



Windows *and* Window Based Tools: Beginner's Guide



Contents

Chapter 1 The Window System	3
1.1. A Window System in Operation	3
1.2. Parts of the Sun Workstation	4
1.3. Cursor Versus Caret: Window System Locators	5
Chapter 2 Setting Up Windows	9
2.1. Starting <code>suntools</code>	9
2.2. "Stuck" Mice: No Cursor Movement	11
2.3. Open a Window	12
2.4. Starting <code>suntools</code> Automatically Upon Login	14
2.5. Summary	15
Chapter 3 Modifying Windows	19
3.1. Modifying Your Window	19
Pop Up the Frame Menu	19
Changing the Location of a Window	20
Resizing, or Changing the Size of a Window	24
Closing and Opening a Window	27
Chapter 4 Creating Application Windows	33
4.1. Creating Application Windows	33
Pop Up the Root Menu	33
4.2. Creating a Window	34
Chapter 5 Manipulating Windows	39

5.1. Playing With Multiple Windows	39
Exposing Windows	40
Hiding Windows	41
Redisplaying a Window	43
Redisplaying All of the Windows	43
Quitting a Window	43
Exiting the Window System	44
Chapter 6 Storing Window Attributes	47
6.1. toolplaces	47
6.2. The .suntools File	48
Chapter 7 Window-Based Tools	53
7.1. List of Window-Based Tools	53
7.2. clock	61
7.3. perfmeter	61
7.4. shelltool	62
7.5. textedit	62
Chapter 8 Editing and the Text Facility	65
8.1. Setting Up Function Keys	65
8.2. New-Style Menus, or Walking Menus	70
8.3. Basic Editing	70
Terminology	71
Starting textedit	72
Loading the Initial File	73
Selecting Text	75
Insertion Point	77
Basic Editing Operations	78
Scrolling Text	86
Saving Your Work	87
8.4. Intermediate Editing	89
The Scratch Text Subwindow	89

Changing the Working Directory with the Text Menu	91
Loading a File with the Text Menu	92
Clearing the Text Subwindow with <code>reset</code>	94
Creating a File from Scratch	94
Leaving the Editor	94
8.5. Summary of Basic and Intermediate Editing	94
Chapter 9 Advanced Editing	99
9.1. More About the Text Menu	99
9.2. Advanced Editing	101
Terminology	102
Advanced Selecting	102
Aborting an Operation	106
Advanced Scrolling	106
Splitting	107
Advanced Editing Operations	108
Searching for Text Selections	111
The Again Operation	112
Editing Tty Subwindows and Panel Text Items	113
Editing Command Subwindows	113
9.3. Shift Toggles Direction of Function	114
9.4. Mousing Ahead	114
9.5. Wrapping Long Lines	114
9.6. Remember to Save Your Work	115
9.7. Filters and Extensibility	115
9.8. Text Options	115
9.9. Summary of Text Facility	116
Chapter 10 The Command Facility	121
10.1. <code>cmdtool</code>	121
10.2. Command Facility Characteristics	123
Read-Only Boundary	123
Interpretation of Certain Control Characters	123

Moving to the Current Command Prompt	123
vi, more, and su: Cbreak or Raw Mode	123
10.3. Summary	124
Chapter 11 Other Editing Tools	127
11.1. defaultsedit	127
11.2. iconedit	130
11.3. fontedit	131
11.4. Summary	133
Chapter 12 Special-Purpose Displays	137
12.1. gfxtool	137
12.2. tektool	138
Chapter 13 Menu Accelerators	143
13.1. Accelerate to End of Text Subwindow	143
13.2. Accelerated Full-Length Zoom	143
13.3. Mouse Button Accelerators	143
Chapter 14 Focusing Attention	147
14.1. Click-To-Type	147
Why Use “Click-To-Type?”	147
How to Use “Click-To-Type”	148
Chapter 15 Modifying Your Root Menu	151
15.1. Constructing a Root Menu File	151
The Default Root Menu File	151
Make Your Own Root Menu File	152
15.2. Inform defaultsedit of Your Filename	153
15.3. Exit and Restart suntools	153
15.4. Walking or Stacking Root Menus	153
15.5. Using Icons to Illustrate Your Root Menu	155
Shopping for Icons	155
Inserting the Icons into the Root Menu	155

Chapter 16	Modifying Subwindow Behavior	159
16.1.	Modifying Tty Subwindow Behavior	159
	Page Mode On/Off	159
	Mapping Functions to Keys	160
	Format of the <code>.ttyswrc</code> File	160
	Example <code>.ttyswrc</code> File	162
16.2.	Modifying Text Subwindow Behavior	163
	Mapping Filters or Functions to Keys	163
	Format of the <code>.textswrc</code> File	163
	Example <code>.textswrc</code> File	165
	Mapping Functions to the Arrow Keys	166
	<i>How Controllers Organized By Function</i>	
Chapter 17	Other Features	169
17.1.	<code>lockscreen</code>	169
17.2.	<code>screendump</code>	170
Appendix A	Further Reading	173
Appendix B	Glossary	177

Chapter 16	Modifying Subwindow Behavior	159
16.1.	Modifying Tty Subwindow Behavior	159
	Page Mode On/Off	159
	Mapping Functions to Keys	160
	Format of the <code>.ttyswrc</code> File	160
	Example <code>.ttyswrc</code> File	162
16.2.	Modifying Text Subwindow Behavior	163
	Mapping Filters or Functions to Keys	163
	Format of the <code>.textswrc</code> File	163
	Example <code>.textswrc</code> File	165
	Mapping Functions to the Arrow Keys	166
	<i>166 Accelerators Organized By Function</i>	
Chapter 17	Other Features	169
17.1.	<code>lockscreen</code>	169
17.2.	<code>screendump</code>	170
Appendix A	Further Reading	173
Appendix B	Glossary	177

Setting Up Windows

Setting Up Windows	9
2.1. Starting suntools	9
2.2. "Stuck" Mice: No Cursor Movement	11
2.3. Open a Window	12
2.4. Starting suntools Automatically Upon Login	14
2.5. Summary	15

Setting Up Windows

In this chapter, you will learn how to:

- Start `suntools`
- Fix “stuck” mice
- Use the mouse to open an icon
- Start `suntools` automatically upon login

2.1. Starting `suntools`

To start the window system, log in to your machine, then type `suntools` to the UNIX† command prompt.³

Figure 2-1 *Starting suntools*

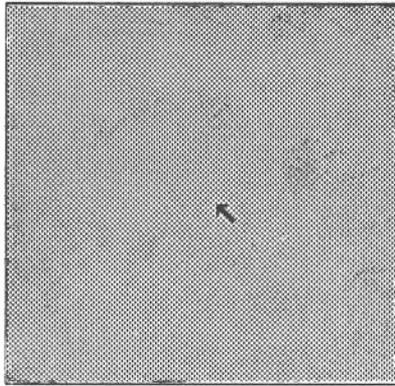
```
venus% suntools
```

At this point, the screen clears, then a granular gray surface appears.⁴

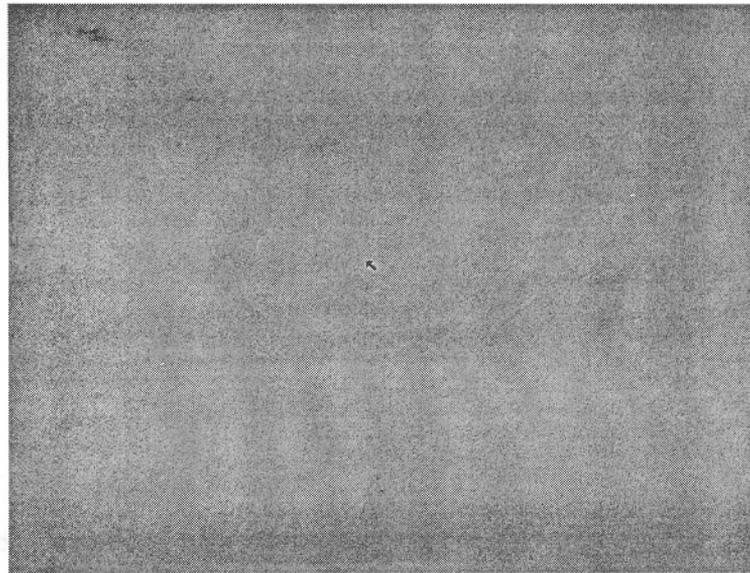
† UNIX is a trademark of AT&T Bell Laboratories.

³ The command prompt is `venus%` in this case, because the example machine is called `venus`.

⁴ If you get an error message, you may be trying to run the window system on the wrong equipment. Contact someone who is using the window system or your system administrator.

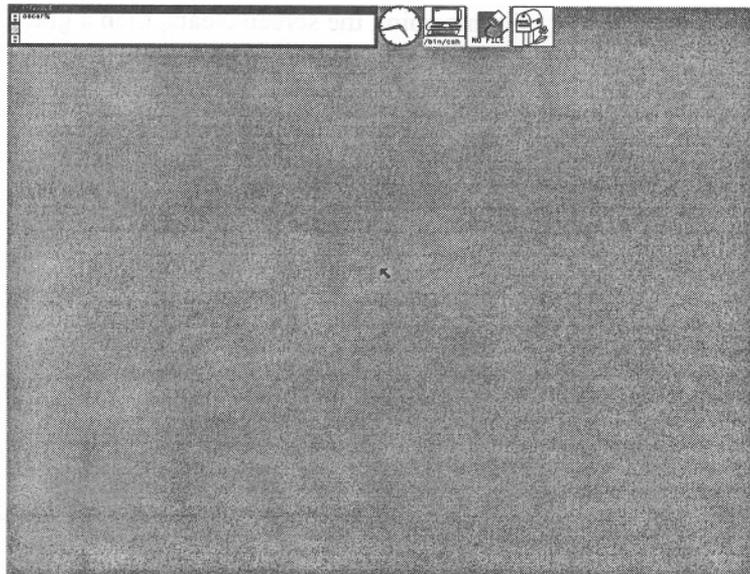
Figure 2-2 *Granular Gray Surface With Cursor*

Enlarged view



Note: The *console* window is a special window that displays messages about the status of the system.

Soon, objects appear along the top of the gray background screen. Most of the objects are *icons*, or “closed” windows, except for one window, the *console* window, that is open. An icon is a little drawing that represents a closed window. You must open an iconic window before you can type commands to the window. `suntools` is ready for your instructions when the screen looks like this:

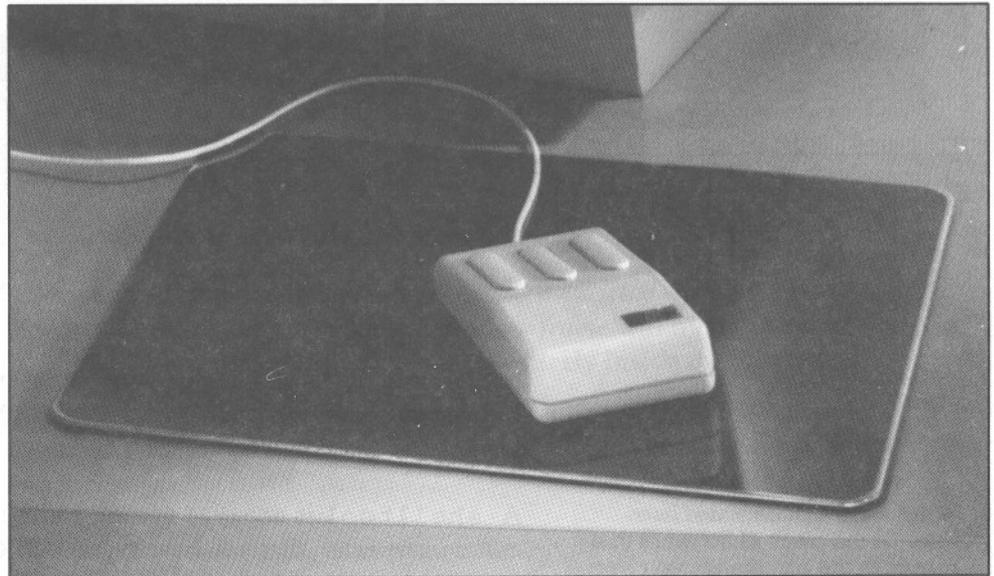
Figure 2-3 *suntools Screen: Ready for Instructions*

The amount of time it takes for `suntools` to start depends on the number of tools you want it to initiate and display on the screen.⁵

Though it is inconspicuous at first glance, look for the black arrow somewhere on the gray screen, usually in center screen pointing “northwest.” That is the cursor.

To move the cursor, push the mouse about on its tablet. Make sure that the mouse’s “eyes” are on its underbelly, in other words, the mouse buttons are on top; then, the mouse can read the lines on the tablet to indicate relative position on the screen. Also, make sure to orient the mouse perpendicular to one of the long sides of the tablet, so that the cursor responds appropriately when you move the mouse — if the cursor doesn’t respond properly, rotate the mouse on the tablet, then try moving the cursor again.

Figure 2-4 *Moving a Mouse on Its Tablet*



2.2. “Stuck” Mice: No Cursor Movement

If the cursor won’t move when you push your mouse on its tablet, your mouse may be “stuck.” Try pushing the mouse rapidly in large circles on the tablet several times. The mouse should then start to control the cursor position.⁶

⁵ See the chapter on storing window attributes to learn about controlling the number of windows on the screen just after starting `suntools`.

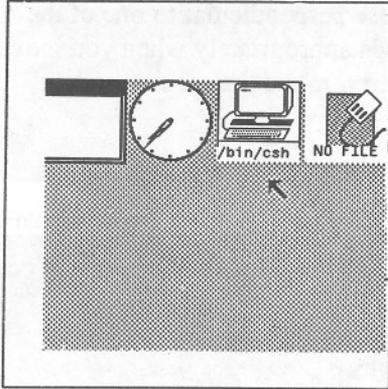
⁶ If the mouse still won’t control the cursor position, check to make sure it is plugged in to your workstation without a loose connection. If that fails to solve the problem, unplug the mouse from the workstation and plug it in again. If it still doesn’t work, the mouse or the workstation may be defective — contact your system administrator.

2.3. Open a Window

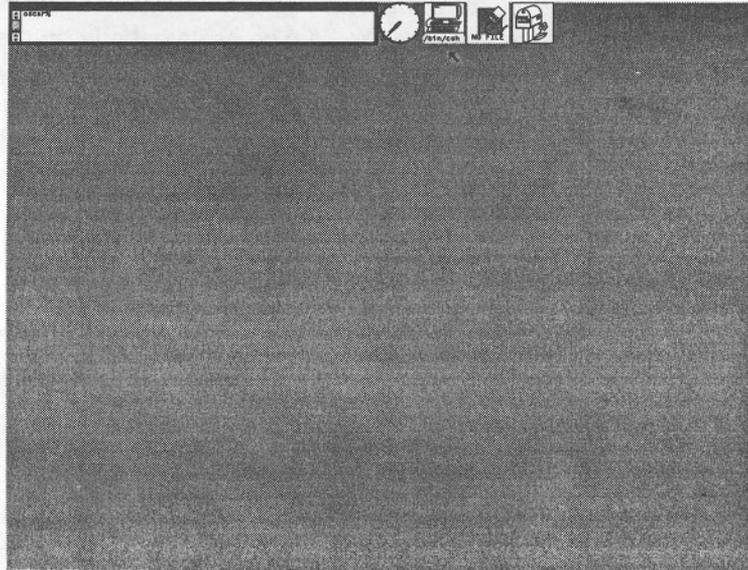
There it is — the `suntools` screen. What useful things can you do with it?

Push the mouse so as to move the cursor onto the small rectangular icon that looks like this, the `shelltool` icon:

Figure 2-5 *Shelltool Window Icon*



Enlarged view



Make sure to pick the `shelltool` icon above, not one of the other two icons on the screen.⁷

In this case, the `shelltool` icon represents a closed, or iconic, `shelltool`. In fact, each icon represents not a window, but a *tool*, in other words, a window application program that creates windows.

Note: A *shell*, or *command interpreter*, is the piece of software that translates the commands you type so the UNIX operating system can understand and act on them.

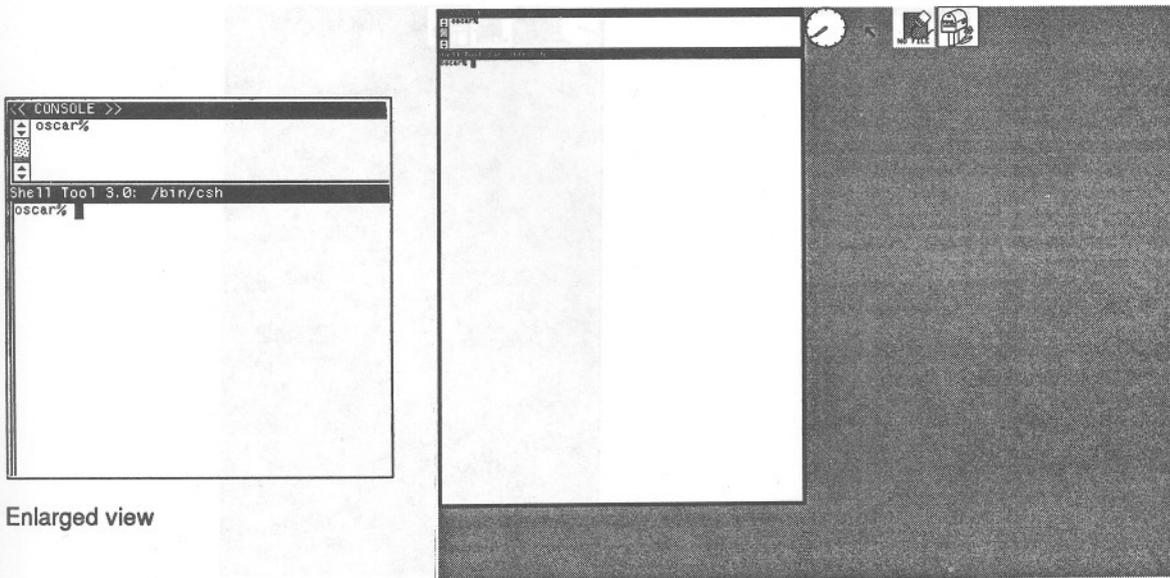
A `shelltool` is one type of tool. `shelltools` run the *shell*, or the *command interpreter*, that you have typed UNIX commands to all along. With `shelltools` that run only within `suntools`, you can have several windows running the UNIX command interpreter on the screen simultaneously.

To *open* the iconic `shelltool` window, move the cursor over the `shelltool` icon and *click*, or press and release, the left mouse button. An open `shelltool` appears in the gray surface of the screen.⁸

⁷ You will learn about the `textedit` and `mailtool` icons in the chapter on window-based tools, Chapter 7.

⁸ Window system performance may deteriorate when your machine doesn't have enough memory or runs too many programs in the background. When your machine is a client machine of an overloaded file server, performance slows as well. If the window system seems sluggish, contact your system administrator to understand and remedy the difficulty.

Figure 2-6 Open shelltool Window



Enlarged view

Note: The window *frame* comprises the *namestripe* across the top of the window, and the *borders* on the other three sides of the window.

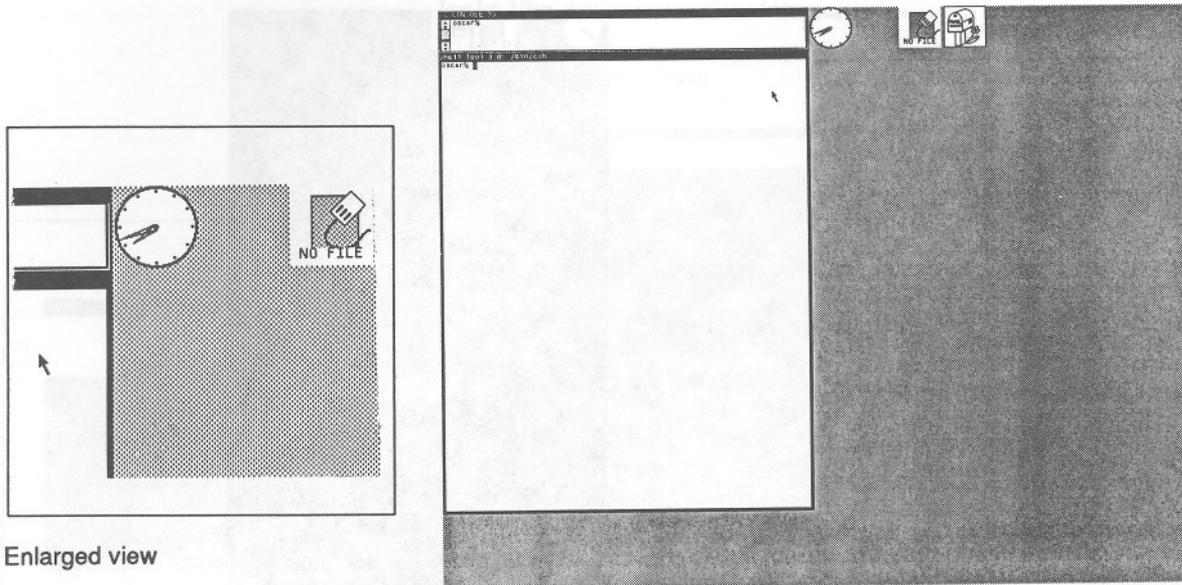
You can use the “left-click” method of opening an iconic window with any of the icons on the screen.

To make use of the window, you must move the cursor within the borders of the window. Locating the cursor on the window *frame* will **not** allow you to type in the window — you must move the cursor **entirely inside** the window.

The system confirms your window choice by filling in the window border. Try moving the cursor slowly in and out of the window to see how the window border changes.⁹

⁹ If the system does not confirm your window choices by darkening the window border, it may be operating with the “click-to-type” method for choosing windows. See the chapter on focusing attention (Chapter 14 .)

Figure 2-7 Border Changes When Choosing a Window



Enlarged view

You can type commands to the command prompt within the window just as you typed commands to the prompt you used before starting `sunttools`. For example, try creating a file using `cat >`, looking at it with `more`, and listing your working directory with `ls`. Notice that whenever the cursor wanders outside of the window, your typing no longer appears in the window. You can't do work in that window until you move the cursor into the window again.¹⁰

2.4. Starting `sunttools` Automatically Upon Login

If you want `sunttools` to start automatically when you log in on your workstation, insert the following lines at the end of your `.login` file:

```
if ( "`tty`" == "/dev/console" ) then
echo "Do you want windows?"
echo "If not type ^C now"
    /usr/bin/sunttools
endif
```

Then, when you log in, the system will display

```
Do you want windows?
If not type ^C now
```

on your screen. If you don't type **CTRL-C** within a second or two, `sunttools` will start.

¹⁰ To learn about "click-to-type," an alternative to the "cursor-in-window" method of choosing a window, see the chapter on focusing attention, Chapter 14.

2.5. Summary

Now that you know how to start `suntools`, fix “stuck” mice, and open an iconic window, you can learn how to modify the open window on the screen.

Modifying Windows

Modifying Windows	19
3.1. Modifying Your Window	19
Pop Up the Frame Menu	19
Changing the Location of a Window	20
Resizing, or Changing the Size of a Window	24
Closing and Opening a Window	27

Modifying Windows

This chapter explains how to modify windows, specifically how to:

- change the location of, or *move*, a window
- change the size of, or *resize*, a window
- *open* and *close* windows

3.1. Modifying Your Window

To modify the window you opened in the last chapter, you can use the *frame* menu. The frame menu allows you to modify individual windows.

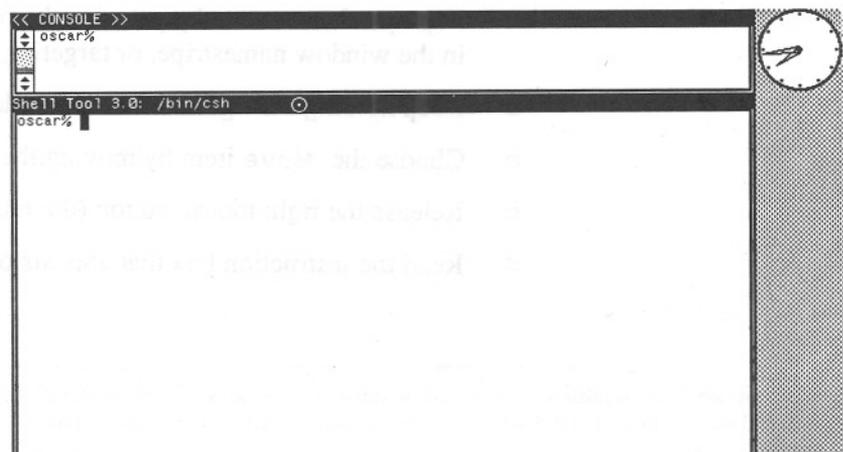
Pop Up the Frame Menu

Note: When you *pop up* a menu, you make it visible on the screen. The frame menu that first appears is an *old-style* menu, unless you change the style, as described in the section on walking menus (Section 8.2), in which case the header *Frame* doesn't appear at the top of the frame menu.

Move the cursor to the namestripe across the top of the window. Then, *pop up* the frame menu by pressing, and holding down, the right mouse button while the cursor is over the window frame (the namestripe or border of the window).

When you move the cursor onto the window frame, a small *target circle cursor* with a dot in the center appears. Pop up the menu by pressing, and holding down, the right mouse button.

Figure 3-1 Target Circle for Popping Up a Frame Menu



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Figure 3-1 Target Circle for Popping Up a Frame Menu

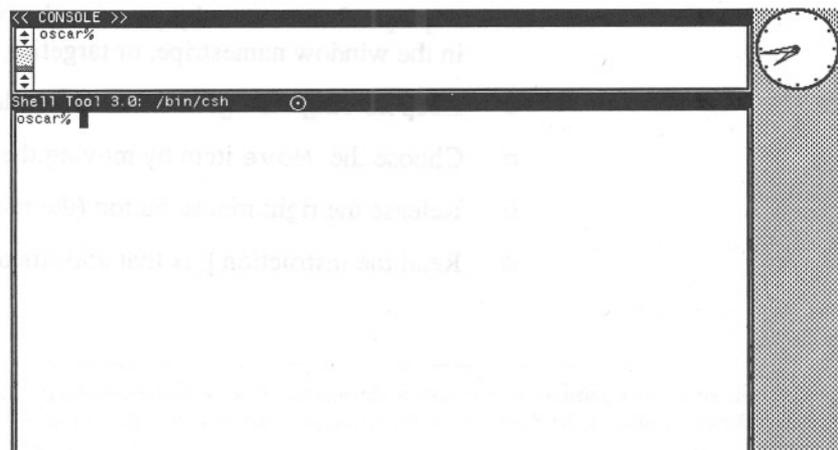
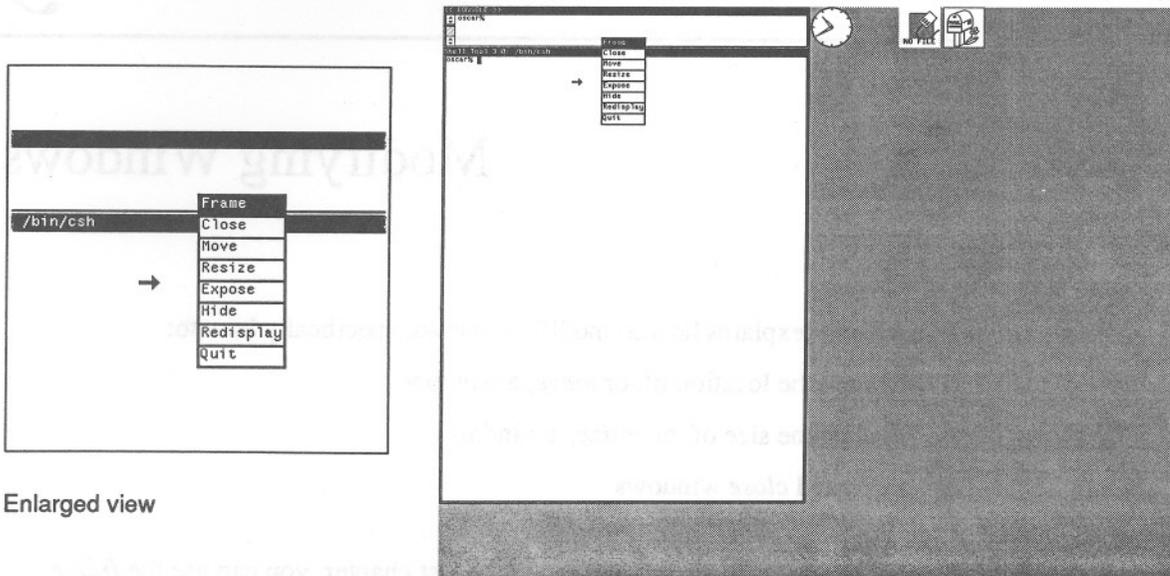


Figure 3-2 The Frame Menu



Enlarged view

Note: When you select an item within the menu box, the window system notifies you of your choice by reversing the colors of the rectangular item area you have selected. When you release the mouse button, the window system executes the item you chose. If you don't select anything, nothing happens.

Changing the Location of a Window

The frame menu has the abbreviation *Frame* as its *header*. Notice that the cursor changes — it points due “east” when you pop up a menu. That is so that you can *choose* a menu item, such as *Move* to change the location of a window.

When you decide not to choose a menu item, move the cursor outside the menu box, and release the right mouse button. The menu box will disappear.

How can you move the window from its current screen location to your favorite spot on the vast expanse of unadulterated gray screen?

Here are the steps:

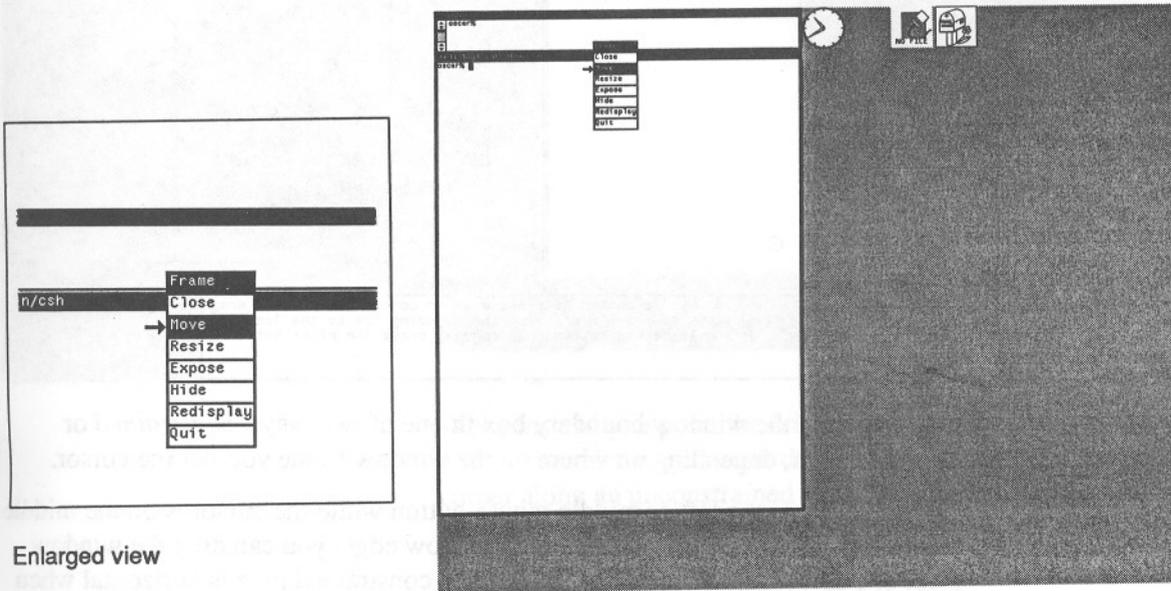
- Pop up a frame menu by pressing the right mouse button while the cursor is in the window namestripe, or targeting a window border
- Keep holding the right mouse button down
- Choose the *Move* item by moving the cursor into the menu item rectangle
- Release the right mouse button (the menu box disappears)
- Read the instruction box that appears on the screen

Note: A *boundary box* is a rectangle that defines the boundary, or borders of a window. So, when changing window locations, the boundary box informs you where the window will settle after you release the mouse button.

- Drag the window to the desired location by pressing, and holding, the left or middle mouse button and using the mouse to move the window's *boundary box*
- Release the mouse button¹¹

Here are some illustrations of these steps:

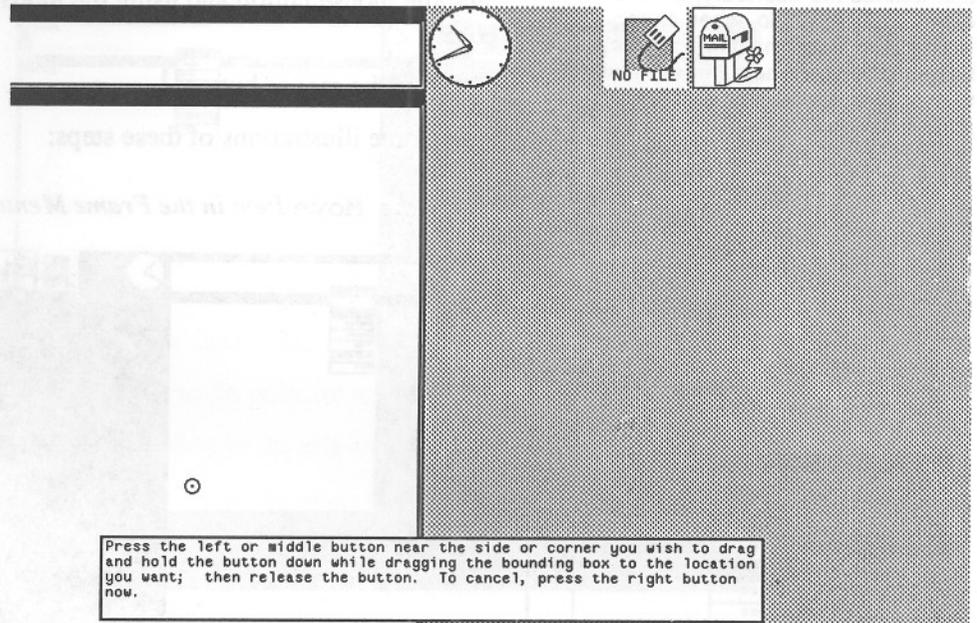
Figure 3-3 *Choosing the Move Item in the Frame Menu*



Enlarged view

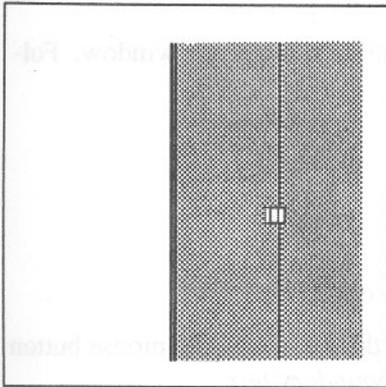
¹¹ For a quick method of changing window location without using a menu, see the chapter on accelerators, Chapter 13. The quick reference appendix provides a quick reference to the function keys and most of the accelerators.

Figure 3-4 The Instruction Box for Moving Windows

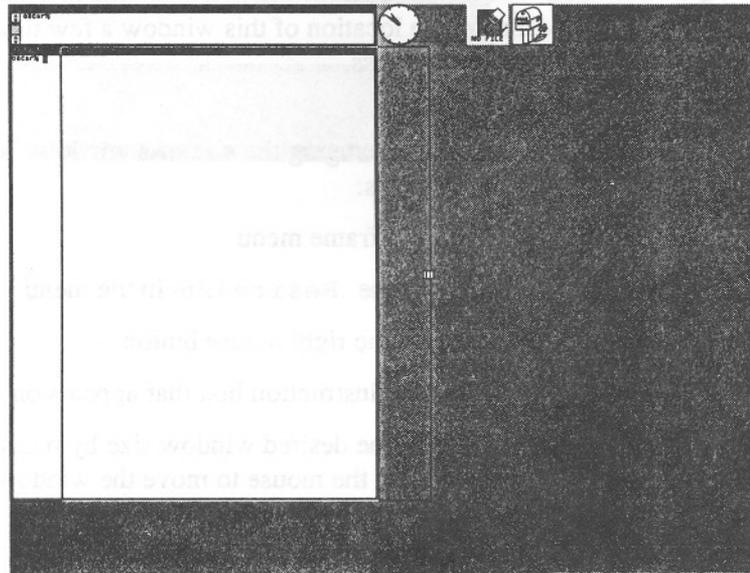


You can *drag* the window boundary box in one of two ways, *constrained* or *unconstrained*, depending on where on the window frame you put the cursor.

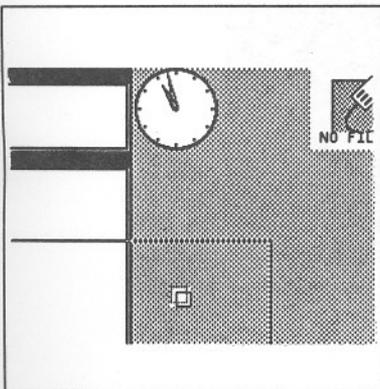
When you press the left or middle mouse button while the cursor is on the middle third of the window namestripe or any window edge, you can drag the window side, or edge, along a constrained path. The constrained path is horizontal when you pick the left or right window edge; it is vertical when you pick the namestripe or the bottom edge of the window. You move the mouse so that the *constrained movement cursor* indicates the new window position, then release the mouse button.

Figure 3-5 *Dragging a Window Boundary Box: Constrained*

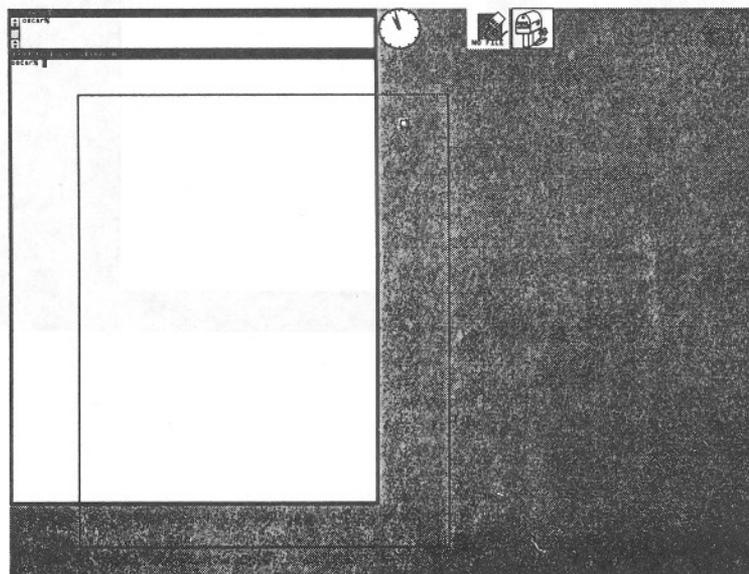
Enlarged view



When instead you press the left or middle mouse button while the cursor is within one-third edge length of a window corner, you can drag the window corner along an unconstrained path. The unconstrained path is horizontal, vertical, or diagonal, depending on how you move the *unconstrained movement cursor*. Release the mouse button to fix the window in the new position that you desire.

Figure 3-6 *Dragging a Window Boundary Box: Unconstrained*

Enlarged view



When you can see the instruction box and you want to cancel the moving operation, simply click the right mouse button, as indicated in the instructions, and the instruction box will disappear without changing the location of the window.

Change the location of this window a few times, so you can familiarize yourself with the process.

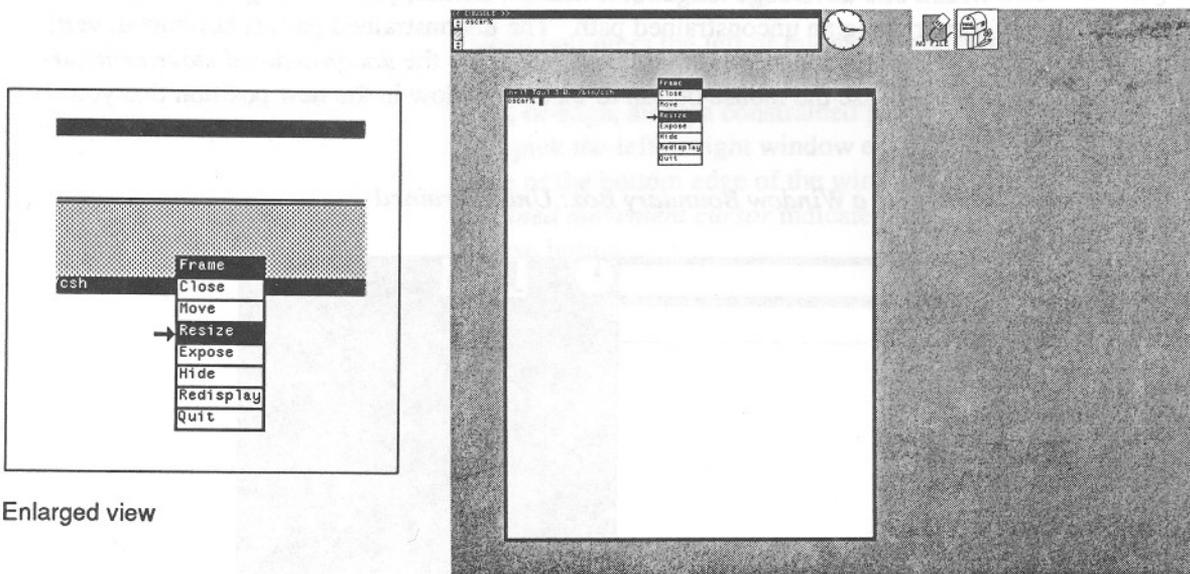
Resizing, or Changing the Size of a Window

Resizing, or changing the size of a window, is similar to moving a window. Follow these steps:

- Pop up a frame menu
- Choose the `Resize` item in the menu
- Release the right mouse button
- Read the instruction box that appears on the screen
- Specify the desired window size by pressing the left or middle mouse button and using the mouse to move the window's *boundary box*
- Release the mouse button

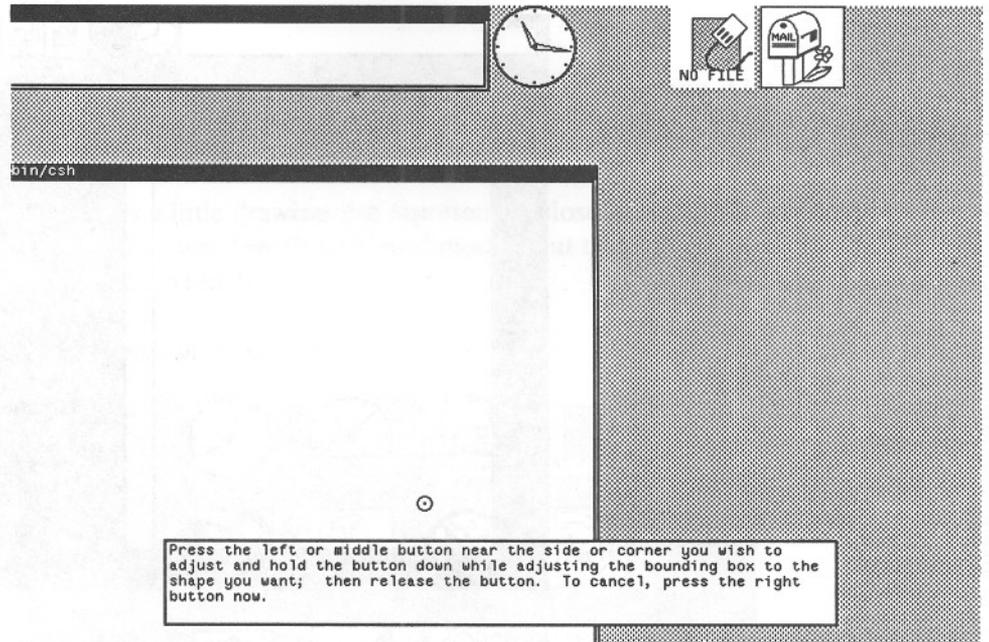
Here are some illustrations:

Figure 3-7 *Choosing the Resize Item in the Frame Menu*



Enlarged view

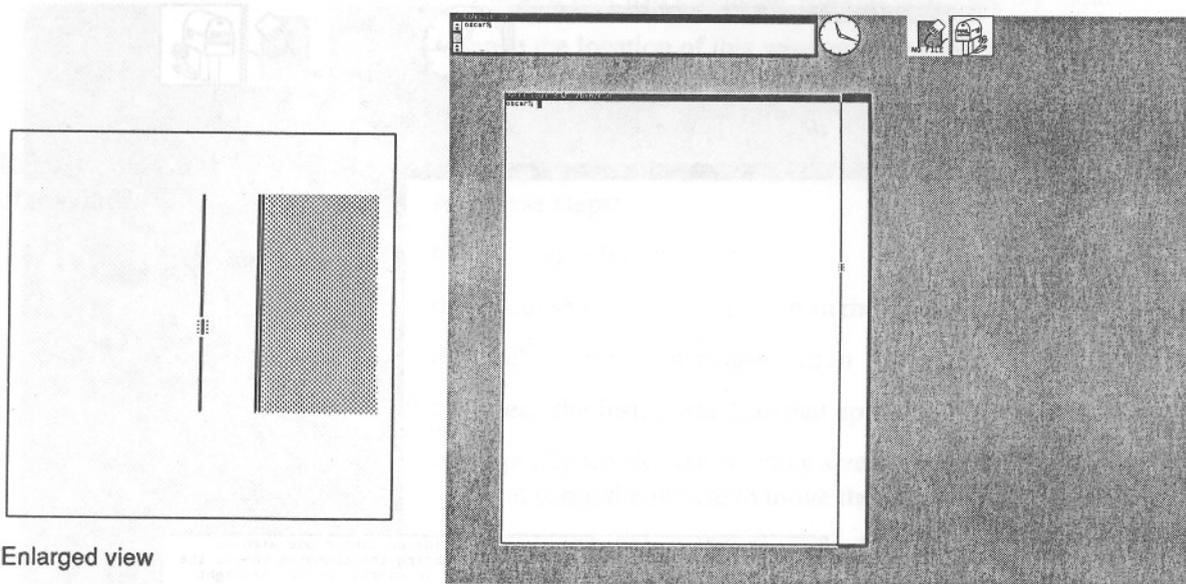
Figure 3-8 The Instruction Box for Resizing Windows



You can *adjust* the window boundary box in one of two ways, *constrained* or *unconstrained*, depending on where on the window frame you put the cursor.

When you press the left or middle mouse button while the cursor is on the middle third of the window namestripe or any window edge, you can adjust the window side, or edge, along a constrained path. The constrained path is horizontal when you pick the left or right window edge; it is vertical when you pick the namestripe or the bottom edge of the window. You move the mouse so that the *constrained resizing cursor* indicates the new window position, then release the mouse button.

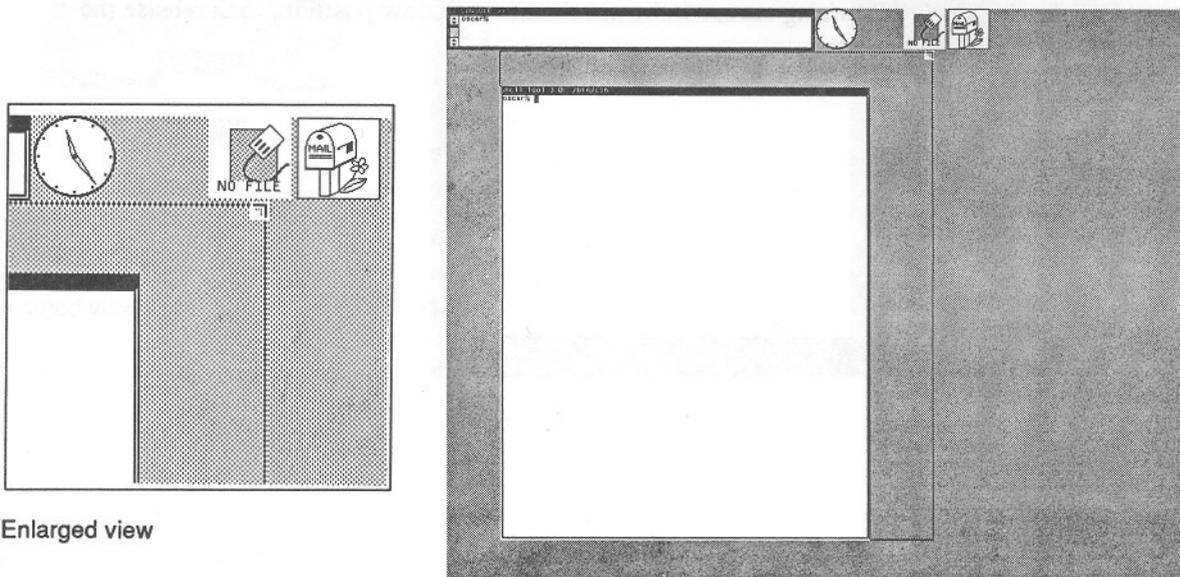
Figure 3-9 *Adjusting a Window Boundary Box: Constrained*



Enlarged view

When instead you press the left or middle mouse button while the cursor is within one-third edge length of a window corner, you can adjust the window corner along an unconstrained path. The unconstrained path is horizontal, vertical, or diagonal, depending on how you move the *unconstrained resizing cursor*. Release the mouse button to fix the window in the new position that you desire.

Figure 3-10 *Adjusting a Window Boundary Box: Unconstrained*



Enlarged view

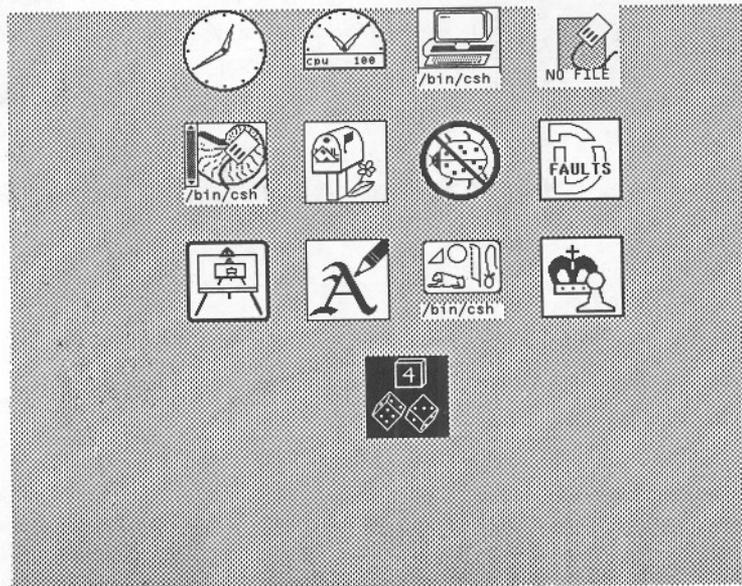
The instruction box notes that you can cancel the resizing operation by clicking the right mouse button, rather than continuing to size the window boundary box.¹²

Sometimes it is useful to “close” a window, or transform it into an *icon*. You might want to close the window while you aren’t using it, so that the window doesn’t take up as much space on the screen.

An icon is a little drawing that represents a closed window. Each type of window has its own icon. (You’ll read more about types of windows in Chapter 7 on window-based tools.)

Closing and Opening a Window

Figure 3-11 *Some Common Icons*



You can type commands to open windows, but not to closed windows.¹³ However, an iconic window will continue to execute commands that you typed before you closed the window.

To close a window, follow these steps:

- Pop up a frame menu
- Choose the `Close` item in the menu
- Release the right mouse button¹⁴

¹² For a quick way to resize windows without using a menu, see the chapter on accelerators, Chapter 13. The quick reference appendix provides a quick reference to the function keys and most of the accelerators.

¹³ `perfmeter` is one exception; see its Man Page, online or in the *Commands Reference Manual*.

¹⁴ For a quick way to close windows without using a menu, see the chapter on accelerators, Chapter 13. The quick reference appendix provides a quick reference to the function keys and most of the accelerators.

Figure 3-12 *Open shelltool Window*

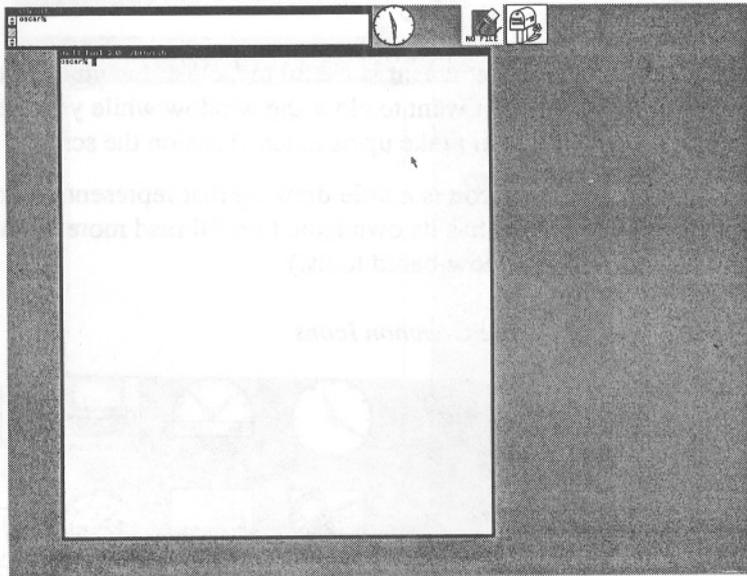
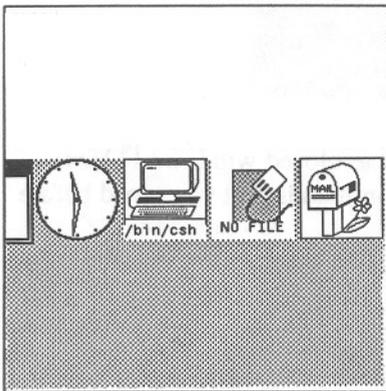
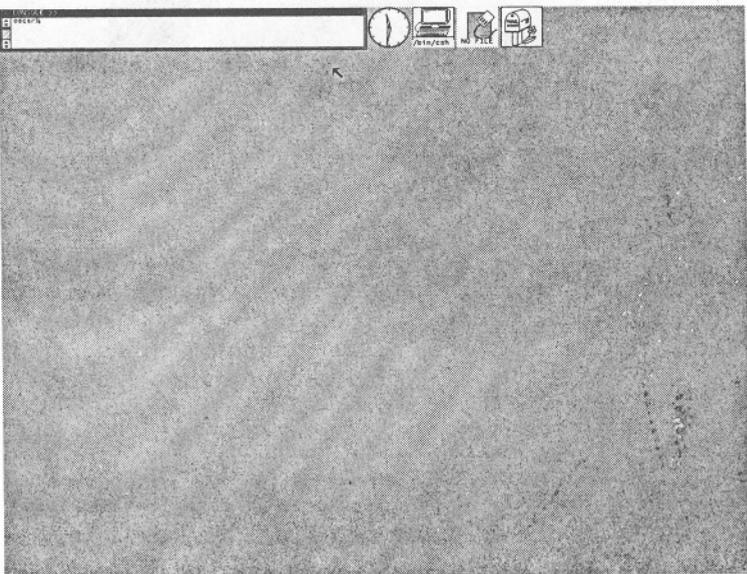


Figure 3-13 *Closed, or Iconic, shelltool Window*



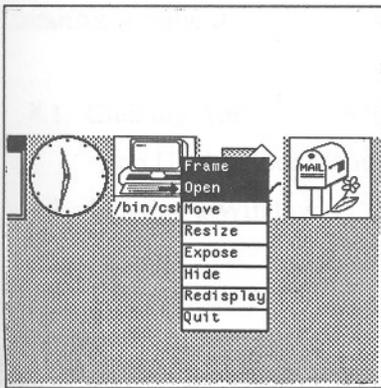
Enlarged view



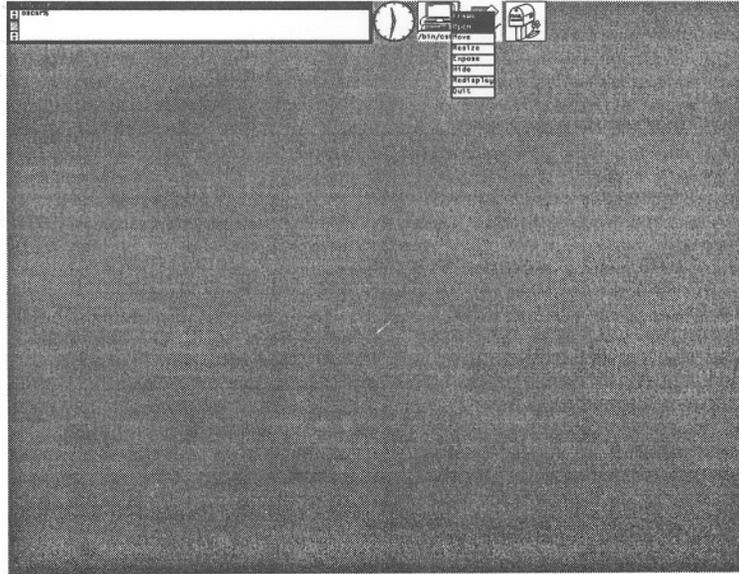
To open a window that is in its iconic state, follow these steps:

- Pop up a frame menu by pressing the right mouse button while the cursor is anywhere in the iconic rectangle
- Choose the `Open` item in the menu
- Release the right mouse button

Figure 3-14 *Choosing the Open Item in the Frame Menu*



Enlarged view



When you first started to use the window system, you opened a window by clicking the left button once on the appropriate icon. That is a fast way to open a window, known as an *accelerator*.¹⁵

Try opening and closing the window a couple of times to make sure you've got the idea.

You've learned how to move, resize, open, and close a window. Next, you can learn how to create a window "from scratch."

¹⁵ See the chapter about accelerators, Chapter 13. The quick reference appendix provides a quick reference to the function keys and most of the accelerators.

Windows and Window-Based Tools: Quick Reference

This quick reference describes the text facility operations of the mouse and the function keys.

The Mouse

Each of the mouse buttons has a general purpose:

LEFT	<i>selects</i>
MIDDLE	<i>adjusts (or modifies) a selection</i>
RIGHT	<i>pops up a menu</i>

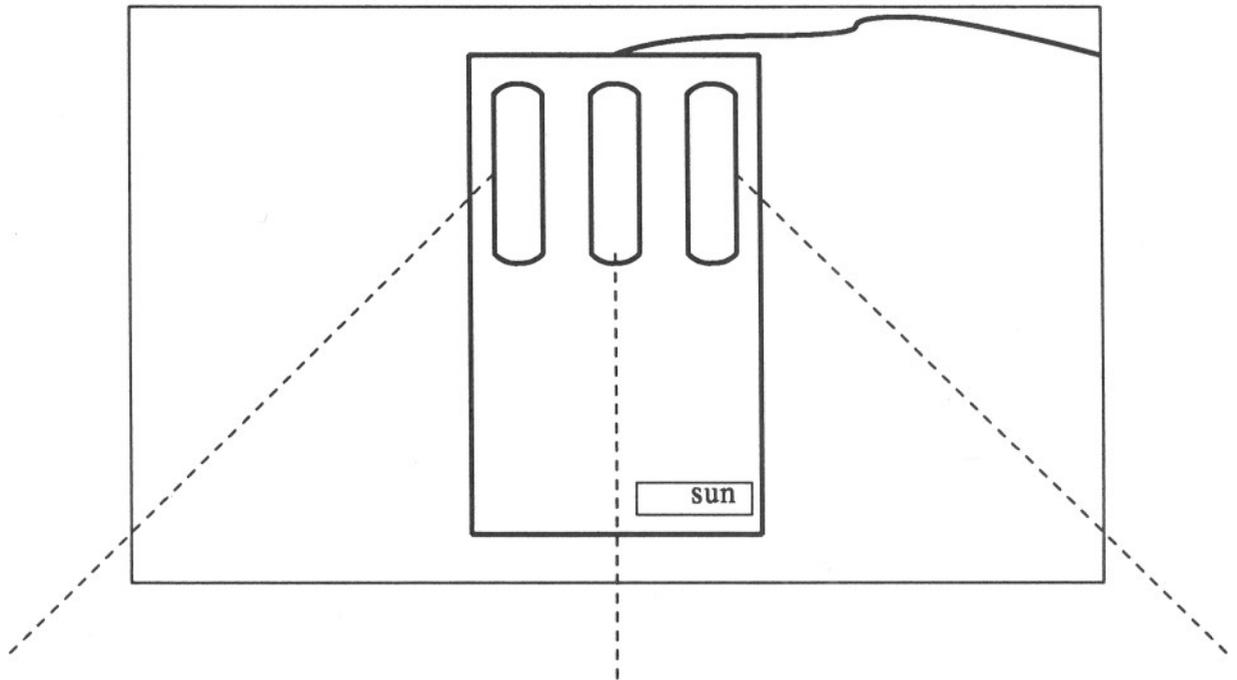
The **SHIFT** key toggles the “direction” of the action.

The **CTRL** key modifies the meaning of a choice or accelerator.

Mouse By Function

<i>Desired Function</i>	<i>Mouse Button Procedure</i>
open	LEFT on icon
expose	LEFT on frame (border or namestripe)
hide	SHIFT-LEFT on frame (border or namestripe)
move	MIDDLE on corner = unconstrained, vertical and horizontal adjustment MIDDLE on middle third of edge = constrained, movement either horizontally or vertically
resize	CTRL-MIDDLE on corner = unconstrained, vertical and horizontal adjustment CTRL-MIDDLE on middle third of edge = constrained, resizing either horizontally or vertically
zoom full length	CTRL-LEFT on frame (border or namestripe) toggles (switches back and forth) this feature
menu access	RIGHT and hold down, on frame (border or namestripe)

Mouse By Button



MIDDLE	On corner = unconstrained move, vertical and horizontal adjustment On middle third of edge = constrained move, either horizontally or vertically
SHIFT-MIDDLE	n.a.
CTRL-MIDDLE	On corner = unconstrained resize, vertical and horizontal adjustment On middle third of edge = constrained resize, either horizontally or vertically

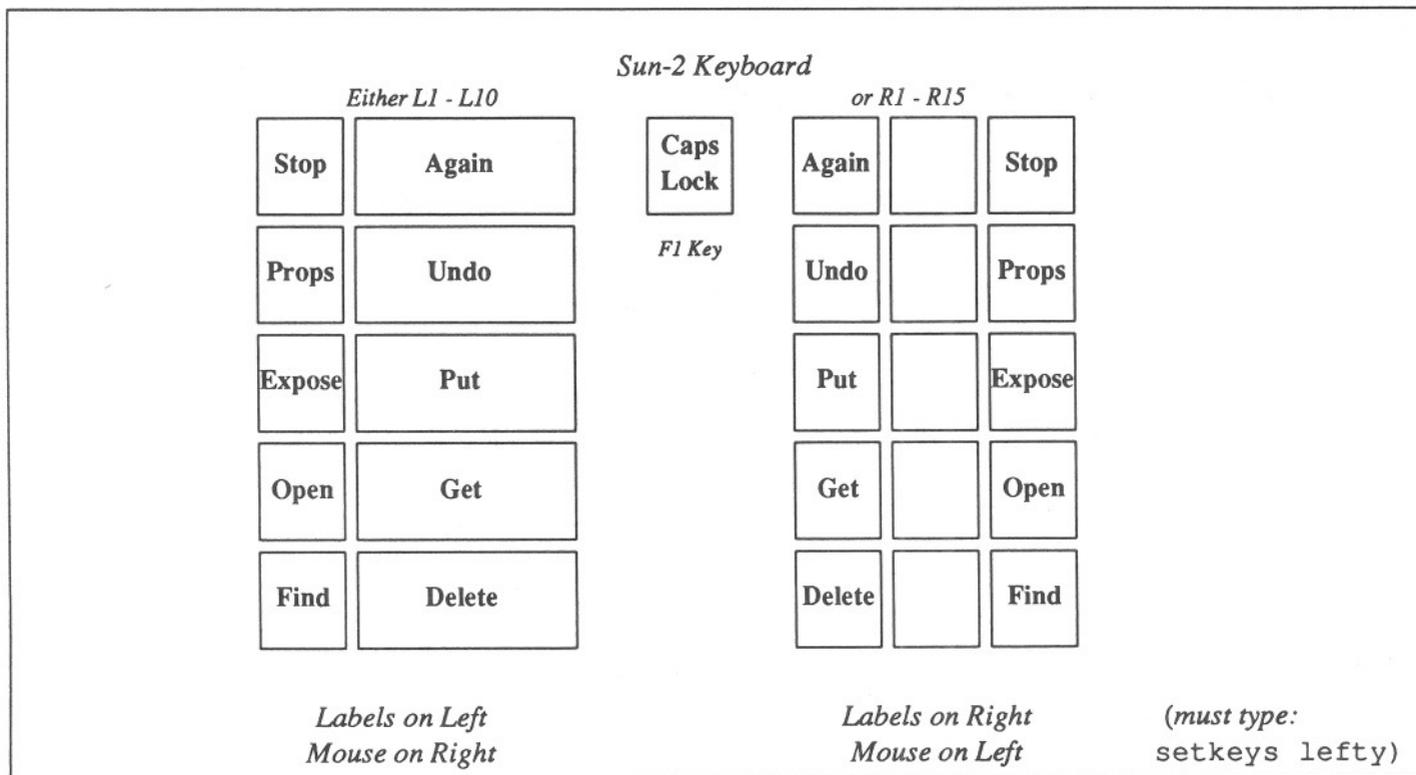
LEFT	On icon: open
SHIFT-LEFT	On frame (border/namestripe): expose
CTRL-LEFT	On frame (border/namestripe): hide
	On frame (border/namestripe): toggles zoom (full length)

RIGHT	On icon or frame (border/namestripe): pop up a menu
or SHIFT-RIGHT	
or CTRL-RIGHT	

Basic Editing

<i>Select</i>	<code>LEFT</code> to select, <code>MIDDLE</code> to adjust.
<i>Scroll</i>	<code>LEFT</code> in scroll button to scroll forward one line, <code>RIGHT</code> to scroll backward, <code>MIDDLE</code> to scroll a page.
<i>Insert</i>	Type characters.
<i>Delete</i>	<code>Delete</code> function key. With characters adjacent to the caret, you can use UNIX rubout, erase word, or line kill characters.
<i>Reinsert deleted text</i>	<code>Get</code> or <code>CTRL-G</code> .
<i>Replace</i>	<code>Delete</code> , type characters.
<i>Move</i>	<code>Delete</code> , select destination, <code>Get</code> .
<i>Store on shelf</i>	<code>Put</code> .
<i>Copy from shelf</i>	<code>Get</code> or <code>CTRL-G</code> .
<i>Copy text from elsewhere</i>	Select text, <code>Put</code> , select destination, <code>Get</code> .
<i>Undo edits</i>	<code>Undo</code> undoes all edits since last selection, or use of <code>Get</code> , <code>Put</code> , or <code>Delete</code> .
<i>Load a file</i>	Load file item on text menu, or type name of file to empty text subwindow, followed by <code>ESC</code> . Reset text menu item (once or twice) makes window empty.
<i>Save</i>	Save or Store to named file item on text menu.
<i>Exit</i>	Quit item on frame menu.

Function Keys



Function Keys *cont.*

Sun-3 Keyboard

Either L1 - L10

Stop	Again
Props	Undo
Expose	Put
Open	Get
Find	Delete

*Labels on Left
Mouse on Right*

Caps
Lock

F1 Key

or R1 - R15

Again		Stop
Undo		Props
Put		Expose
Get		Open
Delete		Find

*Labels on Right
Mouse on Left* (must type:
setkeys lefty)

Sun-1 Keyboard

Stop

Set Up Key

PF1 - PF4, etc.

Again			
Undo		Props	
Put		Expose	
Get		Open	
Delete		Find	

*Right side of keyboard
for left- and right-handed people* (must type:
setkeys sun1)