it in Interleaf, you wouldn't want to have to retype the entire document in Interleaf; you'd use a filter to convert the WordPerfect document into an Interleaf document.

This chapter will show you how to access the *Filter Setup Tool* and how to use selected filters to convert non-Interleaf documents into Interleaf documents. It will also show you how to import TPS 3 and TPS 4 (older versions of Interleaf) documents into Interleaf 5, and how to read an Interleaf 5 document in TPS 3 or TPS 4 (yes, Interleaf 5 is upward *and* downward compatible).

## **Working with Older Versions of Interleaf**

If you're a seasoned Interleaf user, it's probably because you've started out by using older versions of Interleaf. And if you've used older versions of Interleaf, you probably have a lot of TPS 3 or TPS 4 documents lying around that you somehow need to get into Interleaf 5. If this is the case, fear not. As you will see in this section, Interleaf 5 is both upward and downward compatible.

## Can I convert my Interleaf 5 document into a TPS 4 or TPS 3 document?

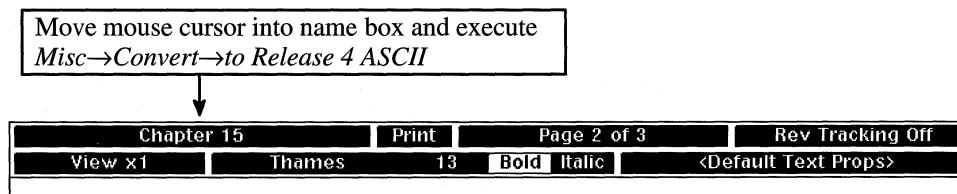
Yes. But be forewarned: When you convert an Interleaf 5 document into an older Interleaf document, all of the Interleaf 5 specific features will be stripped out of the document.

Also, when you make the conversion, the software converts Interleaf 5 documents into the Interleaf ASCII versions of TPS 4 or TPS 3 documents. However, this does not matter, because Interleaf ASCII is perfectly acceptable by TPS 3 and TPS 4.

### ***Interleaf 5 to TPS 4***

To convert an Interleaf 5 document into a TPS 4 ASCII document, follow these steps:

1. Open the document.
2. Move the mouse cursor into the document name box in the document header, as shown in Figure 1, hold down the menu button, and execute *Misc→Convert→to Release 4 ASCII*.



*Figure 1*

*A stickup window appears, asking you to enter the new name for the resulting TPS 4 ASCII document.*

3. In the stickup window, type the name you wish to give your new TPS 4 ASCII document, and select the *Enter* button.

*An ASCII Conversion summary window appears, displaying a list of the Interleaf 5 features that are stripped out of the document, along with the number of times each feature is removed, as shown in Figure 2.*

4. Move the mouse cursor into the *ASCII conversion summary* window and execute *Close*.

<b>ASCII conversion summary:</b>	
<pre>In file Stacy_Writing.cab/Interleaf_book.boo/test.doc: The following features are eliminated in the conversion. The number of cases is in (). (1) Named Page Stream (1) Name portion of named graphic object *** conversion finished ***</pre>	
▲	▼
<input type="button" value="◀"/>	<input type="button" value="▶"/>

*Figure 2*

*The TPS 4 ASCII document icon is now on your desktop next to the original Interleaf 5 document.*

### **Interleaf 5 to TPS 3**

The steps to convert an Interleaf 5 document to a TPS 3 document are identical, except you execute *Misc→Convert→to Release 3 ASCII* (instead of *Misc→Convert→to Release 4 ASCII*).

*When you convert to TPS 3, an ASCII Conversion summary window appears, displaying a list of the Interleaf 5 and TPS 4 features that are stripped out of the document, along with the number of times each feature is removed, as shown in Figure 3.*

*Notice that the list of eliminated features is larger when converting to a TPS 3 document. This is because the functionality difference between TPS 3 and Interleaf 5 is so much greater than between TPS 4 and Interleaf 5. A lot of new features were added to Interleaf between TPS 3 and Interleaf 5.*

### **Can I convert my TPS 3 or TPS 4 document into an Interleaf 5 document?**

Yes. All you have to do is copy the TPS document to the Interleaf 5 desktop, select the document, and open it. The document automatically converts to an Interleaf 5 document when it is opened on the Interleaf 5 desktop. If you save the document in Interleaf 5, then it will no longer be readable by TPS 3 or TPS

```

ASCII conversion summary:

In file Stacy_Writing.cab/Interleaf_book.boo/test2.doc:
The following features are eliminated in
the conversion. The number of cases is in ().
(1) Inner/Outer Page Margin
(19) Inline Component
(15) Composition type
(11) Master Component's Contents
(1) Language
(5) Font Inheritance
(11) Component name length
(36) Color
(1) Named Page Stream
(1) Name portion of named graphic object
*** conversion finished ***

```

A horizontal scroll bar is visible at the bottom of the window.

*Figure 3*

4 without using the *Misc→Convert* command to change the document format back to TPS 3 or TPS 4 ASCII.

#### **Can I convert an Interleaf 5 document into an Interleaf document format older than TPS 3?**

No. Interleaf does not support Interleaf software versions older than TPS 3.

## **Using Filters**

### **What is a filter?**

A filter is an application program that allows you to convert a document from one proprietary format to another. For example, if you had a WordPerfect document that you wanted to convert into an Interleaf document, you would use a filter to make the conversion.

### **What filters are available with the Interleaf software?**

The following is a complete list of Interleaf filters:

- Calcomp 925 Plotter
- Calcomp 960 Plotter

CGM into Interleaf  
CGM from Interleaf  
Digital DX  
FrameMaker (MIF only)  
HPGL Plotter  
IBM DCA (RTF only)  
IGES  
Interleaf to Plain ASCII  
MacDraw (Pict)  
MacPaint  
MacWrite  
MS Word/RTF (release 4)  
MS Word/RTF into Interleaf  
MS Word/RTF from Interleaf  
Multimate  
NROFF  
PostScript into Interleaf  
Sun Raster Format  
Textfilt (a general conversion format)  
TIFF  
Wang PC  
Wang TTY  
Wang WPS  
WordPerfect 4.2 into Interleaf  
WordPerfect 5.1 into Interleaf  
WordPerfect 5.1 from Interleaf  
WordStart  
X Window Raster Format

**Are any of the filters bi-directional?**

A bi-directional filter is one that not only converts a document from some other format into an Interleaf document, but can also convert an Interleaf document into some other document format.

Not all of the Interleaf documents are bi-directional. In fact, only a few of the filters can convert documents both ways. The bi-directional filters that are accessible through the *Filter Setup Tool* are as follows:

- CGM (Computer Graphics Metafile)
- Microsoft Word (via RTF format)

## WordPerfect

For example, on the *Filter Setup Tool* menu, there is a filter to convert a CGM file into an Interleaf document, and a separate filter to convert an Interleaf document into a CGM file. The same holds true for Microsoft Word and WordPerfect.

### How do I access an Interleaf filter from my desktop?

Because there are so many filters, you must tell Interleaf which filters you want available to you from your desktop popup menus (it would be a waste of resources for Interleaf to automatically load all 30-something filters every time you logged in to your desktop).

To add a filter program to your desktop, follow these easy steps:

1. Move the mouse cursor to the desktop (make sure nothing is selected) and execute *Custom→Misc→Filter Setup*.

*A stickup window appears asking you if you wish to Add a Filter, Quit, or Remove a Filter, as shown in Figure 4.*

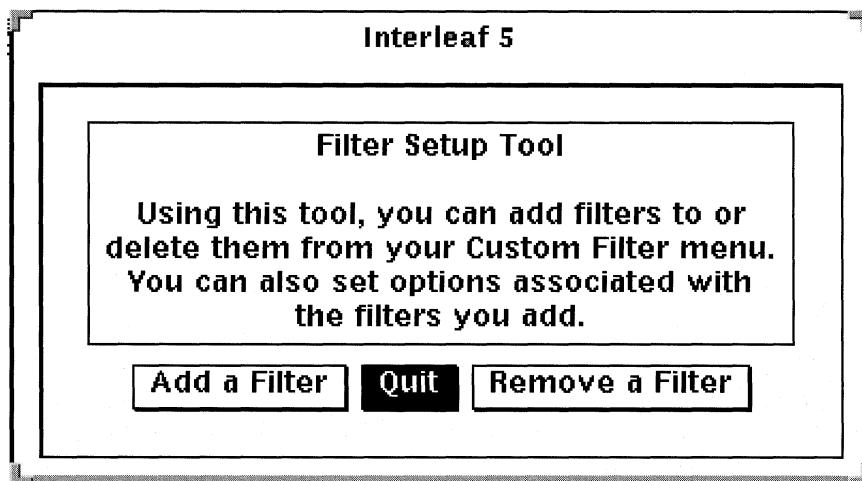


Figure 4

2. Select *Add a Filter* from the stickup window, as shown in Figure 5.

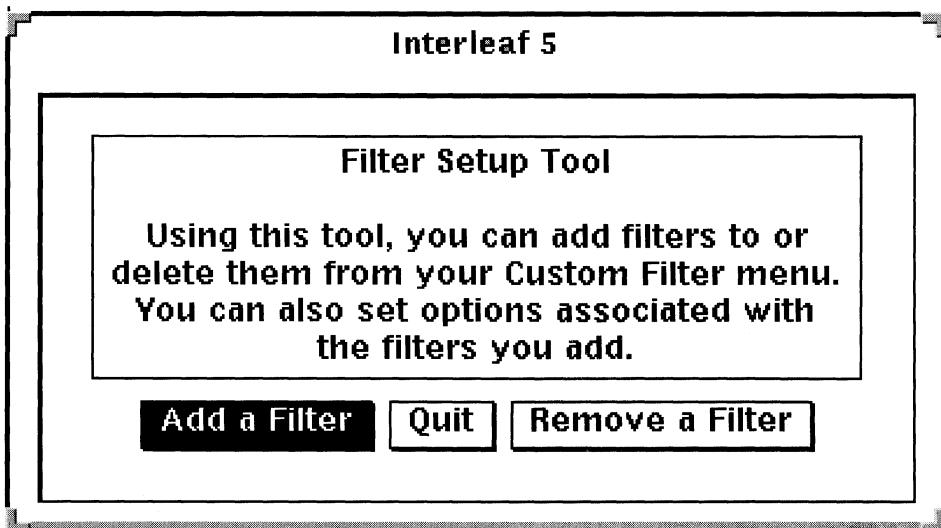


Figure 5

*The list of available filters at your site appears on the desktop. A sample of what the list looks like on my desktop is shown in Figure 6. (Filter lists may vary from system to system and from site to site, depending on which software options your site has purchased.)*

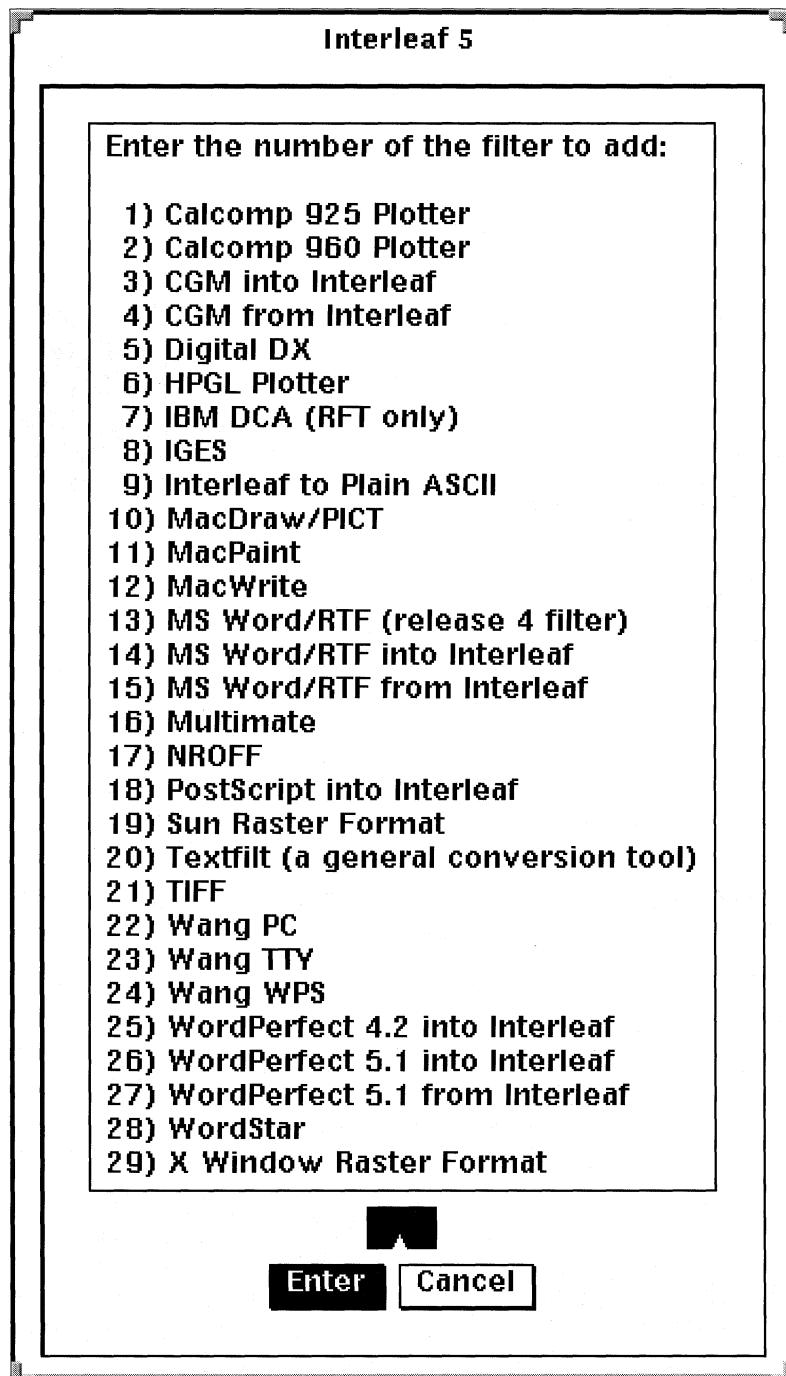


Figure 6

3. Enter the number associated with the filter you wish to add and select the *Enter* button from the stickup window.

*A new stickup window appears, asking you to enter any desired options for the selected filter.*

*Each filter comes with a list of options that you may or may not wish to choose (filter options vary between filters). The filter options are not required; however, in some cases, they can make the conversion of your document a smoother process. For example, one of the options in the WordPerfect filter is to make all sets of double quotes balanced, so you don't end up with a quoted word that looks like this: "unbalanced quotes" (where the first set of quotes are closed instead of open). WordPerfect does not distinguish between open and closed quotation marks, but Interleaf does. If, during the WordPerfect-to-Interleaf conversion process, you want Interleaf to figure out which quotes should be open and which should be closed, you need to select the Balanced Quotes option on the WordPerfect filter.*

*If you select Cancel without selecting any options, all of the defaults for the options are used. To find out the default for each option, refer to the Interleaf File Conversion Manual.*

4. Select the number for any options you wish to add and then select the *Enter* button, or select the *Cancel* button if you do not wish to add any filter options.

*A new stickup window appears, asking you to enter the name of the filter you are adding to the desktop. Whatever name you enter on this stickup will appear on your Custom→Filter menu and will be used to invoke the filter from your desktop.*

5. Enter the name you wish to give the filter and select *Enter*. (For example, if you are adding a TIFF filter, then you might type in *TIFF to Interleaf*.)

*A new stickup window appears, asking you to confirm the filter name and any options you selected, if any.*

6. If the filter name and options are correct, select *Confirm* from the stickup window.

*The stickup window disappears and the original stickup (asking you if you wish to Add a Filter, Quit, or Remove a Filter) reappears.*

7. If you wish to add another filter, select *Add a Filter*. If you wish to exit the *Filter Setup Tool*, select *Quit*.

*Any filters that you have added with the Filter Setup Tool will appear on the Custom→Misc→Filter menu, if you have selected a document to convert.*

To illustrate this process, let's look at an example where a WordPerfect 5.1 filter is added to the desktop. This filter allows you to convert a WordPerfect 5.1 document into an Interleaf 5 document.

The first thing you must do is run the *Filter Setup Tool* to add the WordPerfect filter to your desktop menus.

1. Execute *Custom→Misc→Filter Setup*.

*A stickup window appears asking you if you wish to Add a Filter, Quit, or Remove a Filter.*

2. Select *Add a Filter* from the stickup window.

*The list of available filters at your site appears on the desktop. An example of what this list might look like is shown in Figure 6.*

3. In the input box at the bottom of the open stickup, enter the number associated with the filter option, *WordPerfect 5.1 into Interleaf*.

*For example, if you were looking at the filter list shown in Figure 6, you would enter 26.*

4. Select *Enter*.

*A stickup window appears, as shown in Figure 7. This stickup is the Filter Options Menu that was explained earlier. The Filter Options Menu allows you to customize the way the filter converts from WordPerfect to Interleaf formats.*

5. In the input box at the bottom of the option menu, enter the number 1 (which is associated with the option, *Output File Name*).

*Selecting The Output File Name option allows you to specify the name of the new file after it has been converted. By default, the output Interleaf document that is created after conversion takes place has the same*

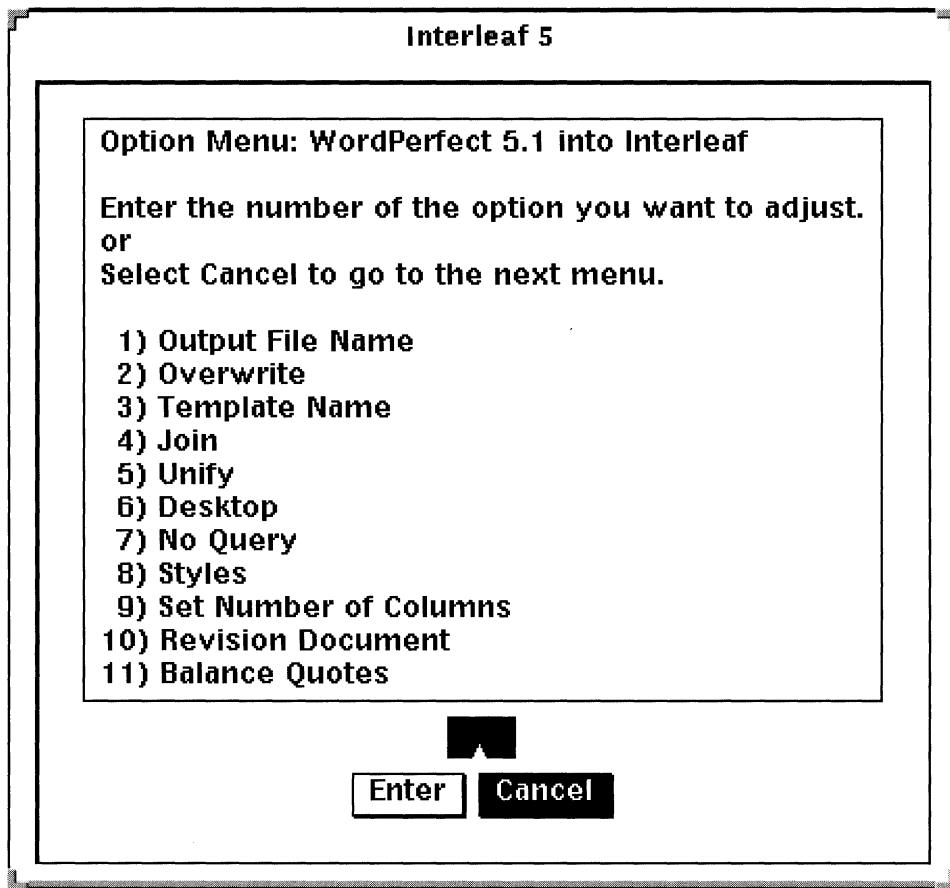


Figure 7

*name as the original WordPerfect document. If you wish the new Interleaf document to have a different name, then select the Output File Name option.*

6. Select *Enter*.

*A stickup appears asking you to enter the name you wish to assign to the output Interleaf document.*

7. In the input field of the stickup, type:

**new\_wpdoc**

Now the output Interleaf document will automatically be named new\_wpdoc. If you do not select this filter option (Output File Name), the filter will give the resulting (filtered) file the same name as the original (unfiltered) file.

8. Select *Confirm*.

*The Filter Options Menu appears again.*

9. In the input box at the bottom of the option menu, enter the number 2 (which is associated with the *Overwrite* option).

*When you select the Overwrite option, the filter will overwrite an existing output file of the same name, if one exists. This option is useful if you wish to convert the same WordPerfect document more than once.*

10. Select *Confirm*.

11. In the input box at the bottom of the option menu, enter the number 11 (which is associated with the *Balance Quotes* option).

12. Select *Enter*.

*As briefly explained earlier, if you select the Balance Quotes option, the quotes at the beginning of a word will convert to open quotes and quotes at the end of a word will convert to closed quotes. By default, the WordPerfect filter converts all quotes to closed quotes, because WordPerfect does not distinguish between open and closed quotes.*

13. Select *Confirm*.

*The filter options menu reappears.*

14. Select *Cancel*.

*A stickup appears asking you how you want the filter name to appear in your custom menu.*

15. In the input box in the window, type:

**wp5\_ileaf**

16. Select *Enter*.

*A confirmation stickup appears.*

17. Select *Confirm* to add the new entry to your custom filter menu.

*The stickup window that asks you if you wish to Add a Filter, Quit, or Remove a Filter once again appears.*

*At this point you may add another filter to your custom filter menu, or you may quit.*

18. Select *Quit*.

*The Filter Setup Tool window disappears.*

*The WordPerfect filter is now available to you from your desktop pull-down menus.*

*You have now added a filter called "wp5\_ileaf" to your Custom→Misc→Filter→... menu. Now whenever you wish to convert a WordPerfect 5.1 document to an Interleaf document, you select the WordPerfect document from the desktop, and then execute this filter.*

**Do I have to invoke the *Filter Setup Tool* every time I want to use a filter?**

No. Once you install a filter with the *Filter Setup Tool*, that filter will always be available to you from the *Custom→Misc→Filter* desktop menu.

**Why don't I see the FrameMaker filter in the *Filter Setup Tool* list?**

The FrameMaker filter was released recently by Interleaf. If Interleaf was installed on your system a while ago, the FrameMaker filter was probably not available at the time your software was shipped.

To receive the FrameMaker filter, talk to your local Interleaf sales rep or VAR, or call *Interleaf Direct* (Interleaf telemarketing services) at 1-800-955-5323.

The FrameMaker filter will be included with the Interleaf 6 software.

**Is there a limit to the number of filters I can add to my desktop menus?**

No. You can add them all to your desktop if you like.

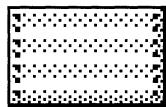
**How do I use a filter to convert a document?**

Simply select the document icon and execute *Custom→Misc→Filter→(pick a filter name)*. The filter names on the *Custom→Misc→Filter* menu are the same names that you added via the *Filter Setup Tool*.

For example, if you want to use the WordPerfect filter to convert a WordPerfect 5.1 document into an Interleaf 5 document, follow these steps:

1. Select the WordPerfect document from the desktop (in this case, let's assume that the WordPerfect file name is *WP51.doc*).

*When WordPerfect documents appear on the Interleaf desktop, the icon is represented by a host file icon, as shown in Figure 8.*



**WP51.doc**

*Figure 8*

2. While *WP51.doc* is selected, execute *Custom→Misc→Filter→wp5\_ileaf*.

*A Filter Messages window appears, as shown in Figure 9. The name of the WordPerfect to Interleaf filter program is called “wp5filt.” The Filter Messages window, as shown in Figure 9, displays any error or warning messages that may have occurred during the execution of the “wp5filt” filter program.*

3. In the open *Filter Messages* window, hold down the menu button and execute *Close*.

*Notice that a new document icon called “new\_wpdoc” has been created on the desktop immediately next to the original *WP51.doc*, as shown in Figure 10. (The name “new\_wpdoc” is the result of the name choice you made when you installed the filter with the Filter Set-Up Tool.) The *new\_wpdoc* document is in Interleaf format, and contains the conversion of the WordPerfect document.*

### **How do I convert an Interleaf document into a plain ASCII file?**

A lot of people mistakenly think that if you execute *Save→ASCII* from the pull-down menu in the document name box, the resulting document is a plain ASCII document that can be read into any other package that accepts ASCII. I'm here to tell you this is not true! *Save→ASCII* saves a document in Interleaf ASCII format which is not readable by other software packages. If you want

```
Filter Messages:  
-----  
Running:  
  "wp5filt  WP51_doc#1 wp_conversion -overwrite -quotes"  
  
wp5filt: Using template file "/interleaf/ileaf5/data/wp5_tpl.doc".  
  
Completed:  
  "wp5filt"  
-----  
All icons processed.  
Processing complete.  
-----  
▲   □   ▲   □
```

Figure 9

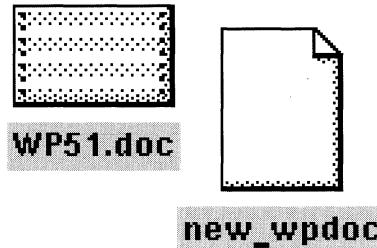


Figure 10

a plain ASCII file, then you must go one step further and run the *Interleaf to Plain ASCII* filter on the document after it has been saved in Interleaf ASCII format.

To successfully convert an Interleaf document into a plain ASCII file, follow these simple steps.

1. Run the *Filter Setup Tool* and add the *Interleaf to Plain ASCII* filter to your desktop menus.

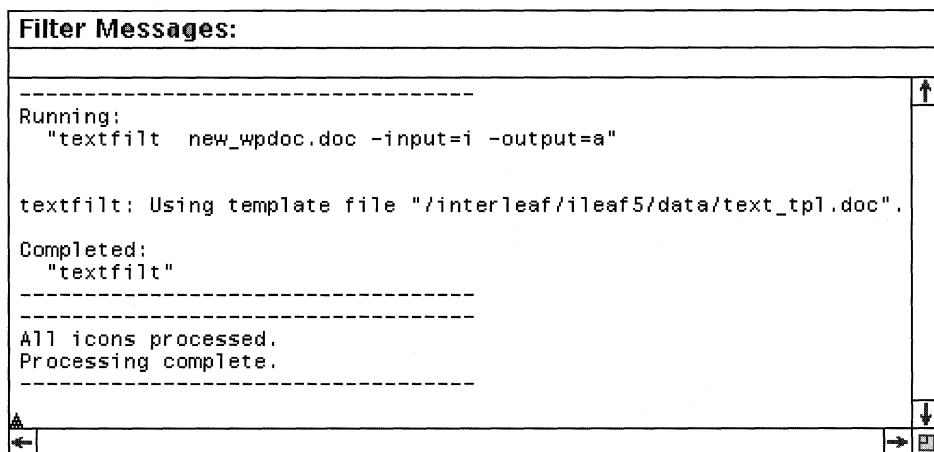
*If you don't know how to add a filter to your desktop, review the previous questions in this chapter.*

2. Execute *Save→ASCII* from the pulldown menu in the document name box of the document header.

*The document is saved in Interleaf ASCII format.*

3. Close the document.
4. Select the document and execute *Custom→Misc→Filter→(pick the Interleaf to Plain ASCII filter)*.

*A Filter Messages window appears, as shown in Figure 11, displaying any error or warning messages that may have occurred during the execution of the "Textfilt" filter program.*



*Figure 11*

5. In the open *Filter Messages* window, hold down the menu button and execute *Close*.

*Notice that a new host icon (with the same name as the original document) has been created on the desktop immediately next to the original document. The new host file contains the Interleaf document text in plain ASCII format. This host file can be used as input into any other software package that accepts plain ASCII as input.*

## How do I convert a screen capture from the Sun desktop into an Interleaf image file?

When you capture a screen image on the Sun desktop using the *Snapshot* utility, the resulting screen capture is saved in Sun raster format. Fortunately, Interleaf provides a filter that converts a Sun raster format image into an Interleaf image file. The name of this filter (as listed in the *Filter Setup Tool*) is called *Sun Raster Format*, and it can be added to your Interleaf desktop as follows:

1. Run the *Filter Setup Tool* and add the *Sun Raster Format* filter to your desktop menus.

*If you don't know how to add a filter to your desktop, review the previous questions in this chapter.*

2. Copy the sun raster image file to your Interleaf desktop.

*If the image file does not appear after you have copied it to your desktop, execute Custom→Rescan.*

3. Select the Sun raster image icon from the desktop and execute *Custom→Misc→Filter→(pick the Sun Raster Format filter)*.

*A Filter Messages window appears, as shown in Figure 12, displaying any error or warning messages that may have occurred during the execution of the "sunrasfilt" filter program.*

4. In the open *Filter Messages* window, hold down the menu button and execute *Close*.

*Notice that a new Mona Lisa image icon (with the same name as the original host file) has been created on the desktop immediately next to the original host file icon. The new image contains the Sun screen capture in Interleaf image format.*

## How do I remove a filter from my desktop menus?

When you add a filter to your custom desktop menus, the filter remains a menu option until you specifically remove it. If you know that you will never again use a filter that you had previously added to your menus, then you can remove the filter with the *Filter Set-Up Tool*, as follows:

1. Make sure that none of the icons on the desktop are selected.

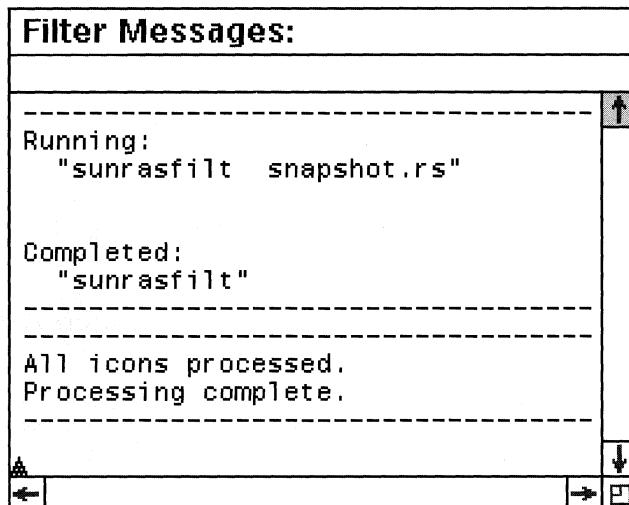


Figure 12

2. Execute *Custom*→*Misc*→*Filter Setup*.
3. Select *Remove a Filter* from the stickup window, as shown in Figure 13.

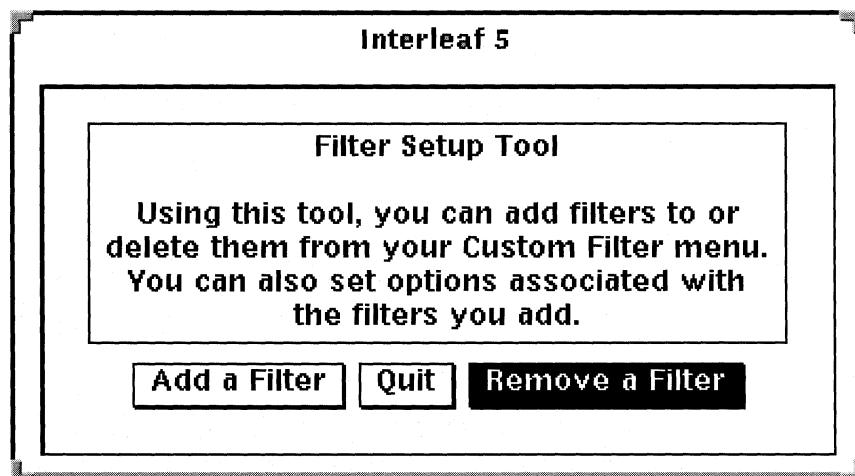


Figure 13

*A list of all of the filters you have installed on your desktop appears. Let's assume that you were not going to be using the WordPerfect filter anymore. In this case, it would be more efficient to remove the WordPerfect filter from your desktop menus. If you need the WordPerfect filter in the future, you could always add it again with the Filter Setup Tool.*

4. In the input box at the bottom of the window, enter the number associated with the option, *wps–ileaf* filter. (This is assuming that the WordPerfect filter in this case is called *wps–ileaf*. On your desktop, it may be called something else.)

*A stickup appears, warning you that you are about to delete the wps–ileaf filter from your custom filter set.*

5. Select *Confirm*.

*The wps–ileaf filter has been removed from your custom desktop menu.*

6. Select *Quit*.
7. Select any document icon from the desktop.
8. Hold down the menu button and highlight *Custom→Misc→Filter→...* (do not release the menu button until you are instructed to do so).

*Notice that the wps–ileaf filter is no longer an option in your custom filter menu. This is because you removed the wps–ileaf filter with the Filter Set-Up Tool.*

9. Move the mouse cursor off of the menu so that no menu item is highlighted and then release the menu button.

## What is Cloverleaf?

Cloverleaf is an Interleaf tool that allows you to write your own filters or modify an existing filter. To gain access to Cloverleaf, you must install it on your desktop via the *Tool Manager*.

A Cloverleaf filter converts an input file by looking for patterns that you specify and then, upon finding those patterns, takes specific action. You can write a simple Cloverleaf filter that converts one Interleaf document into another

simply by internally changing components names, or you can write a more complex filter that converts one proprietary document format into an Interleaf document.

The mechanics of writing filters is beyond the scope of this book. If, however, you are interested in finding out more information about Cloverleaf, refer to Interleaf's *Cloverleaf* manual.

# 17. Macros

---

I hate to type. It's not because I have any condition which makes it hard for me to type, it's more out of laziness than anything (hey, at least I'm honest). Being a writer, typing is a fact of life. Fortunately, I can decrease the number of keystrokes I have to press by relying on macros.

Macros were created for lazy people like me. To refresh your memory, macros provide you with a way of assigning multiple keystrokes or mouse movements to a single keystroke or key sequence. The nice thing about the Interleaf macros feature is that you can create as many macros as you want, including those for use in documents, on the desktop, and in frames. Basically, anything you do "by hand" you can squeeze into a macro. And with a little bit of Interleaf magic, you can name your macros and have the software automatically load them every time you invoke your Interleaf desktop.

In this chapter, you'll learn a couple of different ways to create Interleaf macros, and you'll learn how to name and save your macros so they can be used whenever you log in to Interleaf. I'll also give you a couple of suggestions as to what types of things would be good to put into a macro.

## Setting Up Macros

### What is a macro?

In general, a macro is a collection of mouse movements and/or keystrokes that are all neatly packaged together into one little program. Usually a macro is invoked via a key sequence like *Ctrl-x* or *Esc-q*. Macros play back events in the exact order in which they were recorded. For that reason, macros are especially handy if you must perform repetitive sequences of events on the desktop. For example, if your job requires that you repeatedly create a cabinet, rename it *Fred*, and open it up, you can write a macro that does all that and map it to one key sequence (*Ctrl-o*, for example). Or if you constantly have to create a special character from the *Create→Char* menu in an open document, you can map the creation of that character to a key sequence.

Interleaf 5 allows you to write as many macros for the Interleaf desktop as you like. The only limitation is your system's disk space and RAM.

The most efficient way to write an Interleaf 5 macro is with the *Macro Tool*.

### How do I gain access to the *Macro Tool*?

The *Macro Tool* is one of the many Interleaf tools that you must install on your desktop using the *Tool Manager*. If you've never used the *Macro Tool*, then you must install it on your desktop, as follows:

1. Move the mouse cursor to the desktop (make sure nothing is selected), hold down the menu button, and execute *Custom→ToolMgr*.

*The Tool Manager window appears.*

2. In the open *Tool Manager* window select the *Interleaf* button.

*The Interleaf Tools window appears in the Tool Manager window, as shown in Figure 1.*

*Your Interleaf Tools window may look different, depending upon the Interleaf options your site has purchased. In addition, you may have more tools turned on (which translates to more ones, instead of zeros, in the boxes to the right of the tools).*

3. Find the *Macro Tool* option.

*Notice that each option has a box that contains a zero or a one associated with it.*

4. Change the box associated with the *Macro Tool* from zero to one by clicking the box with the select button.

*The zero turns into a one. This means that the Macro Tool will be activated on your desktop when you execute Apply.*

5. In the open *Tool Manager* window, hold down the menu button and execute *Apply*.

*A Tool Managers Log window appears on the desktop, as shown in Figure 2.*

*Make sure that you see the message 'Setup of "Macro Tool" Succeeded.' If you do not get this message, show the message to your systems administrator.*

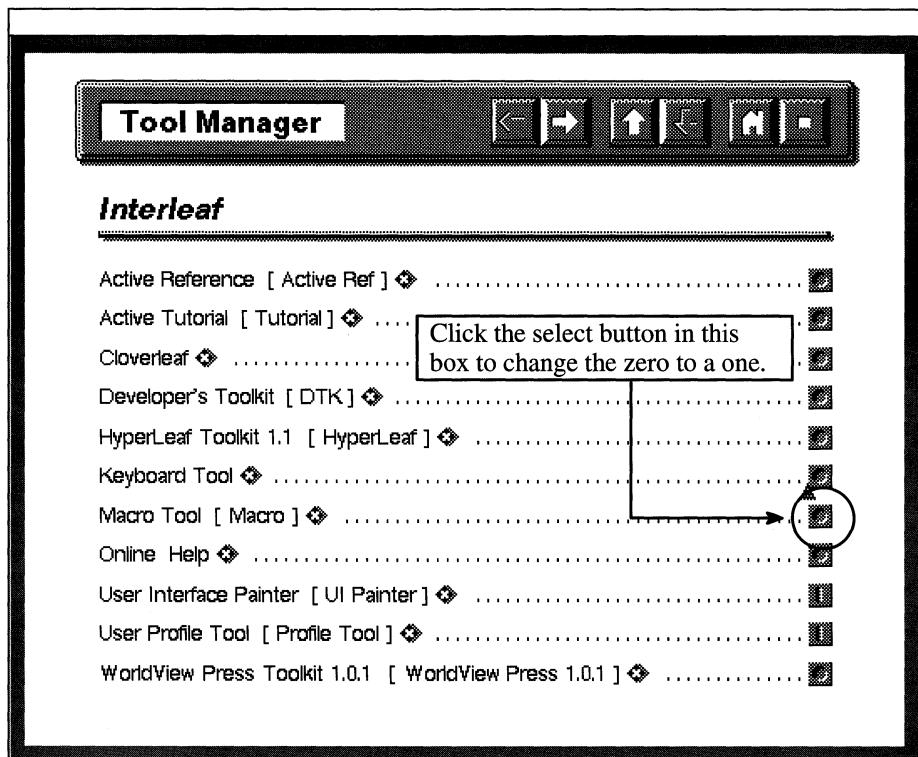


Figure 1

The screenshot shows the 'Tool Manager's Log' window with the title bar 'Tool Manager's Log'. The log area contains the following text:

```

Setup of "Macro Tool" succeeded.
Created:
  Macro Lisp file (link) in "profile" in "Custom" in "System5"
  Macro drawer (link) in "Tools" in "Create" in "System5"
  Macro drawer (link) in "Tools" in "No Selection" in "Custom" in "System5"
  Macro drawer (link) in "Tools" in "Selection" in "Custom" in "System5"
Loaded the profile script.

```

At the bottom of the window are scroll bars and navigation buttons.

Figure 2

*If you see the message 'Setup of "Macro Tool" Succeeded,' you have successfully activated the Macro Tool on your desktop.*

6. Close the Tool Manager's Log window.

*You do not have to invoke the Tool Manager every time you want to use the Macro Tool. From now on, the Macro Tool will always be available to you when log in to Interleaf.*

7. Close the *Tool Manager* window.

*The Macro Tool is now available to you by executing Custom→Tools→Macro→Control from the desktop pulldown menus.*

### **How do I use the *Macro Tool* to create a macro?**

Once the *Macro Tool* has been installed, you invoke it via the desktop pulldown menus to create a new macro. The easiest way to show you how to create a macro with the *Macro Tool* is to illustrate use of the *Macro Tool* through an example.

Let's assume that you want to create a simple macro that creates a trademark symbol that looks like this: ™. You could use the mouse to execute *Create→Char→Symbols→™* every time you need to make the symbol, but that's a lot of menus to go through. Plus, you want to be able to create the trademark symbol from the keyboard, so that while you're typing, your hands do not have to leave the keyboard whenever you need to make this special symbol.

To make a macro that creates a trademark symbol, follow these steps:

1. Move the mouse cursor to the desktop (make sure nothing is selected), hold down the menu button, and execute *Custom→Tools→Macro→Control* (or press the *Ctrl-x m* key sequence).

*The Macro Control window opens on the upper righthand corner of the desktop, as shown in Figure 3. Keep the Macro Control window open on your desktop throughout the rest of the following steps.*

2. Open a document.
3. Move the mouse cursor to the text area of the open document and press the following key sequence:

**Ctrl-x (**

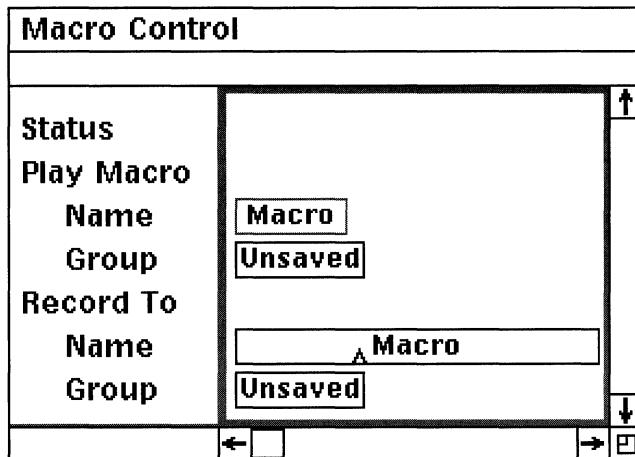


Figure 3

*Notice the status box in the open Macro Control window. The status box states; “Recording”, as shown in Figure 4. All keystrokes and mouse movements from this point on are being recorded — even your mistakes, so be careful!*

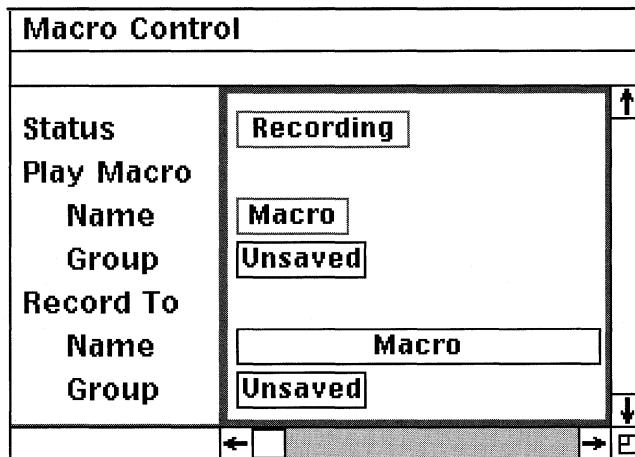


Figure 4

4. In the text area of the document, execute *Create→Char→Symbols→™*.

*Do not move the text caret or mouse cursor after you have created the symbol. If you do, those movements will be recorded as part of your macro.*

5. Press the following key sequence:

**Ctrl-x )**

*The Macro Tool stops recording. Notice that the “Recording” message in the status box goes away, as shown in Figure 5. At this point, the software ceases to record keystrokes and mouse movements.*

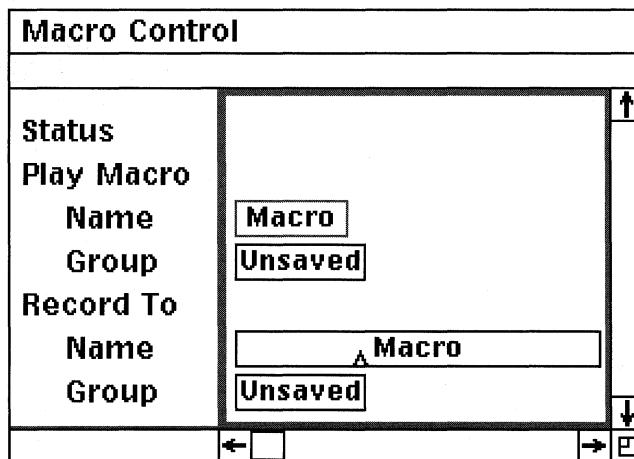


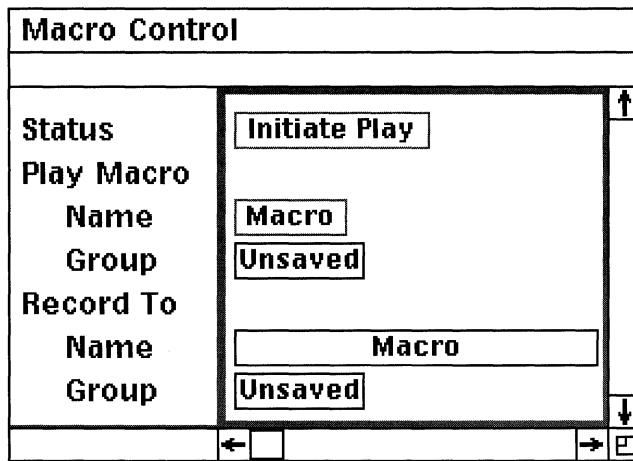
Figure 5

6. Move the mouse cursor into the open *Macro Control* window, hold down the menu button, and execute *Play→Start*.

*The Macro Tool gets ready to play back your macro. Notice the status box in the open Macro Control window states; “Initiate Play”, as shown in Figure 6.*

7. Move the mouse into the open document and create a new component.
8. In the text area of the new component, hold down the menu button and execute *Play*.

*Executing Play plays back the macro you just created. In this case, the macro you just created is one that creates a trademark symbol.*



*Figure 6*

### How do I name a macro?

To illustrate this, let's assume that you wish to name the trademark macro that you created in the previous question.

1. Using the *Macro Tool*, create the trademark macro, as outlined in the previous question.
2. In the open *Macro Control* window, hold down the menu button, and execute *Props*.

*The macro property sheet opens, as shown in Figure 7.*

3. Move the mouse cursor into the *Name* field on the macro property sheet and click the select button.
4. In the *Name* field, type:

**TM**

5. While in the open macro property sheet, hold down the menu button and execute *Apply*.

*Notice that the name field in the Macro Control window changes to "TM."*

*You've now named your new macro "TM" (short for "trademark").*

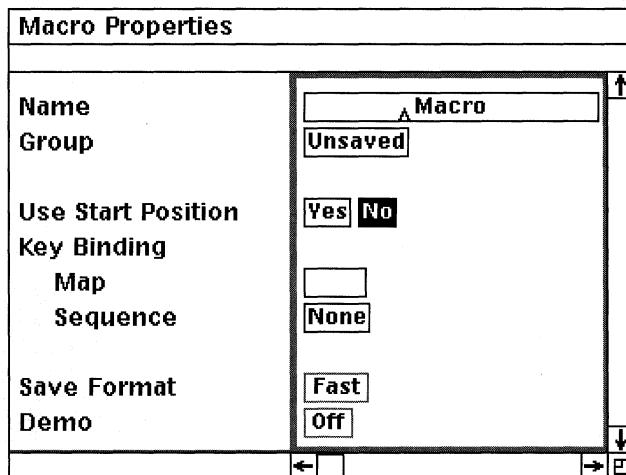


Figure 7

### How do I bind a macro to a key sequence?

Binding a macro to a key sequence allows you to invoke that macro simply by pressing its associated key sequence. There are different Keyboard Displays for different areas in Interleaf (for example, there are separate Keyboard Displays for open documents, the desktop, and inside an open frame). When you bind a macro to a key sequence, the binding appears only on one particular Keyboard Display. For example, document macros are bound to the document Keyboard Display, desktop macros are bound to the desktop Keyboard Display, graphics macros are bound to the graphic Keyboard Display, and so on. This means that if a particular key sequence is bound to a graphic function in an open frame, it may be bound to some other function on the desktop.

Before you bind your macro to a key sequence, it is a good idea to use the Keyboard Display to find a key sequence that currently is not being used.

1. While the mouse cursor is in the open document, Press the *Ctrl-x k* key sequence.

*The Keyboard Display for documents appears, as shown in Figure 8.*

2. In the open Keyboard Display window, click the select mouse button on the *Esc* button in the upper lefthand corner of the Keyboard Display.

*The key sequence functions that are prefixed by the Escape key are displayed in the Keyboard Display, as shown in Figure 9.*

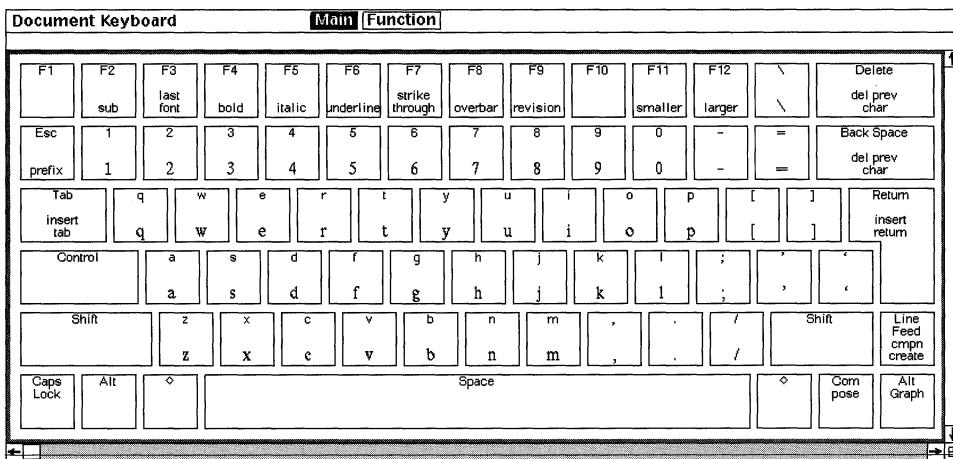


Figure 8

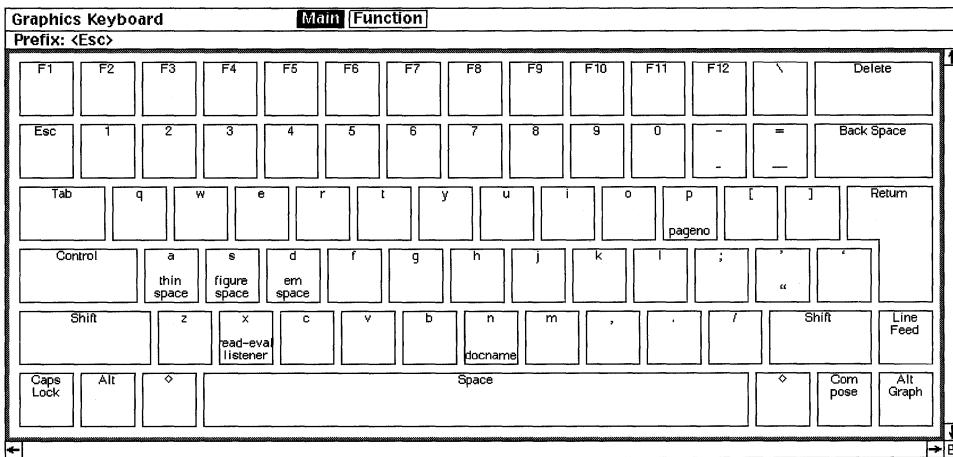


Figure 9

*Notice that the Esc-t key sequence currently has no function bound to it. This means you can bind your trademark macro to Esc-t without the worry of accidentally writing over an existing key sequence function.*

*If you bind a macro to a key sequence that already has a function, you will override that function with your new macro.*

3. Close the Keyboard Display.

To illustrate how to bind a macro to a key sequence, let's bind the trademark macro that you created in the previous two questions to the *Esc-t* key sequence.

4. Using the *Macro Tool*, create the trademark macro and name it TM, as outlined in the previous two questions.
5. In the open *Macro Property sheet*, move the mouse cursor to the *Sequence* field, hold down the menu button, and select *New*.

*A stickup window appears, stating the following:*

**Enter key sequence**

6. In the stickup window, press the following key sequence:

**Esc-t**

*The text Escape-t is now displayed in the Sequence field. This tells the software that you wish to bind your trademark macro to the key sequence Escape-t.*

7. In the open macro property sheet, hold down the menu button and execute *Apply*.

*Now, whenever you press the Esc-t key sequence, a trademark symbol will be typed in your document at the position of the text caret. This saves you from having to execute the Create→Char→Symbols→™ menu item every time you wish to create a trademark symbol.*

8. Move the mouse cursor to the text area of the open document, and press the following key sequence:

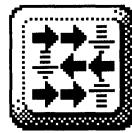
**Escape-t**

*Notice that a trademark symbol is created at the position of the text caret.*

### What does a macro icon look like?

A macro is nothing more than a Lisp program, therefore, the icon for a macro looks like the icon shown in Figure 10 (where the name of the icon is the name you gave the macro).

When you create a macro, the software captures the mouse movements and keystrokes and records them as Lisp source code.



TM

Figure 10

If you create a macro without using the *Macro Tool*, the software creates a new drawer called *Macro* (in the *System5/Custom* cabinet) and stores the new macro in there. The macros stored in the *Macro* drawer are named *Macro-1* through *Macro-6*, depending on how many macros you create.

If you create a macro using the *Macro Tool* the macro icon ends up in the macro container you specify from the *Macro Control* window.

### **Can I create a macro without using the *Macro Tool*?**

Yes. When creating macros without the *Macro Tool*, you rely on the following key sequences to record and play back a macro (keep in mind, however, that you can use *Ctrl-x*), *Ctrl-x (*, *Ctrl-x e*, and *Ctrl-z* with the *Macro Tool* as well).

<b>When you press...</b>	<b>...this happens</b>
<i>Esc Ctrl-x m</i>	<i>Displays a stickup that begins, ends, or plays back a macro</i>
<i>Ctrl-x (</i>	<i>Starts recording a macro</i>
<i>Ctrl-x )</i>	<i>Ends recording a macro</i>
<i>Ctrl-x e</i>	<i>Plays last recorded (or played) macro</i>
<i>Ctrl-z</i>	<i>Interrupts macro playback</i>

These macro key sequences are available for use from within a document or directly from the desktop. You do not need access to the *Macro Tool* in order to use the above macro key sequences.

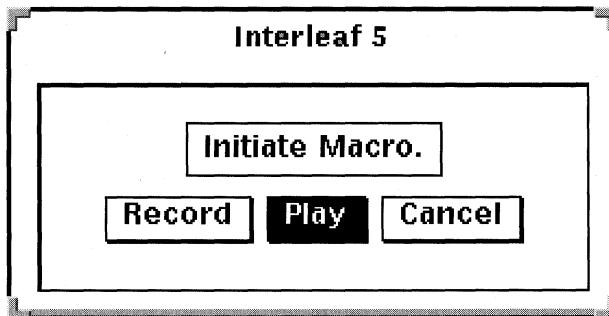
To illustrate the use of the macro key sequences, let's look at an example. Let's assume that you have to create the same three components (*head*, *para1*, and

*para2*) in the same order, one right after another, in a variety of Interleaf documents. To record the creation of these three components, follow these simple steps:

1. Open a document, and move the mouse into the component bar.
2. While the mouse cursor is still in the component bar, press the following macro key sequence:

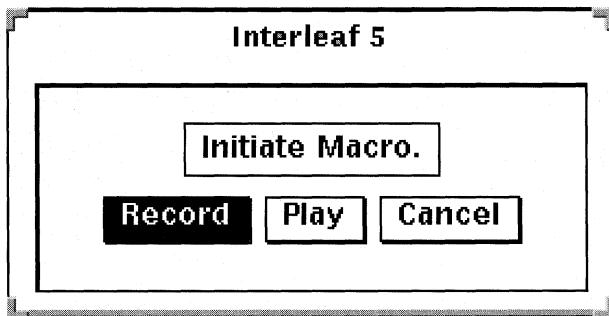
**Esc Ctrl-x m**

*The Initiate Macro stickup window appears, as shown in Figure 11. This stickup allows you to begin your macro recording session.*



*Figure 11*

3. Select the *Record* box in the stickup window, as shown in Figure 12.



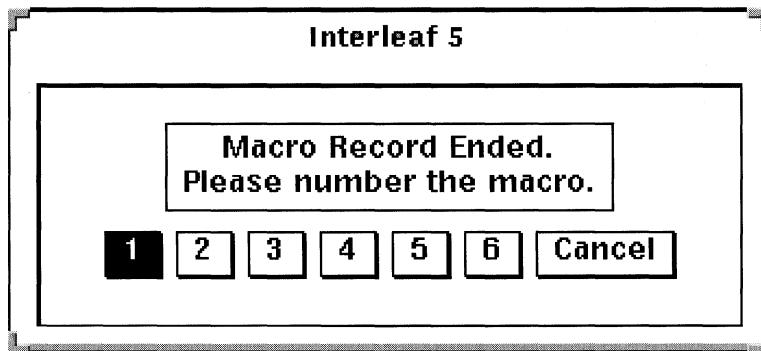
*Figure 12*

*The Initiate Macro stickup window disappears. From now on, all of your keystrokes and mouse movements will be recorded in a macro.*

4. From the component bar, create the three components in the exact order in which they will appear in the documents (for example, *head, para1, para2*).
5. With the mouse cursor in the component bar, press the following key sequence:

**Esc Ctrl-x m**

*A new stickup appears, as shown in Figure 13.*



*Figure 13*

*At this point, Interleaf ceases to record all of your keystrokes and mouse movements and asks that you assign a number to the macro it just recorded.*

6. Select the box labeled 1 in the stickup window.

*You have now saved the previously recorded events as macro-1.*

*You can record up to six macros using the basic macro (non-Macro Tool) method.*

To play back *macro-1*, follow these steps:

1. Move the mouse cursor to where you want to insert the three components and click the select button.

*When playing back basic macros, the mouse cursor must be in the same position it was in when the macro was recorded and the conditions in the document must be exactly the same. For example, if the mouse cursor was in the component bar when the macro was recorded, then the mouse cursor must be in the component bar when the*

*macro is played back. Furthermore, if nothing was selected (i.e., text or components) while the macro was being recorded, then nothing can be selected when the macro is played back.*

2. Press the following key sequence:

**Esc Ctrl-x m**

*The Initiate Macro stickup window appears again. But this time you are going to play back a macro, instead of record a macro.*

3. Select the *Play* box in the stickup window, as show in Figure 14.

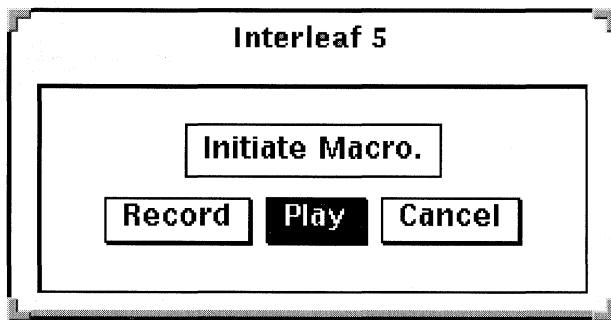


Figure 14

*A new stickup appears, as shown in Figure 15.*

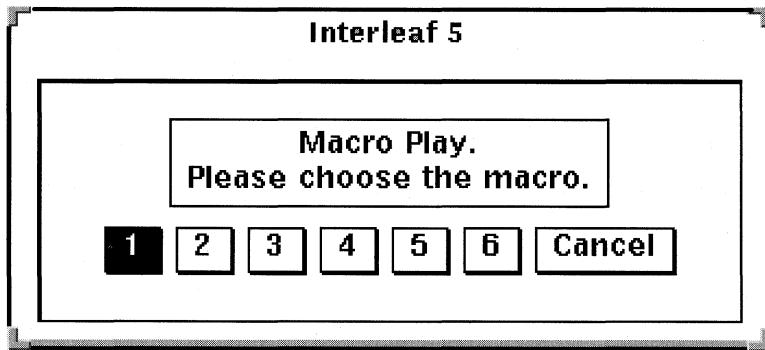


Figure 15

4. Select the box labeled 1 from the stickup window.

*The macro that you created earlier and stored as macro-1 plays back, and as a result the three components are inserted at the position of the component caret.*

*If a macro inserts components, the components are inserted at the current position of the component caret.*

*If a macro inserts text, the text is inserted at the current position of the text caret.*

## Saving Macros

### If I exit and then reinvoke Interleaf, will I still be able to execute my macro?

If you created basic macros (without using the Macro Tool), then your macros will always be available to you, even after you log off and log back in.

If, however, your macros were created using the Macro Tool, and you want to use them in future Interleaf sessions, then you must save the macro before exiting the Interleaf desktop. If you don't save a macro, the macro will be lost when you exit Interleaf.

### How do I save a macro?

If you wish to save your macro so that you can use it every time you log in, you must put the macro in a macro container.

It is also a good idea to give the macro a name and bind it to a key sequence, if you are going to make the macro a permanent fixture on your desktop.

1. Load the macro you wish to save into memory.

*To load a macro into memory, select the macro icon and execute Custom→Load or create a new macro with the Macro Tool. When you create a new macro, it remains in memory until you either create a new macro or load a new macro.*

2. If you have not done so already, give the macro a name and bind it to a key sequence.

*For the sake of this example, we will assume that the macro is named "TM" and that it is bound to the key sequence Esc-t. Your macro will undoubtedly have a different name and be bound to a different key sequence.*

3. Bring up the *Macro Control* window, if it is not up already.

*Remember that when you bring up the Macro Control window, you move the mouse cursor to the desktop (make sure nothing is selected) and execute Custom→Tools→Macro→Control.*

*The Macro Control window opens.*

4. In the open *Macro Control* window, hold down the menu button and execute *Props*.

*The macro property sheet opens, as shown in Figure 16. Recall that the macro name of TM and the macro key binding of Esc-t are used only as an example. Your macro property sheet will contain your customized macro name and key binding.*

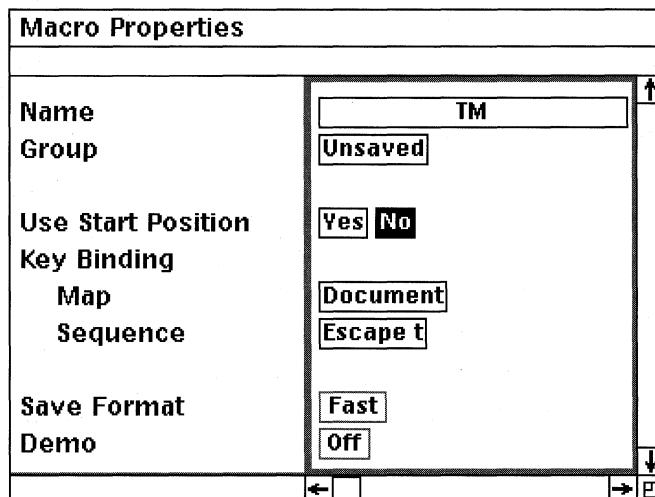


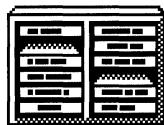
Figure 16

*All permanent macros must be saved in a macro container. Therefore, if you want to save a macro, you must first create a macro container.*

5. Move the mouse cursor to the desktop (make sure nothing is selected), hold down the menu button and execute *Create→Tools→Macro→Container*.

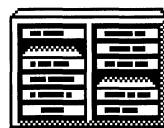
*A macro container is created on the desktop, as shown in Figure 17.*

6. Change the name of the macro container to *Document Macros*, as shown in Figure 18.



**Container**

*Figure 17*



**Document Macros**

*Figure 18*

*You can name your macro container anything you want. For the sake of this example, we are going to call this macro container “Document Macros.”*

7. In the *Macro Control* window, hold down the menu button and execute *Misc→Group→Activate→Document Macros*.

*The active macro container is now Document Macros.*

*This tells the software that you are going to be inserting macros in the macro container named “Document Macros.” If you had more than one macro container sitting on your desktop, all of the macro container names would be listed when you executed *Misc→Group→Activate→...*, and you would pick the one you wanted to activate.*

8. Move the mouse cursor to the *Group* field in the macro property sheet (if the macro you have loaded has never been saved, this field will contain the text “*Unsaved*”). Hold down the menu button and select *Document Macros*.

*The Group name is now Document Macros, as shown in Figure 19. This means that any macros you save at this point will be inserted into the Document Macros macro container.*

9. Execute *Apply* in the open macro property sheet.

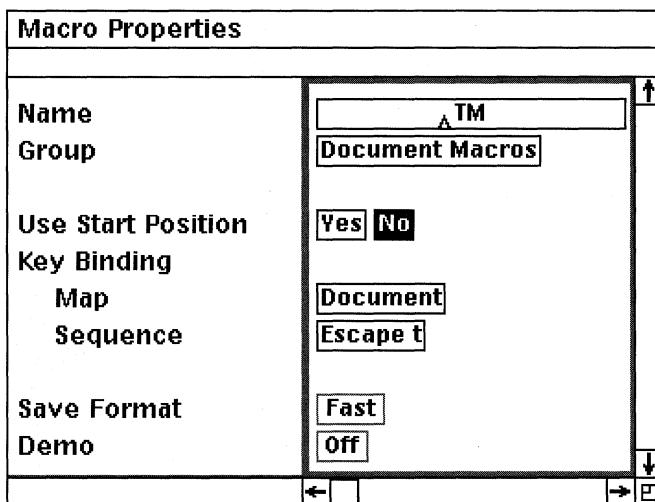


Figure 19

*The TM macro has been copied into the Document Macros macro container. Now when you exit Interleaf and then log back in, the TM macro will be available to you from the Document Macros container. All you have to do when you log back in is activate the Document Macros container with the Macro Tool.*

10. Close the macro property sheet.
11. Close the *Macro Control* window.
12. On the desktop, select the *Document Macros* container and open it.

*Notice that the TM macro has been added to the Document Macro container.*

13. Close the macro container.

### **How do I activate a macro container when I log in to the Interleaf?**

Select the macro container you want to activate, hold down the menu button, and execute *Custom→Load*. All of the macros inside of the macro container will be loaded into memory and available for use.

## Is there a way I can have my macros load automatically when I log in to Interleaf?

Yes. If you're like me, you don't want to *Custom*→*Load* your macro containers every time you log in. If you want the macros in a specific macro container to automatically get loaded when you invoke Interleaf, cut the macro container from the desktop and put it in your *Profile* drawer. Everything in the *Profile* drawer is loaded when you invoke the Interleaf desktop.

*If you've forgotten, here's how you get into the Profile drawer: Open the System5 cabinet, open the Custom cabinet, and open the Profile drawer.*

## Using Macros

### Do the macros I create appear on the Keyboard Display?

Yes. If you don't save the macro and you don't give it a name, the macro appears in the Keyboard Display as *Unsaved Macro*. If you give the macro a name but don't save the macro, the macro name appears in the Keyboard Display, but the words *Unsaved* also appear. If you save the macro and give it a name, the macro container name and the macro name both appear on the key sequence in the Keyboard Display.

For example, if you bound a function that creates the trademark symbol to the key sequence *Esc-t* but did not give the macro a name and did not save the macro, the macro would appear in the Keyboard Display as *Unsaved Macro*, as shown in Figure 20.

On the other hand, if you named the macro *TM* (for *trademark*), for example, but did not save the macro, the macro name (*TM*) would appear in the Keyboard Display, along with the text *Unsaved*, as shown in Figure 21.

Finally, if you name the macro *TM* and you save the macro in a macro container named *Custom*, the macro name (*TM*), along with the macro container name (*Custom*) would both appear in the Keyboard Display, as shown in Figure 22.

The Escape-t key sequence is labeled “Unsaved Macro” because we did not give the new macro a name and we did not save it

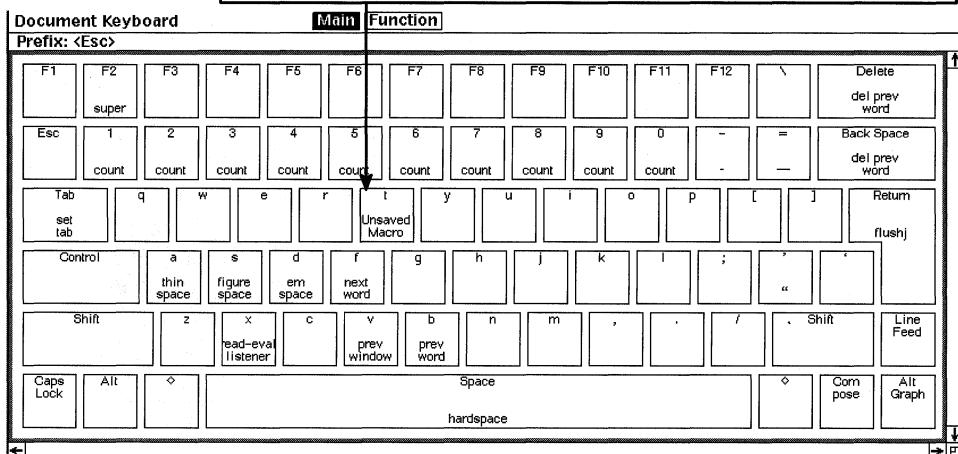


Figure 20

The Escape-t key sequence is labeled “Unsaved TM” because we gave the new macro a name, but did not save it

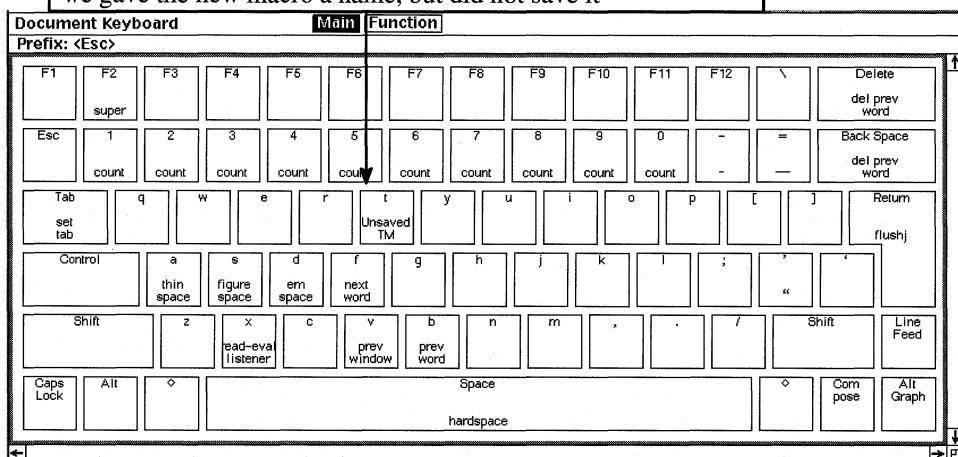


Figure 21

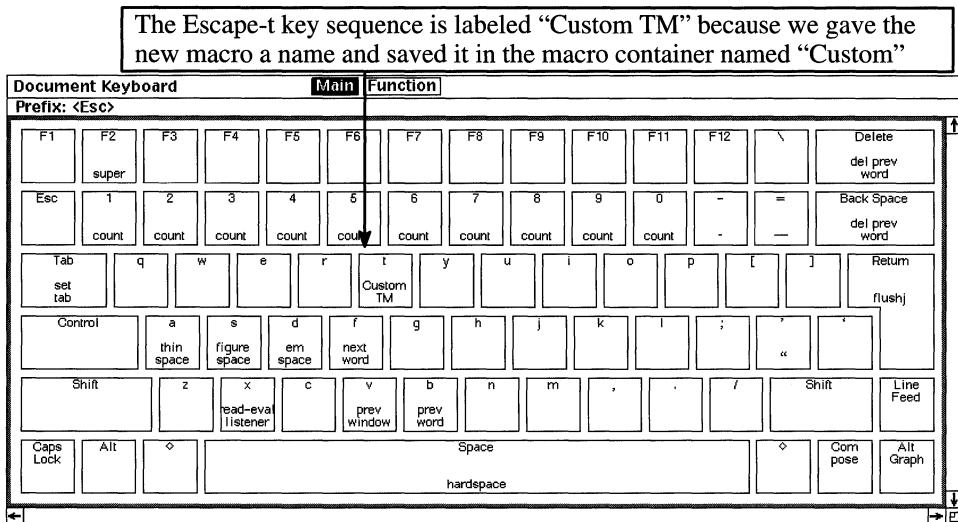


Figure 22

**If I create a macro while I'm in a particular document, is that macro useable in all documents?“**

Yes. Macros are not tied to any one document. Interleaf macros are desktop-wide, meaning if you create a macro in one document, you can use that same macro in any other Interleaf document on your desktop.

**Can Interleaf macros call other Interleaf macros?**

Yes. These are called nested macros because they are nested one inside another. To create a nested macro simply invoke a macro, while you are recording with the *Macro Tool*. The *Macro Tool* will include the invoked macro as part of the new macro it creates.

For example, let's assume that you invoked the *Macro Tool* and started to record a series of mouse movements and keystrokes in a macro you were going to call *Lazy*. If, during the recording session, one of the keystrokes you pressed invoked another macro called *Busy*, all of the mouse movements and keystrokes in the macro *Busy* would be included (nested) in the macro *Lazy*.



# **18. Potpourri**

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This section is the catch-all chapter. There are certain Interleaf questions that should be answered because they're constantly asked, but I didn't know where to put them, so I put them here. I usually don't like miscellaneous-type categories, but in this case, it just fits.

This chapter covers everything from error recovery to revision bars. Most of these questions are ones that people ask most often. Ironically, for some of these questions I have never found documented answers, and thus had to figure them out for myself. Some of the answers were so simple that I felt humbled when I discovered the answer—it's like it was staring me in the face all along. This chapter should save you the frustration of having to learn the hard way.

## **Error Recovery**

### **What do I do if I get a SIGSEV or SIGBUS error?**

SIGSEV or SIGBUS errors can happen for a variety of reasons. All I really know about them is that they always happen at the most inopportune time, and nine times out of 10 I end up losing data.

There are ways, however, to save yourself from disaster if you know how to pick the right option on the SIGSEV or SIGBUS stickup window. When you get a SIGSEV or SIGBUS error, you are usually offered three courses of action by the software: *Exit*, *File*, or *Continue*.

### ***Exit***

If you pick *Exit*, you will be bumped out of the Interleaf desktop back into the windowing system (if you are on a UNIX system) or the DOS prompt (if you are on a DOS system). If you were editing a document when you got the SIGSEV or SIGBUS error and you select *Exit*, all of the changes you made after the last time you saved will be lost.

## ***Continue***

Sometimes if you select *Continue*, the SIGSEV or SIGBUS error stickup simply goes away, and the software lets you continue where you left off. If you get this opportunity, immediately execute *Save→Fast* from the name box in the document header, so that all your current work is saved.

Most times, however, selecting the *Continue* button just reinvokes the SIGSEV or SIGBUS error stickup window, and you will be forced to select *Exit* or *File*.

## ***File***

If you pick *File*, you stand a good chance of saving all the work you have done up until the time you crashed (regardless of the last time you saved). Selecting *File* saves your current work in a *Crash File*. Then when you reinvoke Interleaf and open the document, the software detects that a *Crash File* exists and will ask you if you want to open it.

You open the *Crash File* by simply opening the document you were in when you crashed. A stickup window appears asking you which version of the document you wish to open. Select the *Crash* button from the stickup window. (I know it sounds dangerous to select a button that says *Crash*, but trust me, that's how it works.) The *Crash File* for a document contains all of the editing changes that you made in that document up until the time you crashed. Once the *Crash File* is open, immediately execute *Save→Fast* from the name box in the document header.

The problem with selecting *File* is that it doesn't always work. Most of the time your changes are saved in a *Crash File*, but then again sometimes they aren't (the software can be fickle, depending on what caused the SIGSEV or SIGBUS error). Sometimes selecting *File* is like selecting *Exit*; you just get bumped out of Interleaf, back into the operating system, and all your current editing changes are lost. Nevertheless, it's worth the risk to try to save your work by selecting the *File* button because if you select *Exit* first, you will lose everything for sure.

## **Can I recover my *System5* cabinet if I accidentally purge it?**

Yes. If you purge your *System5* cabinet, simply move your mouse cursor to the desktop (make sure nothing is selected), hold down the menu button, and execute *Create→System5*. A new *System5* cabinet will be created on your desktop from the *MasterSystem5* cabinet maintained by the systems administrator.

Be forewarned, however, that the new *System5* cabinet will not contain any customizations that you made to your old *System5* cabinet.

If you've accidentally cut your *System5* cabinet, and it is still selected in the clipboard, simply move the mouse cursor to the desktop and execute *Paste*. Your *System5* cabinet will be returned to the desktop. Any customizations that you had added to the *System5* cabinet will be retained.

**Is it possible for me to have more than one copy of Interleaf running at the same time?**

That depends on whether you are running Interleaf under UNIX or DOS.

### **UNIX Systems**

On UNIX systems, yes. If your site bought six copies of Interleaf, for example, and you're the only person on the network using Interleaf, then you may run the six copies of Interleaf all at the same time. If, however, there are six people on the network already using Interleaf and you try to invoke the software (you being the seventh person), then the Interleaf license will not let you bring up an Interleaf desktop because all six copies are already in use.

Sometimes it's hard to tell if you are running more than one copy of Interleaf, because all you ever see at any given time is one Interleaf desktop. Even so, if you invoke Interleaf twice, you will have two Interleaf processes running, which means that you are taking up two licenses on the network. If you take up two licenses, that's one less person on the network who can use Interleaf.

A common mistake among new UNIX Interleaf users is that they invoke Interleaf from the windowing system, and then they wait, and wait, and wait, and nothing seems to be happening. So they invoke Interleaf again, and then finally the Interleaf desktop pops up. In reality, what has happened is that the user has invoked Interleaf twice. Interleaf can take a fair amount of time to load, especially on older hardware or if your system does not have a lot of memory. Some new users aren't used to waiting this long for software to load so they keep re-invoking Interleaf until the Interleaf desktop appears. Each time they reinvoke Interleaf, however, they take up another license.

If you suspect you've taken up more than one Interleaf license, perform the following steps to release the extra copies:

1. Bring up a shell tool window.

2. In the shell tool window, type:

**ps**

All the processes running on your system will be listed. If you are using more than one copy of Interleaf, you will have more than one Interleaf process listed.

3. Note the process number of the Interleaf process you wish to release.
4. In the open shell tool window, type:

**kill -9 *Interleaf-process-number***

Where *Interleaf-process-number* is the actual process number listed by the *PS* command.

*Once the process has been killed, you've released a single copy of Interleaf.*

For example, if the Interleaf process number is 3065, type:

**kill -9 3065**

*The Interleaf process will be eliminated, freeing up a single copy of Interleaf.*

*Repeat this procedure for every copy of Interleaf you wish to release.*

## **DOS Systems**

For DOS systems, the concept of network licensing does not apply. The general rule of thumb is that your site purchases one copy of Interleaf for every PC on which Interleaf will run. Because of the PC architecture, you cannot run more than one copy of Interleaf on a single PC. (However, this could change now that Interleaf plans to support its publishing software on Windows NT.)

## **Units of Measurement**

### **Can I change the general units of measurement used in a document?**

Yes. By default Interleaf documents use inches as a general unit of measurement. This means that tabs, component margins, and page margins are all measured in inches. If you wish to change a document's general unit of mea-

surement, you can do so from the document's page property sheet. The units of measurement supported by Interleaf are inches, millimeters, picas, ciceros, points, didots, pica:points, and cicero:didots. To change the general unit of measure used in a document, follow these easy steps:

1. Open the document's page property sheet.
2. Select the *Custom* box at the top of the property sheet.

*The Custom page of the property sheet opens, as shown in Figure 1.*

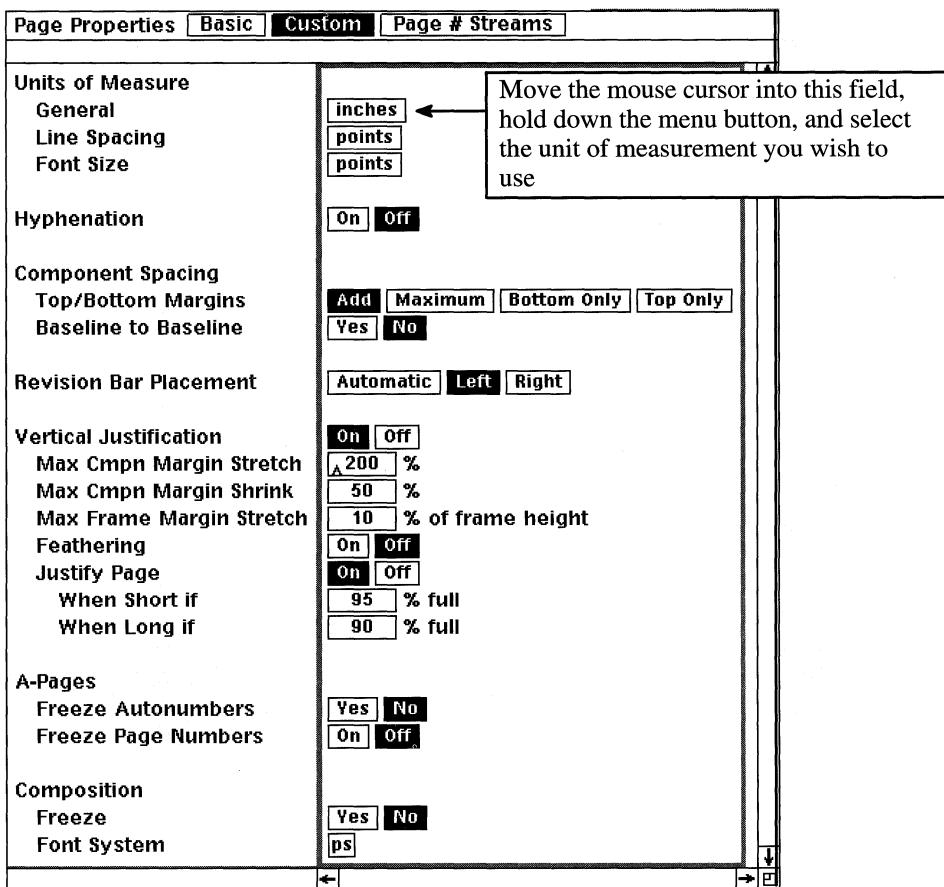


Figure 1

3. Move the mouse cursor into the *General* box (under the *Units of Measurement* field), as shown in Figure 1, hold down the menu button, and select the unit of measure you wish to use.

4. Execute *Apply*.

*All measured objects throughout the document (tabs, margins, etc.) will be displayed in the unit of measure that you select on the page property sheet.*

*Changing the unit of measure is document-specific. Each document has its own unit of measurement. If you wish to permanently modify the unit of measurement for every new document that is created as a result of executing Create→document, then change the page property sheet of the default document in the System5 cabinet.*

### **Can I use more than one unit of measurement in the same document?**

Yes. This is accomplished with the expression parser. The expression parser is something that is built in to Interleaf 5 (in other words, you do not have to turn it on). Since the expression parser is readily available, you can use it at any time. The way it works is as follows: You have a general unit of measurement for the entire document, which is defined on the page property sheet. By default this unit of measurement is in inches. This means that all document measurements such as tabs, margins, and page size are displayed in inches. If you wish to define a new object size (for example, the top margin of a component) in another unit of measurement, such as picas, but keep the rest of the document in inches, you enter the new value followed by a symbol that represents the new unit of measurement. The Expression Parser then converts the new value and symbol to inches.

For example, let's assume that the general unit of measurement for a particular document is inches. This means that margins on a component property sheet in the document are displayed as shown in Figure 2.

Let's assume, however, that you want to change the top margin to 12 picas, but leave the rest of the margins on the property sheet in inches. To accomplish this, use the expression parser as follows:

1. Move the mouse cursor into the *Top Margin* box, click the select button once, and type:

**12 pi**

*Twelve is the pica value, and pi is the symbol that represents the picas unit of measurement.*

2. Move the mouse cursor out of the *Top Margin* box and click the select button.

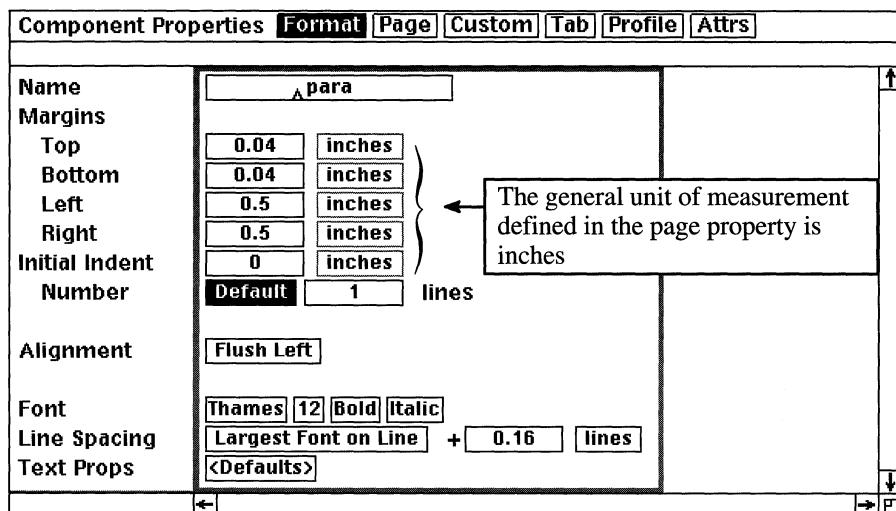


Figure 2

*The expression parser sees the value and the pica symbol and converts 12 picas to 1.99 inches, as shown in Figure 3. The expression parser allows you to enter values as any unit of measurement supported by Interleaf. The expression parser then converts the value and symbol to the general unit of measurement defined on the page property sheet.*

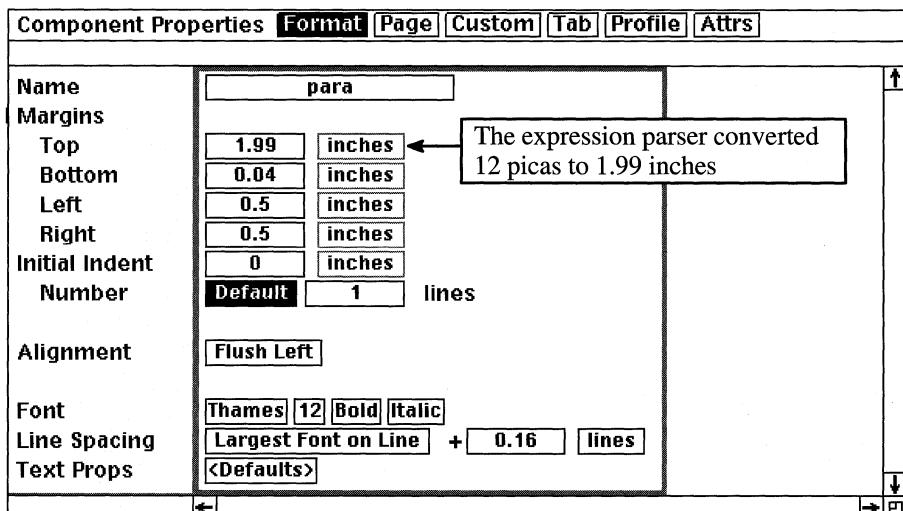


Figure 3

## What are the unit of measurement symbols recognized by the expression parser?

The table below shows the symbols the expression parser recognizes for each unit of measurement.

Units	Symbol name	Abbreviation	Synonyms
millimeters	mm	m	none
centimeters	cm	none	none
picas	picas	pi	pc
points	points	po	pts, poin, point
big points	b	bp	none
didots	didots	di	dd, did, dido, didot
ciceros	ci	cc	cic, cicer
inches	in	"	inch
degrees	degrees	deg	degree, degree
radians	radians	ra	rad, radi, radian
minutes	minutes	mi	min, minu, minut, minute
seconds	seconds	se	sec, seco, secon, second

If you enter a value and *one of* the following:

- a symbol name
- an abbreviation
- a synonym

the expression parser will convert the value to the document's general unit of measurement.

For example, if you enter *12 pts* on a property sheet with a general unit of measurement in inches, the expression parser will convert 12 points to .17 inches (.166 rounded up to .17).

You must be careful to use expression parser symbols that pertain to the object you are sizing. In graphics, for example, degrees, radians, minutes and seconds are units of measurement for the rotation of angles only. The expression parser will not let you size a page margin to 30 degrees, for example.

## Where can I enter expression parser values and symbols?

You can enter them in any field, stickup, or property sheet in which a distance, size, or angle must be entered. For example, you can use the expression parser to size a horizontal line to 10 centimeters as follows:

1. Select the line and execute *Size→Numeric→Horizontal*.

*A stickup window appears asking you to enter the size of the line.*

2. In the stickup window, type:

**10 cm**

*The line sizes to be 10 centimeters exactly (instead of using the default sizing factor).*

## Revision Bars

### Can I change the width of Interleaf's revision bars?

Yes. All it takes is to write a simple Lisp program, as follows:

1. Move the mouse cursor to the desktop (make sure nothing is selected), hold down the menu button, and execute *Create→Misc→Lisp*.

*A Lisp icon is created on the desktop.*

2. While the icon is still selected, execute *Open*.

*The Lisp icon opens, as shown in Figure 4.*

3. Move the mouse cursor to the end of the last line and press the *Return* (or *Enter*) key.

*A new blank line is created at the end of the source code listing.*

4. In the new blank line, type:

**(require "text-props-setup")**

5. Press the *Return* (or *Enter*) key once.

*A new blank line is created at the end of the source code listing.*

**Editing: Lisp.lsp**

```
(lisp-set-implementation "Interleaf Lisp" "2.0")
;; Module name:
;; Purpose:
;; Notes:
;; Interfaces:

;; Audit:
;; DD-MON-YY USERNAME COMMENT
```

*Figure 4*

6. In the new blank line, type:

**(doc-text-props-setup :rev-bar-width 20000)**

*The number 20000 is in a unit of measurement called rsu (stands for ridiculously small units). The more rsu's you add, the fatter your revision bars will be.*

*Your Lisp program should now look like the one shown in Figure 5.*

**Editing: Lisp.lsp**

```
(lisp-set-implementation "Interleaf Lisp" "2.0")
;; Module name:
;; Purpose:
;; Notes:
;; Interfaces:

;; Audit:
;; DD-MON-YY USERNAME COMMENT
(require "text-props-setup")
(doc-text-props-setup :rev-bar-width 20000)
```

*Figure 5*

7. Execute *Save→if Modified* and close the window.

8. Select the Lisp icon name (*Lisp*) and change it to *Big Revs*.
9. Select the *Big Revs* icon and execute *Custom→Load*.

*Your program is loaded into memory. Now when you create revision bars, they will be “fatter” than the default size for revision bars.*

If you want your *Big Revs* program loaded every time you log on to Interleaf, cut *Big Revs* from the desktop and paste it in the *Profile* drawer (found in *System5/Custom/Profile*).

**Can I force the revision bars to appear in the right margin (instead of the left)?**

Yes. By default Interleaf puts revision bars in the left margin of a document. If you want your revision bars in the right margin, then you must change the document’s default from the page property sheet, as follows:

1. Open the document’s page property sheet.
  2. Select the *Custom* box at the top of the property sheet.
- The Custom page of the property sheet opens, as shown in Figure 6.*
3. Select the *Right* box in the *Revision Bar Placement* field, as shown in Figure 6.
  4. Execute *Apply* and close the property sheet.

*All of revision bars for this particular document will appear in the right margin.*

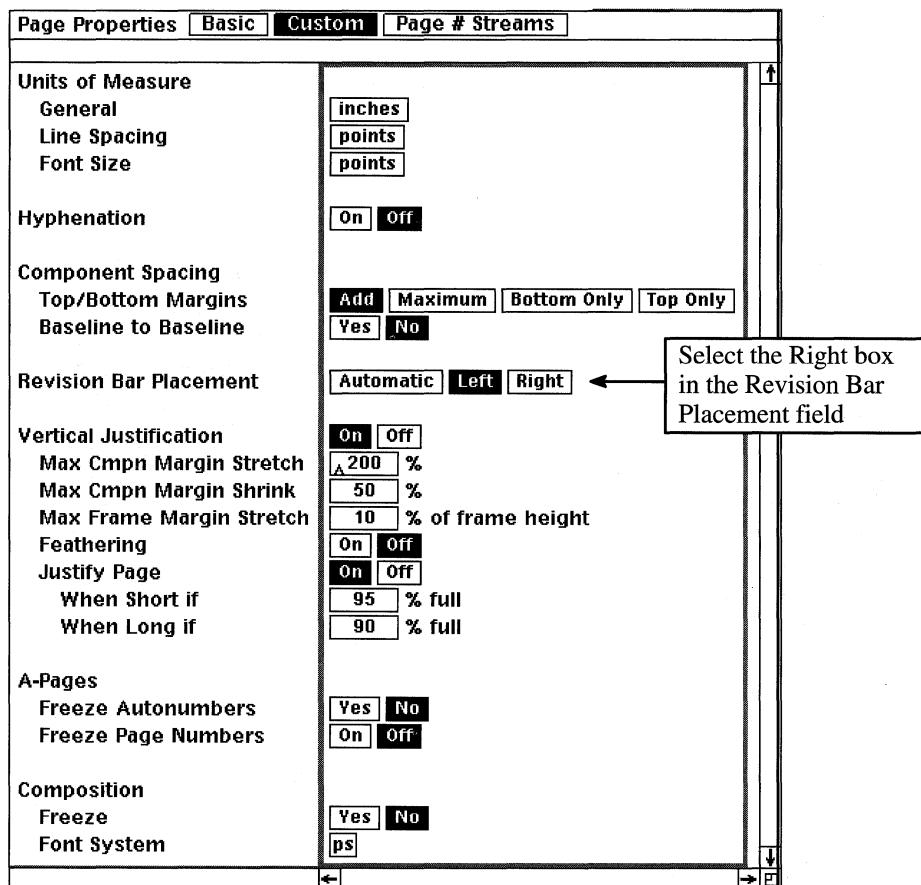


Figure 6

### Can I create non-printable revision bars?

Yes. If you want your revision bars to appear in an open document (on the computer screen), but not on the hardcopy when you print, follow these simple steps:

1. Move the mouse cursor into the *Print* box in the document header, and execute *Props*.

*The document's Print property sheet opens, as shown in Figure 7.*

2. Select the *No* box in the *Rev Bars* field, as shown in Figure 7.

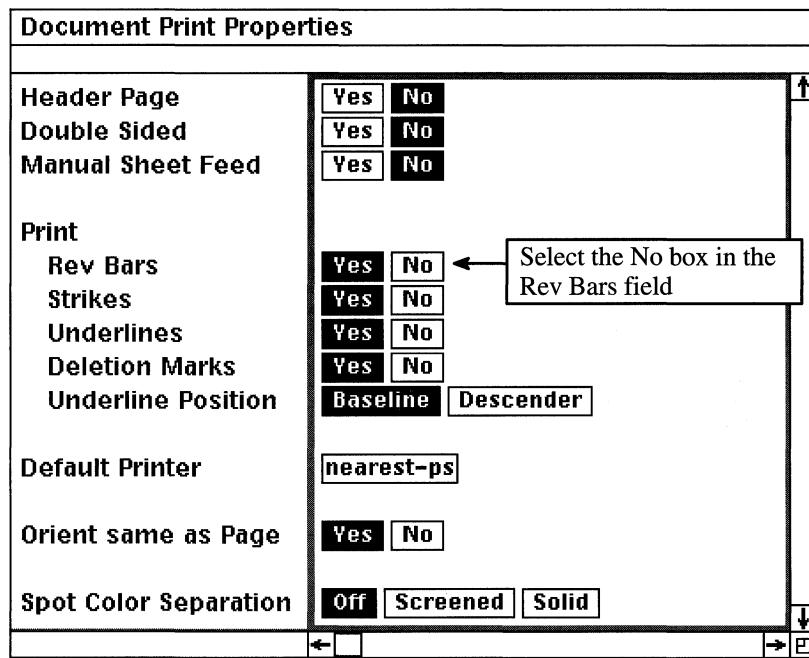


Figure 7

3. Execute *Apply* and close the property sheet.

*Now when you print your document, revision bars will not appear in the hardcopy, even if they appear in an open document on the desktop.*

#### **How do I eliminate all revision bars from a document?**

Select all of the components in the component bar (execute *Select→All* from the component bar), hold down the menu button, and execute *Misc→Remove Rev Bars*. All of the revision bars in the document will be removed from the open document.

## **Desktop Shortcuts**

### **Can I close all of the open windows on my desktop at once?**

Yes. Interleaf 5 allows you to close all open windows with one single command. Move the mouse cursor to the Interleaf desktop (make sure nothing is selected), hold down the menu button, and execute *Custom→CloseAll*. All win-

dows that are currently open will close. If any of the open windows contain open documents that have been modified, Interleaf will ask you if you want to save your changes before it closes the document.

### Can I purge icons directly from the desktop?

Yes. Before Interleaf 5 you had to cut an icon and then purge it from the clipboard. Now you can purge an icon directly from the desktop (without the icon first going to the clipboard) by selecting the icon and executing *Custom→Purge*. A stickup window appears, as shown in Figure 8, asking you to confirm the purge. If you do wish to purge the icon select the *Confirm* button in the stickup window. The selected icon is completely eliminated from the desktop (with no backup copy in the clipboard).

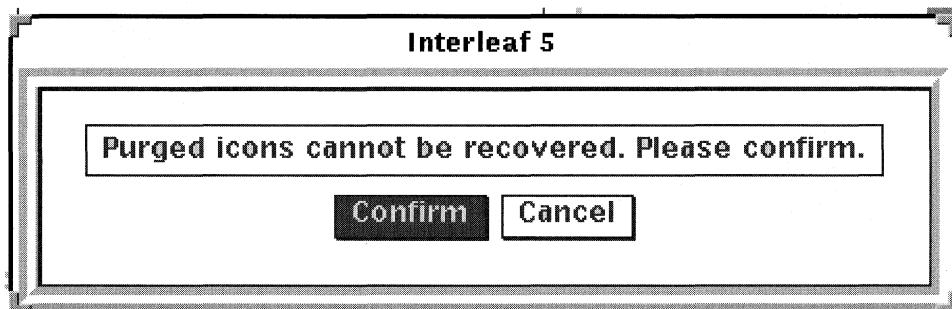


Figure 8

### Is there a text undo feature in Interleaf?

Yes, but don't use it. (How's that for a no-nonsense answer!) The text undo feature in Interleaf 5 is buggy at this point, and hence Interleaf does not support its use in a production environment. The text undo feature is something that you have to turn on with the *Profile Tool*. The problem is that after you have turned it on, you risk permanently corrupting your document (making it un-openable) if you make changes to shared-content components, frames, and tables. Using text undo with the A-pages feature, Revision Tracking, Search & Replace, and the Spellchecker causes a variety of problems as well.

If you insist on using the text undo feature of Interleaf 5, *you do so at your own risk!* My advice is that you leave it turned off until Interleaf says otherwise. For more information on the text undo feature, refer to the *Release Notes* document in the *System5* cabinet.

### Is there a multi-paste feature in Interleaf?

Yes. Multi-paste allows you to repeatedly paste the last object you cut or copied without having to re-cut. For example, if you wanted to copy a component named *subhead* and paste it in 10 different places throughout the document, you'd follow these simple steps:

1. Select the *subhead* component and execute *Copy*.
2. Move the component caret where you want to insert the first copy and execute *Paste*.

*The first copy is pasted.*

3. Move the component caret where you want to insert the second copy and execute *Paste*.

*The second copy is pasted.*

4. Move the component caret where you want to insert the third copy and execute *Paste*.

*The third copy is pasted (and so on).*

Multi-paste is one of those features that is turned on with the *Profile Tool*. In more recent releases of Interleaf 5, the multi-paste feature is turned on by default. If, however, you have an older release of Interleaf 5, then you will have to turn multi-paste on yourself. Here's how you do it:

1. Move the mouse cursor to the desktop (make sure nothing is selected), hold down the menu button, and execute *Custom→Tools→Profile Tool*.

*The Profile Tool window opens, as shown in Figure 9.*

*If Profile Tool does not appear as a menu item under Custom→Tools, you must install the Profile Tool on your desktop using the Tool Manager. For instructions on how to use the Tool Manager to install the Profile Tool, refer to Chapter 2.*

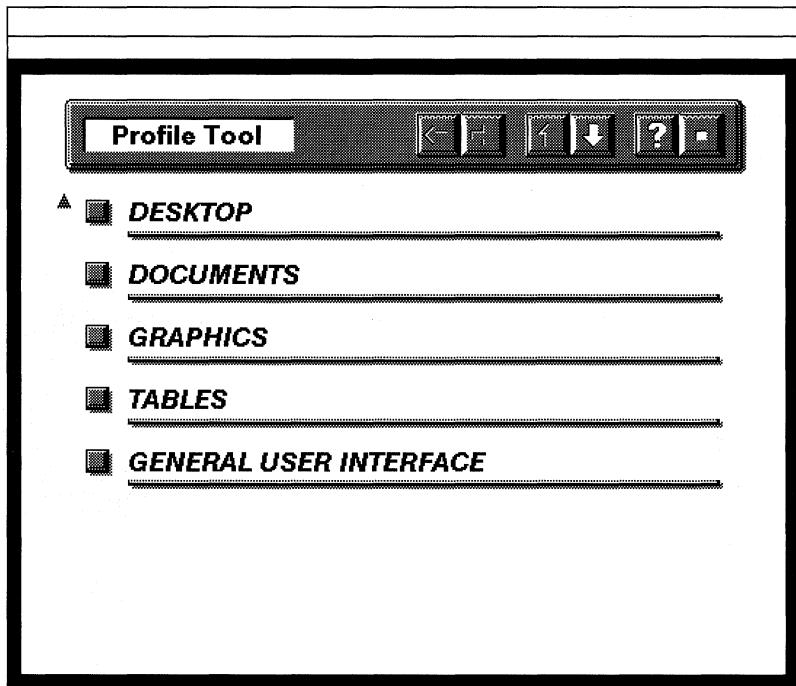


Figure 9

2. In the open *Profile Tool* window, select the *Documents* button.

*The Documents window opens, as shown in Figure 10.*

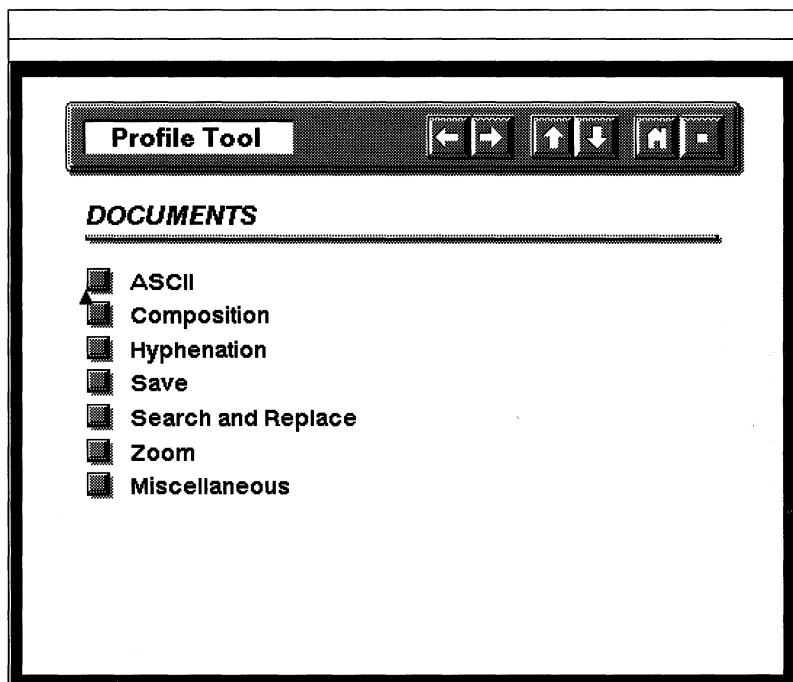


Figure 10

3. Select the *Miscellaneous* button.

*The Documents: Miscellaneous window opens, as shown in Figure 11.*

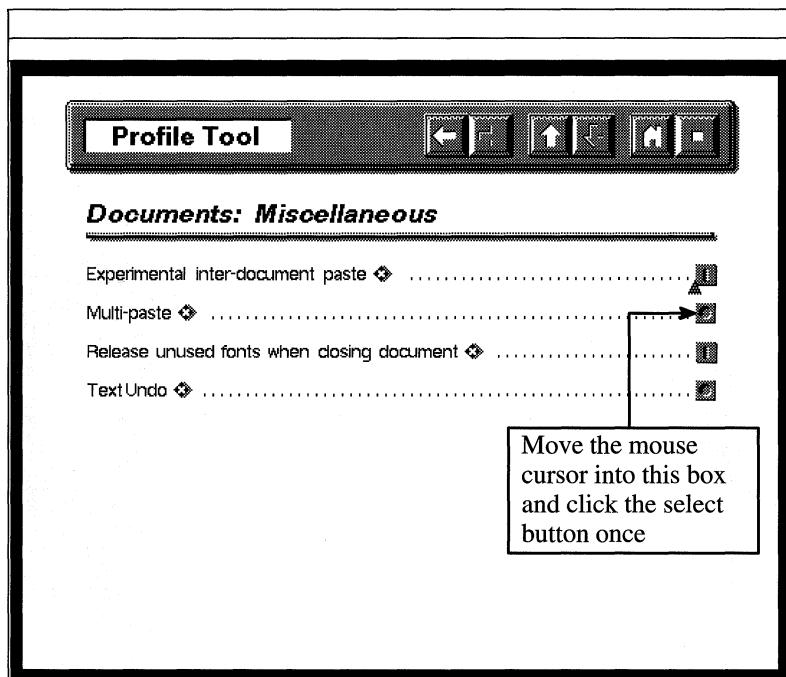


Figure 11

4. Move the mouse cursor into the far-right box associated with the *Multi-paste* feature, as shown in Figure 11, and click the select button once.

The 0 in the box changes to a 1, as shown in Figure 12. This indicates that the multi-paste feature will be turned on when you execute Load.

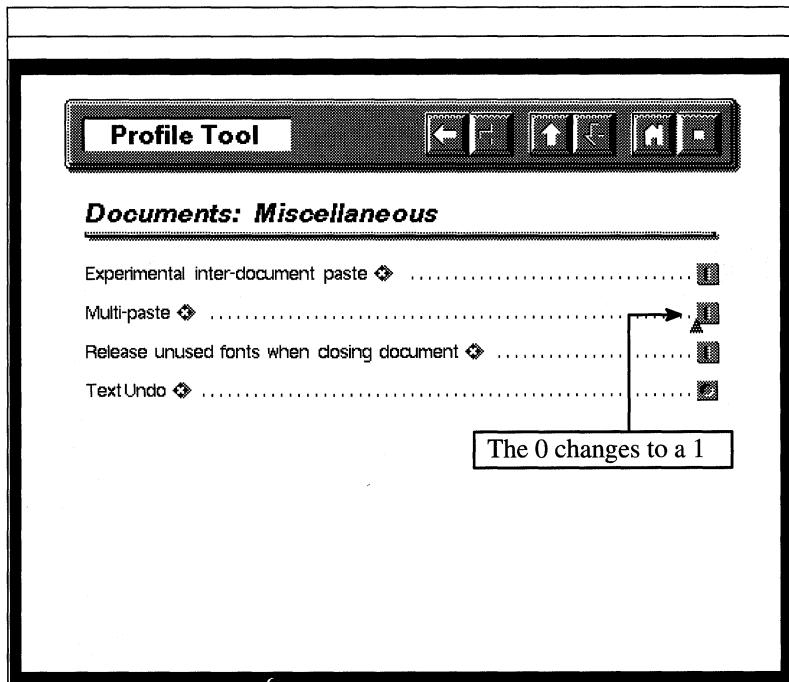


Figure 12

5. In the open *Documents: Miscellaneous* window, hold down the menu button and execute *Load*.

You may now use the multi-paste feature when editing your documents.

If you want the multi-paste feature to automatically load when you invoke the Interleaf desktop, execute *Save* in the open *Documents: Miscellaneous* window and copy the resulting Profile Tool icon into your Profile drawer (found in System5/Custom/Profile). For more information about saving changes made with the Profile Tool, refer to Chapter 2.

6. Close the *Profile Tool*.

**Can I make my popup menus stay up without holding down the menu button?**

Yes. You can change your desktop such that the popup menus stay up until you select a menu item. This is particularly handy if you are a new Interleaf user, and your fingers keep slipping off the mouse buttons (causing all kinds of weird things to happen).

To change the way the popup menus behave you execute the *Profile Tool*, as follows:

1. Move the mouse cursor to the desktop (make sure nothing is selected), hold down the menu button, and execute *Custom→Tools→Profile Tool*.

*The Profile Tool window opens, as shown in Figure 9.*

*If Profile Tool does not appear as a menu item under Custom→Tools, you must install the Profile Tool on your desktop using the Tool Manager. For instructions on how to use the Tool Manager to install the Profile Tool, refer to Chapter 2.*

2. In the open *Profile Tool* window, select the *General User Interface* button.

*The General User Interface (UI) window opens, as shown in Figure 13.*

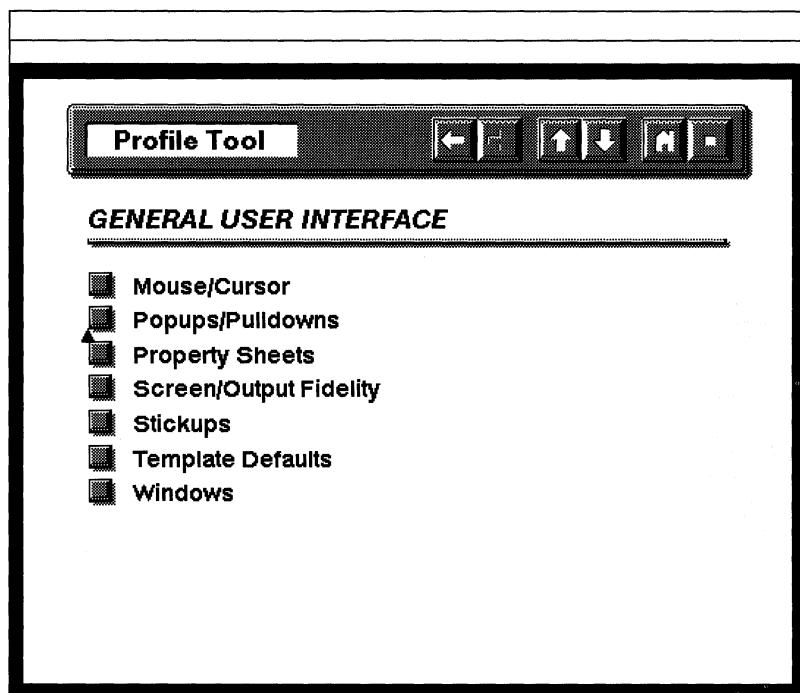


Figure 13

3. Select the *Popups/Pulldowns* button.

*The General UI: Popups/Pulldowns window opens, as shown in Figure 14.*

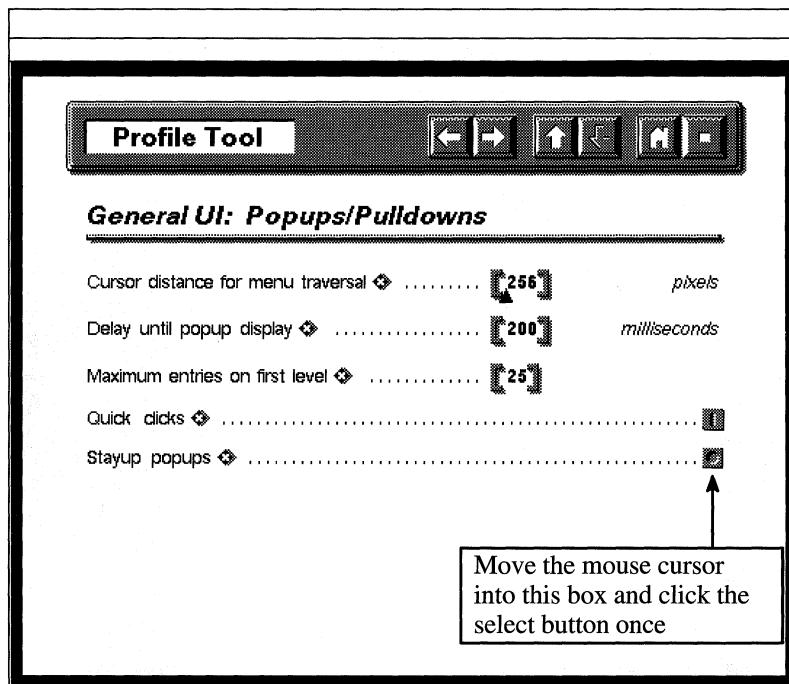


Figure 14

4. Move the mouse cursor into the far-right box associated with the *Stayup popups* feature, as shown in Figure 15, and click the select button once.

*The 0 in the box changes to a 1, as shown in Figure 15. This indicates that the Stayup popups feature will be turned on when you execute Load.*

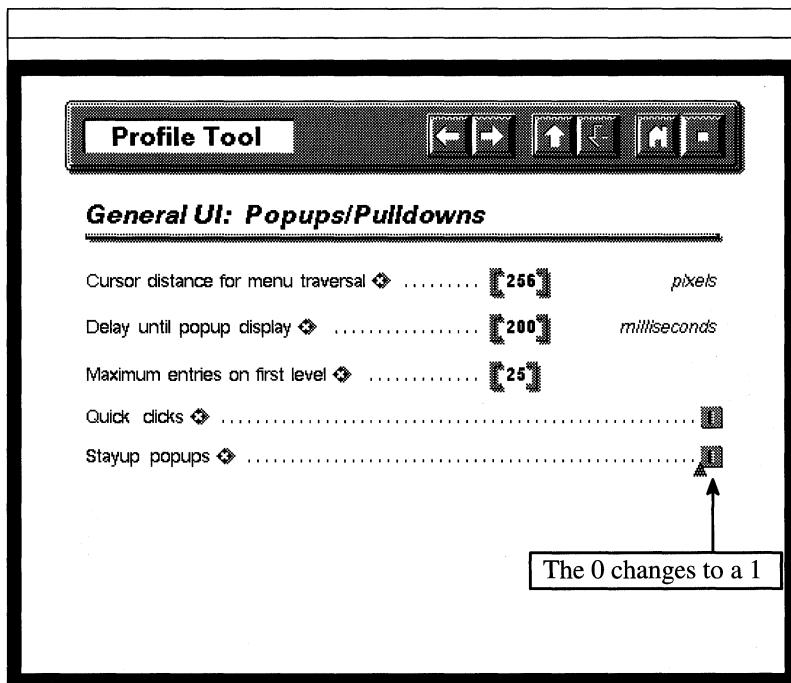


Figure 15

5. In the open *General UI: Popups/Pulldown* window, hold down the menu button and execute *Load*.

*Your popup menus will now stay up (even if you release the menu button) until you select a menu item.*

*If you want the Stayup popup feature to automatically load when you invoke the Interleaf desktop, execute Save in the open General UI: Popups/Pulldowns window and copy the resulting Profile Tool icon into your Profile drawer (found in System5/Custom/Profile). For more information about saving changes made with the Profile Tool, refer to Chapter 2.*

6. Close the *Profile Tool*.

## Sharing Files

### How do I link to an object that resides on another desktop?

Linking to an object such as a file or directory instead of copying it is very efficient. When you link to an object you view the object on your Interleaf desktop without actually making a copy of it; the object stays wherever it is. Many people can link to the same object to view it. This way, you have one copy of the object for everyone to share.

The only drawback to linking is that you cannot modify the linked object unless the owner of the object gives you read/write access. This means that if you need to change the object, you have to actually copy the object to your desktop (or the owner of the object must change the permissions). Still, if you need only to review a document, linking to it, rather than copying it is the way to go.

To link to an object outside of your desktop directory, you use the *Copy→Link* command. The best way to illustrate how the *Copy→Link* command works is to look at a practical example.

Let's assume that you're working on a UNIX system, and your Interleaf desktop directory is *home/amy/desktop*. Let's also assume that you wanted to view a document named *Chapter 1* that currently resides on the desktop directory *home/bob/desktop*. To accomplish this, follow these simple steps:

1. Select any document on your desktop and execute *Copy→Link→to Original Object*.

*An animated copy of the document appears on your desktop.*

2. Move the mouse cursor anywhere else in the desktop and execute *Paste*.

*The copy of the document is pasted on to your desktop.*

3. Select the document and execute *Props*.

*The property sheet for the document opens, as shown in Figure 16.*

*Notice that there is an extra box labeled "Pathname" on the property sheet. You only get this field if you execute Copy→Link, as opposed to just Copy. The Pathname box allows you to specify the pathname of the document or container to which you wish to link. The Name box (above the Pathname box) allows you to enter the name of the document.*

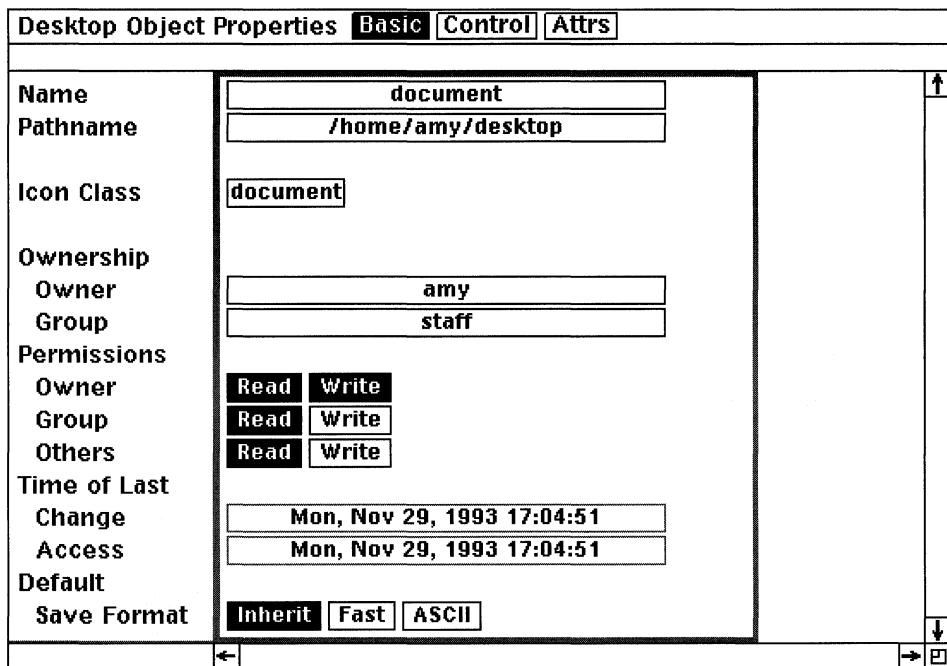


Figure 16

4. In the *Name* box, type in the name of the document to which you wish to link. In the *Pathname* box, type the pathname of the document.

*For our example the document name would be Chapter 1 and the pathname would be /home/bob/Desktop, as shown in Figure 17.*

5. Execute *Apply*.

*Notice that the owner now changes from amy to bob. This is because you are linked to an object on bob's desktop.*

6. Close the property sheet.

*Notice the icon name changes to Chapter 1.*

7. Select the *Chapter 1* document and open it.

*The document to which you have linked opens on your desktop. In this case, you have read-only access to the document unless the owner changes the permissions. This means you can look at the document,*

Desktop Object Properties		Basic	Control	Attrs
Name	Chapter 1			
Pathname	/home/bob/Desktop			
Icon Class	document			
Ownership				
Owner	amy			
Group	staff			
Permissions				
Owner	Read	Write		
Group	Read	Write		
Others	Read	Write		
Time of Last Change	Mon, Nov 29, 1993 17:04:51			
Access	Mon, Nov 29, 1993 17:04:51			
Default				
Save Format	Inherit	Fast	ASCII	

Figure 17

*you can even edit the document, but you cannot save any changes that you make.*

8. Close the document without saving.
9. Select the document and execute *Props*.

*Notice on the property sheet that you are not the owner of the document. Therefore, you cannot make permanent changes to the document.*

*If you want to permanently modify the document, you must copy the linked document to your desktop.*

10. Select the *Chapter 1* document and execute *Copy*.
11. Move the mouse cursor anywhere else in the desktop and execute *Paste*.

*A copy of the Chapter 1 document is pasted on to your desktop.*

12. Select the newly pasted *Chapter 1* document and execute *Props*.

*Notice that you are the owner of this copy. This means that you may make editing changes to the document and save those changes on your desktop.*

13. Close the property sheet.
14. Cut the linked version of *Chapter 1* from your desktop.

### **How do I copy an object from one desktop to another?**

There are two ways you can copy files between desktops:

- Using the operating system's copy command (outside Interleaf)
- Using the *Copy→Link* command (inside Interleaf)

#### ***Using the Operating System's Copy Command***

For DOS systems, simply copy the file using the *copy* command, from its original directory to the *desktop* directory. If the document icon is not visible on the Interleaf desktop, hold down the menu button and execute *Custom→Rescan*. The document or host file icon for the file will appear on the Interleaf desktop.

For UNIX systems, simply copy the file using the *cp* command, from its original directory to the *desktop* directory. If the document icon is not visible on the Interleaf desktop, hold down the menu button and execute *Custom→Rescan*. The document or host file icon for the file will appear on the Interleaf desktop.

In both cases, you will have read/write access to the file you copied to your desktop. The original document remains untouched.

#### ***Using the Copy→Link Command***

On the Interleaf desktop, execute *Copy→Link*. Paste the document onto your desktop. Reselect the linked document, hold down the menu button, and execute *Copy*. Then execute *Paste*. Your own copy of the document is pasted onto your desktop. Cut the linked document. The remaining document is a true copy (of the original linked document) to which you have read/write access. The original document remains untouched.

#### **I copied a file to my desktop directory, but the file does not appear on my Interleaf desktop. Why?**

If you copy a file to your desktop directory while the Interleaf desktop is open, the desktop needs to be updated (redrawn) in order for the file's icon to

appear. If you want all of the current files in the *desktop* directory to appear on the Interleaf desktop, simply move the mouse cursor to the Interleaf desktop (make sure nothing is selected), hold down the menu button, and execute *Custom→Rescan*. The desktop will be updated and all files in the *desktop* directory will be represented by icons.

### **Is an Interleaf document created in UNIX readable by Interleaf on DOS?**

Yes. To accomplish this you need to use an Interleaf-provided utility called the *Interleaf Desktop Utility (IDU)*.

The *IDU* bundles an Interleaf file (or group of files in a container) into a single binary file that can then be unbundled on another operating system. This allows you to share Interleaf files between various operating system platforms.

The reason you need such a utility is because the filenames for Interleaf documents, part files, and containers used by UNIX are different from those used by DOS. For example, if you create an Interleaf document on a UNIX system and store the document in a folder, you cannot simply copy the folder onto an Interleaf desktop on DOS, because DOS does not use the same file naming conventions as UNIX.

In order to fluently transfer files back and forth between the DOS and UNIX Interleaf desktops, for example, you need the *IDU* utility to convert Interleaf files into a generic binary file format that will preserve the filenames and directory structure between operating systems.

The general steps involved in transferring a document from one operating system to another are as follows:

1. Invoke the *IDU* to bundle the Interleaf document into an *IDU* file.
2. Transfer the *IDU* file to the new operating system.
3. On the new operating system, invoke the *IDU* to unbundle the *IDU* file into an Interleaf document.
4. Move the new Interleaf document to your desktop directory.

*The new document will be readable by Interleaf on the new operating system.*

## A UNIX to DOS Example

Let's assume that you are using Interleaf on a UNIX system. On your desktop you have a book called *Project\_1*, which contains 10 documents you've been working on.

The engineer you are working with wants to review your work. She happens to be using Interleaf on a DOS system. The two operating systems (UNIX and DOS) are connected by network software, so file transfer is not a problem. What is a problem, however, is file format. The UNIX version of the Interleaf book (*Project\_1*) must be converted to a DOS version. This conversion takes places with the *IDU*, starting on the UNIX system as follows:

### **On the UNIX Side**

1. On the UNIX system, exit the Interleaf desktop and open a shell tool.
2. Change directory (*cd*) to your Interleaf desktop directory.

*For the sake of the example, we are assuming that the Project\_1 book is directly on your Interleaf desktop, and not stored in another container.*

When you invoke the *IDU* you must include switches that tell the *IDU* if you are bundling an Interleaf file into an *IDU* file or unbundling an *IDU* file into an Interleaf file. The syntax to create (bundle) an *IDU* file is as follows:

***idu -cf idu\_filename input\_filename***

The *-cf* switch stands for “create file.” The *idu\_filename* is the resulting *IDU* file that gets created. The *input\_filename* is the file or container you wish to transfer.

3. In the open shell tool window, type:

***idu -cf project1.idu Project\_1.boo***

*This will create an IDU file called “project1.idu” from the Interleaf file “Project\_1.boo.”*

4. Use your network software to transfer *project1.idu* from UNIX to DOS.

## On the DOS Side

Now let's switch hats and become the engineer who has to do the review. After we receive the *project1.idu* file from UNIX, we must unbundle it (using the *IDU*) on DOS. The unbundling process will convert the *IDU* file (*project1.idu*) into a format that DOS can understand. To unbundle *project1.idu*, follow these simple steps:

1. On DOS, exit Interleaf.
2. Change directory (*cd*) to the *desktop* directory.

Once again, when you invoke the *IDU* you must include switches that tell the *IDU* if you are bundling an Interleaf file into an *IDU* file or unbundling an *IDU* file into an Interleaf file. The syntax to unbundle an *IDU* file is as follows:

**idu -xf idu\_filename**

The *-xf* switch stands for “extract file” (meaning extract the Interleaf file from the *IDU* file). The *idu\_filename* is the name of the *IDU* file that you created on UNIX and transferred to DOS.

3. At the DOS prompt, type:

**idu -xf project1.idu**

*This converts the project1.idu file to a Project\_1 book icon that is readable on the DOS Interleaf desktop.*

4. Re-invoke Interleaf (on DOS).
5. Look on the Interleaf desktop for a new book called *Project\_1*. If the book is missing, execute *Custom→Rescan* from the desktop.

*The Project\_1 book was the result of running the IDU utility on the project1.idu file. As we saw earlier, the person who created project1.idu on the UNIX system bundled the Project\_1 book into an idu file called project1.idu. You then used the IDU utility to unbundle the project1.idu file back into a Project\_1 book that was readable on the DOS Interleaf desktop.*

6. Once the unbundling is complete, you can select the *project1.idu* host file from the Interleaf desktop and cut it.

*After the transfer and unbundling are complete, you no longer need the IDU file.*

## Is an Interleaf document created in DOS readable by Interleaf on UNIX?

Yes. The process is identical to that of transferring a UNIX file to DOS, only reversed. To transfer an Interleaf document created on DOS to a UNIX Interleaf desktop, you must use the *IDU* as follows:

1. At the DOS prompt, invoke the IDU to bundle the Interleaf document into an IDU file.
2. Transfer the IDU file to the new operating system.
3. In a UNIX shell tool, invoke the IDU to unbundle the IDU file into an Interleaf document.
4. Move the new Interleaf document to your desktop directory.
5. Invoke the Interleaf desktop.

*The new document will appear on the UNIX Interleaf desktop exactly as it appeared on the DOS desktop.*

## A DOS to UNIX Example

Let's assume that you wanted to transfer the *Project\_1* book to the UNIX Interleaf desktop. To accomplish this, you must invoke the *IDU* as follows:

### On the DOS Side

1. Exit Interleaf to return to the DOS prompt.
2. Change directory (*cd*) to the *desktop* directory (if you're not already there).

*If you executed a "dir" command at this point, you'd notice that the Project\_1 book is listed as "projeboo.dir." This is because DOS filenames are limited to eight characters, plus a three-character extension. Since Project\_1.boo is a nine-character name with a three-character extension, Interleaf has to shorten the name when it is listed in the DOS directory. When you see the book on the DOS Interleaf desktop, however, it still appears as Project\_1.*

3. At the DOS prompt, type:

**idu -cf project1.idu projeboo.dir**

*This will create an IDU file called "project1.idu" from the "Project\_1.boo."*

4. Execute the *dir* command from the DOS prompt.

*Notice that a new file called project1.idu has been created. Using your network software, transfer this file to the UNIX system, where a UNIX user will run the IDU utility to unbundle the file.*

### **On the UNIX Side**

Once again, let's switch hats and become the person on the UNIX side. After we receive the *project1.idu* file from DOS, we must unbundle it (using the *IDU*) on UNIX. The unbundling process will convert the *IDU* file (*project1.idu*) into a format that UNIX can understand. To unbundle *project1.idu*, follow these simple steps:

1. On UNIX, exit Interleaf.
2. Change directory (*cd*) to the *desktop* directory.
3. At the UNIX prompt, type:

**idu -xf project1.idu**

*This converts the project1.idu file to a Project\_1 book icon that is readable on the UNIX Interleaf desktop.*

4. Re-invoke Interleaf on UNIX.
5. Look on the Interleaf desktop for a new book called *Project\_1*. If the book is missing, execute *Custom→Rescan* from the desktop.

*The Project\_1 book was the result of running the IDU utility on the project1.idu file. As we saw earlier, the person who created project1.idu on the DOS system bundled the Project\_1 book into an idu file called project1.idu. You then used the IDU utility to unbundle the project1.idu file back into a Project\_1 book that was readable on the UNIX Interleaf desktop.*

6. Once the unbundling is complete, you can select the *project1.idu* host file from the Interleaf desktop and cut it.

*After the transfer and unbundling are complete, you no longer need the IDU file.*

**Does the IDU work only between DOS and UNIX?**

No. The *IDU* was designed to make any Interleaf document or container portable between any two operating systems that Interleaf supports. When unbundled, the *IDU* files are formatted and named in accordance with the operating system on which they are unbundled.



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