

Anchor Cursor=

By setting this to yes, the standard Windows arrow cursor will change to a pointing finger cursor whenever the cursor moves over a link anchor. Isn't the little hand cute? Well, it's functional anyway.

Note: Anchor Colors are called Hotlinks in Mosaic for Mac and X Windows. On all platforms they are also referred to frequently as hyperlinks.

Show URLs=

If turned on, URL addresses will appear in the Status bar (assuming you have that set to yes) whenever the cursor moves over a link anchor.

Extended FTP=

When you encounter an FTP or Gopher site in Mosaic, you have options as to what you see. If set to yes, the site displays icons relevant to the type of file being viewed. If the size of the file has been specified you will see that too. If this option is set to no, you see only a list of directories and files with no icons and no file size indications.

Toolbar=

The toolbar that runs along the top of the main Mosaic window is one of the most important navigation tools in the program. If you want the displaying of the toolbar to be defaulted, set this to yes.

Status bar=

The Status bar, located in the lower left-hand corner of the main Mosaic window, gives you valuable feedback as to what Mosaic is up to at any given time (during file access and transfer). Vote yes, if you want this bar to always appear (unless you toggle it off in the Options menu).

Title URL bar=

This option, set to yes, will display the URL bar and Status Indicator (NCSA logo) at the top of the document view window.

```
File Edit Search Help
Notepad - MOSAIC.INI
Toolbar=yes
Status bar=yes
Title/URL bar=yes
Use 8-bit Sound=no

[Settings]
Anchor Color=0,0,255

[Main Window]
x=0
y=-1
width=768
height=600

[Mail]
Default Title="WinMosaic auto-mail feedback"

[Services]
NNTP_Server="news.site.domain"
SMTP_Server="site.domain"
rem-We know the above server will usually exist. Change it if you have a local SMTP se

[Viewers]
TYPE0="audio/wav"
TYPE1="application/postscript"
TYPE2="image/gif"
TYPE3="image/jpeg"
TYPE4="video/mpeg"
TYPE5="video/quicktime"
TYPE6="video/msvideo"
TYPE7="application/x-rtf"
TYPE8="audio/x-midi"
TYPE9="application/zip"
rem TYPE0="audio/basic"
```

Figure 3-19: More of the mosaic.ini file.

Use 8-bit Sound

With this checked, all sound files that you transfer in Mosaic will be handled by an 8-bit sound card. This is useful if you don't have a 16-bit card installed.

[Settings]

Here is where you specify what color you want Mosaic link anchors to be. The default color is blue (0,0,255). The color values are expressed as numbers with zero being no instance of the color and 255 being full strength. The color value sequence is red, green, blue. If you wanted to change the anchor color to red, you would change the setting here to 255,0,0. Green would be 0,255,0 and so forth.

[Main Window]

The Main Window refers to the size of the main Mosaic window and its position on your monitor. Do not edit this directly in the mosaic.ini file. To change the screen size and location,

1. From within Mosaic, resize the main window to your desired configuration and move it on the screen where you want it to appear each time it's launched.
2. Choose Save Preferences from the File menu and the window size and position will be written to the mosaic.ini file.

Note: If you have made any other changes in preferences from within Mosaic (such as Display Inline Images, Show Status Bar, Show URLs, etc.), these changes will also be saved to the mosaic.ini file and will become the default preferences. If you do not want this to happen, make sure you only change the window size/position before selecting the Save Preferences option.

[Mail]

When you choose Mail to Developers in the Help menu from within Mosaic, what you have entered here will always appear as the default title of your message. You can, of course, change that title for each instance to reflect the current subject of the message. The mail title comes defaulted to "WinMosaic auto-mail feedback." If you want it defaulted to something else, say "Fanmail from Some Flounder" or "HELP!!!!!!," you can make those changes here. Your return email address also needs to be entered in the appropriate line above (in the [Main] section) if you want NCSA to be able to respond to your question. Also, if you have a local SMTP server (at your Internet service provider's site, for instance), make sure that is changed in the [Services] section below.

[Services]

To be able to read USENET Newsgroups from within Mosaic and to get responses to email messages sent to NCSA, you need this section to be properly filled out.

- *NNTP Server=*: The NNTP (Network News Transport Protocol) server should equal your network service provider's NNTP. Mosaic comes defaulted to the University of Illinois's NNTP server (news.cso.uiuc.edu). This will work fine as a newsgroup gateway, but to save traffic to this site, if you have a local NNTP server, enter it here. It will usually be in the form of "news.site.domain." This information should have come with your SLIP/PPP account.

Note: On some Internet service providers' set-up information sheets, this address is also called an NNRP instead of NNTP. This probably stands for Network News Reader Protocol.

- **SMTP Server**=: The address for the SMTP (Simple Mail Transport Protocol) server should be your local service's SMTP. Mosaic comes defaulted to the NCSA's NNTP server (ftp.ncsa.uiuc.edu). This will work as a mail gateway, but to save traffic to this site, if you have a local SMTP server, enter it here. This information should have also come with your SLIP/PPP account.



```
File Edit Search Help
Notepad - MOSAIC.INI
[Viewers]
TYPE0="audio/wau"
TYPE1="application/postscript"
TYPE2="image/gif"
TYPE3="image/jpeg"
TYPE4="video/mpeg"
TYPE5="video/quicktime"
TYPE6="video/nsvideo"
TYPE7="application/x-rtf"
TYPE8="audio/x-midi"
TYPE9="application/zip"
ren TYPE9="audio/basic"
application/postscript="ghostview %1s"
image/gif="c:\windows\apps\view\view31 %1s"
image/jpeg="c:\windows\apps\view\view31 %1s"
video/mpeg="c:\win32app\mpegplay\mpegplay %1s"
video/quicktime="c:\WIN32APP\QTPlayer.exe %1s"
video/nsvideo="nplayer %1s"
audio/wau="nplayer %1s"
audio/x-midi="mplayer %1s"
application/x-rtf="write %1s"
application/zip="c:\WINDOWS\APPS\ZIPMER\ZM400.EXE %1s"
ren audio/basic="notepad %1s"
telnet="c:\trunpet\telu.exe"

[Suffixes]
application/postscript=.ps,.eps,.ai,.ps
application/zip=.zip
text/html=
text/plain=
application/x-rtf=.rtf,.uri
audio/wau=.wave,.wau,.wav
audio/x-midi=.mid
image/x-tiff=.tiff,.tif
image/jpeg=.jpeg,.jpe,.jpg
```

Figure 3-20: The [Viewers] section of the mosaic.ini file.

[Viewers]

Viewers (or Helper Applications) are external programs that Mosaic uses to access media files (sounds, graphics, movies) on the Web. It is in this section of the mosaic.ini file where you can "map" Helper Application types to specific applications and then define the local hard drive directory path to those applications. That way, when Mosaic encounters a file of that media type, it will transfer the file, hold it temporarily and then launch the external application to show or play the media file in question. See "Configuring Helper Applications" below for more detailed instructions on using these external applications with Mosaic.

[Suffixes]

Suffixes refer to the file extensions that Mosaic looks for in accessed media files. These suffixes only come into play on FTP sites and Web sites using HTTP version 0.9. These 0.9 sites are very rare and you will probably not encounter them. HTTP version 1.0 does not use these suffixes because the file is typed by the server and not your Mosaic client. For each file type, you can list as many different versions of the extension as you think Mosaic may encounter. For instance,

image/jeg=.jpeg,.jpg,.jpe

video/quicktime=.mov,.moov (and so forth)

Make sure that the extension list is separated by commas (no space) and that each extension begins with a period (.).

[Annotations]

In Mosaic 2.x, annotations can be personal or shared over a workgroup. Your personal annotations are stored within a file on your PC, while group annotations are stored on a local networked machine. Here is where you define the storage location for personal and group annotations.

- *Directory*="c:\mosaic\annotate": (or whatever the directory path is on your machine).
- *Default Title*="Personal Annotation by Mosaic User": If you want a different title to appear when you choose an annotation, enter it here. The obvious choice would be to replace Mosaic User with your name.
- *Group Annotations*=: If you are planning on sharing annotations over a network, set this to yes. Otherwise, leave it defaulted to no. You can also toggle this on and off by checking Show Group Annotations under the Options menu.

- *Group Annotation Server="your.local.lan.server:portNumber"*: To share annotations over a local network you need to specify the machine on the network (and the port number) where the group annotations will be stored. Check with your LAN administrator for more information.

[User Menu#]

This section of the mosaic.ini file shows you the structure and contents of your user-configurable hotlist menus. Do not change them here. If you want to create, add to or change menus, use the Menu Editor found under Navigate within Mosaic. See "Creating Custom Hotlist Menus" below for more information.

[HotList]

This section is a list of URLs that are contained in the Quicklist. The Quicklist is a general hotlist that comes already set up with Mosaic. Using the Menu Editor, you can add and subtract to this list as you please. The Quicklist is the only hotlist that is not part of the Starting Points pull-down menu. You access Quicklist via the Open URL window. To edit the Quicklist (or any hotlist), use the Menu Editor. Do not, however, change anything in this area of the mosaic.ini file.

[Document Caching]

Type=Number

Number=[#]

Document Caching refers to how many documents Mosaic will store. Each time you load a Web document to your screen, that document will go into the cache (up to the number you specify here). If you then return to one of the documents that's been cached, Mosaic doesn't need to reload it from its server. So, as you might imagine, the best thing to do is to select a high number to save time and unnecessary Net traffic.

How many documents you specify is a function of how much memory your PC has. If you have a large amount of RAM, select a higher number, if you're low on RAM, select only a few cached documents. If you're really pushing your available memory, set this number to zero (no caching). You can experiment to find a number that's appropriate. A good number to start with is 5.

[Font] sections

Again, this area of the mosaic.ini file is not to be changed. All changes to fonts and font styles are done in the Choose Font choice under the Options menu.

[Proxy Information]

Your copy of the mosaic.ini file may include a section on Proxy Firewall services (or a section can be added if appropriate). A proxy service processes network input and output to and from computers on a local area network (LAN) that sits behind a firewall (a computer security barrier that prevents unwanted intrusions). By gatewaying through a proxy service, the LAN can pretend that it's actually on the Net when (technically) it isn't (it's being mediated through the proxy). For full details on using a proxy service with Mosaic, check out the document at <http://www.ncsa.uiuc.edu/SDG/Software/WinMosaic/ProxyInfo.html>

What in Blue Blazes Is a Firewall? A firewall is a server computer that is set up between the users of a local area network (or LAN) and their gateway to the Internet. As you might imagine, because the Internet is public, it's not very secure. Every computer on the Internet is considered a peer of every other computer. A computer attached to a LAN that is routed to the Internet is potentially accessible to anyone on the Net. A firewall processes network input and output and allows the computers on a LAN to pretend that they're actually on the Net when they (technically) aren't. The problem with this scheme is that it sometimes hinders the performance of programs that want to be directly Net-connected. Mosaic is such a program. The CERN Proxy/SOCKS services, now available with Mosaic 2.x, help improve gateway performance for systems that are hiding behind firewalls.

Configuring Helper Applications

Helper Applications are external programs that Mosaic uses to help it display various media files. This scheme allows Mosaic to keep its mind on its business, while letting other sophisticated viewing and listening applications handle the media presentations. This also gives Mosaic a great degree of flexibility, allowing you to add new types of Helper Applications as you need them.

The first thing you need to do is check to see which of the Helper Applications you have and which you'll need. Table 3-2 shows you the main default applications Mosaic uses.

File Type	Default Application	Special Requirements	Payment Type
GIF/JPEG (images)	LView	SVGA Monitor	Freeware
QuickTime (movies)	Movie Player	QuickTime For Windows	Freeware
MPEG (movies)	MPEGPLAY	8mb Ram Recommended	Shareware
AU (sounds)	WHAM (w/sound card)	Sound Card	Donationware
AU (sounds)	WPlany (w/o sound card)	PC Speaker Driver (speak.exe)	Freeware
Zip (compressed files)	PKUNZIP	(None)	Shareware

Table 3-2: *The default Helper Applications.*

All of these programs are freeware or shareware and are available via anonymous FTP from many of the FTP sites listed elsewhere in this book. (See Table 2-2 in Chapter 2 for FTP site listings.)

Before you've downloaded the Helper Applications you need, you should create a home directory for them. If you're truly lazy, you can look at each Helper Application in the mosaic.ini file and find out what the defaulted pathname is, creating the appropriate directories to conform to those paths. This way, you won't have to change any filepaths in the mosaic.ini file. A more sensible approach would be,

1. On your hard drive, create a directory called apps (or whatever you wish to call it). Mine is c:\windows\apps.
2. Within the new apps directory, create a new subdirectory for each application (c:\windows\apps\mpegplay, c:\windows\apps\lview, c:\windows\apps\wplany, etc.).
3. Download (or move within your hard drive) the zipped Helper Application files into their respective subdirectories. See Chapter 2 for information on FTPing files.
4. Unzip the files in their respective subdirectories.
5. Read each app's installation instructions, registrations and readme files.
6. Open up the mosaic.ini file using the Windows Notepad. Within the [Viewers] section of the mosaic.ini file, find the pathname for each Helper Application. Change the path to reflect its location on your drive. In our example, we would make sure that each path read "c:\windows\apps\helper_app_name.%ls"
7. Save the mosaic.ini file.

That should be all there is to it (assuming you've followed any instructions that came with the application). Now, when you encounter a media file during a Mosaic session and download it, Mosaic will access the appropriate helper and use it to open the file. When done viewing or listening, you can quit the Helper Application (which is now on top of Mosaic) or you can save the file to disk, if that option is available.

If you wish to change any of the Helper Applications or add new applications, you'll need to go back in the mosaic.ini file.

For example, let's say you want to change an application. Mosaic is defaulted to access LView as the application for displaying jpeg images. If you didn't have LView, but have another graphics application, such as Photoshop, here's how you would configure Mosaic to use the new application:

1. First, determine the filepath of the new application. In this case it's c:\photoshp\photoshp.exe (or whatever the pathname might be).
2. Open up the mosaic.ini file using Notepad and find the image/jpeg= application line.
3. Change the current jpeg= statement to equal the pathname of your new application (in this case, image/jpeg= "c:\photoshp\photoshp %ls"). Notice that the extension .exe was dropped and the argument %ls was added.

Note: Notice the forward slashes used in MIME typing as opposed to the DOS backslashes. Be careful when editing Helper Applications that you slash forward and back at the right time. It can get confusing.

```
image/gif="c:\windows\apps\lview\lview31 %ls"  
image/jpeg="c:\windows\apps\lview\lview31 %ls"  
video/mpeg="c:\win32app\mpegplay\mpegplay %ls"
```

Figure 3-21: Changing a Helper Application.

```
image/gif="c:\windows\apps\lview\lview31 %ls"  
image/jpeg="c:\photoshp\photoshp %ls"  
video/mpeg="c:\win32app\mpegplay\mpegplay %ls"
```

Figure 3-22: The new Helper Application for JPEG images.

4. Save the changes to the mosaic.ini file.
5. Launch Mosaic and retrieve a copy of whatever file will require that Helper Application type (for our example, we would want to find a jpeg image to view).
6. If your test is unsuccessful, go back to the mosaic.ini file and make sure you have the pathname correct. Also look in the top section of [Viewers], in the part that has Type[x]=, to make sure that the application you're attempting to "map" has a MIME type listed (more on MIME types below).

Mapping New File Types

The other main feature of the [Viewers] section of the mosaic.ini file is the ability to add new types of files and to “map” them to applications found on your hard drive. The first part of the [Viewers] section is a listing of many of the MIME file types that Mosaic recognizes. MIME (or Multi-purpose Internet Mail Extensions) is a standard originally developed for attaching media messages to conventional Internet email. Mosaic has adopted this standard and uses MIME file types for specifying its external Helper Applications. Table 3-3 shows the common file types that Mosaic recognizes and the defaulted applications (if any).

File Type	Subtype	Application
Text	plain text	Notepad
	richtext	MS Write
	html	Mosaic
Audio	basic	Mosaic
	wav	WHAM
	wav	Media Player
	x-midi	Media Player
Images	jpeg	LView
	gif	LView
	tiff	(no default application)
	x-xbm	(no default application)
Video	mpeg	MPEGPLAY
	quicktime	Movie Player
	msvideo	Media Player
Applications	postscript	Ghostview
	zip	UnZip

Table 3-3: Common files types and Helper Applications in Mosaic.



HOT TIP

The first time you launch Mosaic, you automatically go the Mosaic Home Page at NCSA. Due to the current popularity of Mosaic, traffic to the NCSA server is high. You can ease this burden on the electronic highways by making another Web location the default home page. Simply change the Home Page= line in the mosaic.ini file. I suggest you choose Ventana's Visitors Center at <http://www.vmedia.com/vvc> as your new Home Page. That way, you can keep up with the latest news about Mosaic and the Web, this book, and the newest releases of all the freeware and shareware covered here. Once you've entered the new Home Page URL, save the changes to the mosaic.ini file and relaunch Mosaic.

Using Styles in Mosaic

The Choose Font feature (found under the Options menu) allows you to customize the look of the Web documents you view. The documents you view in Mosaic are created using HTML "tags," sometimes called "style tags." These are bracketed codes that tell Mosaic how to display the various parts of a document. The information that's communicated over the Web does not specify the actual font, it simply tells Mosaic what style category to present things as (normal paragraph, top level header, a quotation, etc.). You get to choose the actual font and style in which the document will appear. Here's where you get to be a little creative—changing styles and font sizes to suit your fancy. See Table 3-4 for a list of the different parts of an HTML document and what changing them will affect.

Style Type	What It Modifies
Normal	The default paragraph style.
Header 1	Topmost heading.
Header 2	Second level heading.
Header 3	Third level heading.
Header 4	Fourth level heading.
Header 5	Fifth level heading.
Header 6	Sixth level heading.
Header 7	Seventh level heading.
Menu	List in menu form.
Directory	List in directory form.
Address	How the author's name and email address will appear at the bottom of documents.
Blockquote	Extended or block quotations.
Example	Short samples of code.
Preformatted	Text already formatted in monospaced font (e.g., program listings).
Listing	Long instances of code samples.

Table 3-4: Paragraph style tags that can be modified in Mosaic.

To change any of the default type styles in Mosaic,

1. Pull down the Options menu and click on Choose Font. A submenu will appear. See Figure 3-23.
2. Select the paragraph style you want to change (see Table 3-4 if you are unsure what some of these styles represent).
3. A Font selection window will pop up offering you a list of the fonts in your system to choose from, a font style (regular, italic, bold, bold italic) and a list of font sizes.

4. Choose the combination you want (remember, you are just changing the part of the paragraph you selected in step 2, not the entire document). The Sample box displays the characteristics (font, style, size) of your choice.

5. When you are happy with your selection, click on the OK button.

6. You should see your changes in the current Web document you are viewing. These changes do not just affect this document but all future documents until you change the Font settings again.

Let's try a few more examples to make this clearer.

If you want all information that's been tagged within an HTML document as the style Blockquote to always appear in boldface 24-point Times, you would select Blockquote in the Choose Font menu, and make those selections in the Font window. From then on, whenever a document appears that includes blockquotes, it will appear on your Web document as boldface 24-point Times.

Keep in mind that these changes will only effect styles that have been appropriately tagged by the document's creator. If an HTML document creator decides not to tag an address with the HTML tags that specify an address, your choosing a special font or style for addresses will have no effect on that particular document. It should also be clear that the changes you make do not affect that actual HTML document—just the way your copy of Mosaic presents it to you.

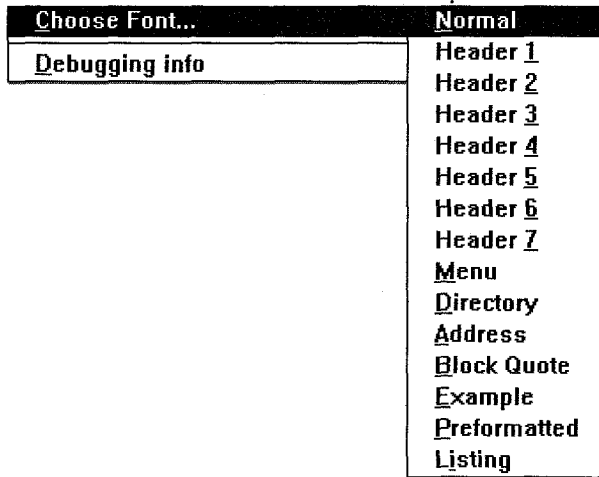


Figure 3-23: *The Choose Font... menu.*

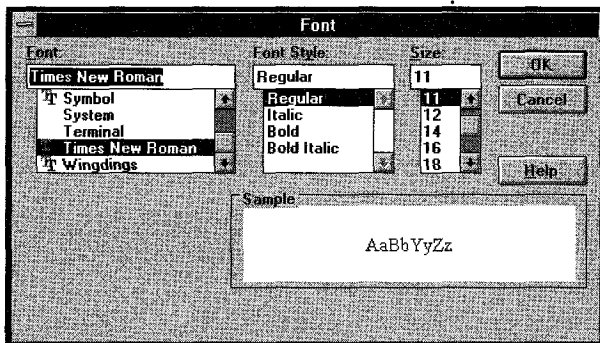
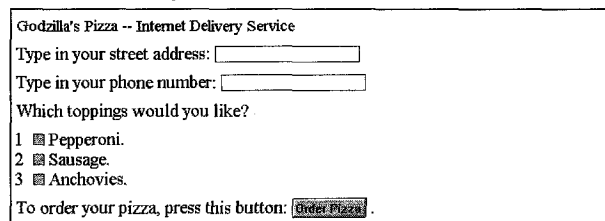


Figure 3-24: *The Font window.*

Using Forms

The introduction and increasing sophistication of forms in HTML documents is one of the things that has excited people so much about the growth of Mosaic. Before forms, the World Wide Web was only a document viewing environment. The ability to enter information into boxes on a Web page makes the World Wide Web now a two-way means of communication. Some of the ways that forms can be used are outlined in Table 3-5.

If you are interested in learning more about forms and how to create forms using HTML, check out the Web document located at <http://south.ncsa.uiuc.edu/forms.html>.



Godzilla's Pizza -- Internet Delivery Service

Type in your street address:

Type in your phone number:

Which toppings would you like?

1 Pepperoni.

2 Sausage.

3 Anchovies.

To order your pizza, press this button:

Figure 3-25: A typical form in a Web document.

How to Use Hotlists

There are so many great resources to discover in the Web. In an average Mosaic session you can open up oodles of documents, explore dozens of hyperlinks and generally tangle yourself up into knots. One of the most useful features of Mosaic is Hotlists, the feature that enables you to create multiple "address books" of documents you've visited that you might want to return to. You can save these lists under different names and even exchange lists with other Mosaic users.

Creating Your First Hotlist

The easiest way to get started with hotlists is to use the Quicklist that comes already set up in Mosaic. Although this list already contains some URLs, you can delete them if you like or just start adding to this list, using it as your current hotlist. To do this,

1. Select the Open URL item from the File menu.
2. When the Open URL window pops up, choose the Quicklist from among the lists offered under the Current Hotlist box.

Form Type	Usage
Ordering	Commerce on the Net. Allows Net-based shoppers to select items from online catalogs. Credit card information can also be taken and is becoming increasingly secure thanks to digital signature and encryption technology.
Survey	Web users are now able to fill out all types of information for commercial, government and private purposes.
Database	The ability to handle multiple forms and check boxes allows for even greater levels of sophistication and flexibility in searching databases for online information.
Feedback	Sites can now let users give direct input without having to resort to email.
Interactive Talk	Form-based discussion groups similar to USENET Newsgroups.
Password	Forms can be used to create private Web sites that can only be entered with a password.
Gaming	All variety of so-called rotisserie games (baseball, football) and other form-based games are possible using Mosaic's form features.
Free Expression	A number of sites on the Web use forms as a way of letting people input poetry, ideas, graffiti and other creative forms of expression.

Table 3-5: *Common uses for forms.*

3. With the Quicklist visible in the Current Hotlist box, choose Cancel. This Quicklist will now be considered your current hotlist.
4. Whenever you come to a Web site that you want to add to the Quicklist, choose Add Current To Hotlist from the Navigate menu. Your new Web document will appear at the bottom of the list.

Creating Custom Hotlist Menus

Before we create our first hotlist menu from scratch, let's open up the Menu Editor located under the Navigate menu. The Menu Editor window will appear. See Figure 3-26.

The Menu Editor

You will see two fields within this window. The left field, the Menus field, contains a list of all the user-configured menus currently set up in Mosaic. The right field contains the items from each one of the menus as you select them in the Menu field.

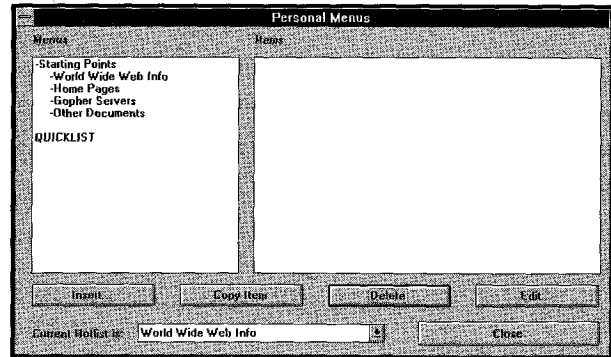


Figure 3-26: *The Menu Editor window.*

Insert...

This button opens the Add Item window. Here you can enter a new item into an existing menu, add a submenu to an existing top-level menu or create a new top-level menu.

If you want to insert an item somewhere in a list, click on the menu item *below* where you want your item inserted. If you want to add the item to the end of the existing list, you don't need to specify a location, and it will automatically be added to the bottom of the list.

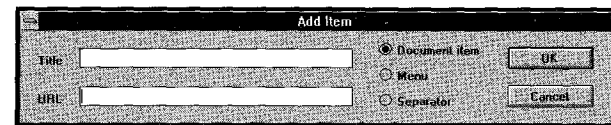


Figure 3-27: *The Add Item window.*

The Add Item window always opens up with the currently selected document displayed in its Title and URL field. If that is not the document you wish to add to your list, you can enter in a new title and URL. If you want to copy an item from another menu list, go to that item in the Menu Editor, select the Copy Item button (see below for more info) and then return to the Add Item menu (by rechoosing Add Item). Your newly selected list's name and URL will appear in the appropriate boxes.

There are three buttons on the Add Item window.

- *Document Item*: Adds a title and URL to an existing menu.
- *Menu*: Creates a new menu with the title specified in the Title box.
- *Separator*: Adds a line into a pull-down menu if you want the menu to have several separated subsections.

Copy Item

Clicking this button from the Menu Editor copies the document title and URL to memory. The next time you open the Add Item window, this document will appear as the selected title/URL.

Delete

Removes the document or entire menu that you've selected. You will get a dialog box asking if you really want to do this. Make sure you are deleting the right thing. The Quicklist menu item cannot be deleted, although items within it can.

Edit...

Choosing this item causes the Edit Item window to appear. From here you can edit the name of a menu and the contents of menus. You cannot rename the Quicklist. It is hardwired into Mosaic. You can, however, edit its contents.

Now that we know what everything does, let's create a new hotlist menu. Since I want to have a series of my own hotlists easily accessible, I want to create a top-level menu that will appear as a pull-down menu in Mosaic's main window. That way, I can add items and submenus as I choose.

1. Open the Menu Editor again (from the Navigate menu).
2. Highlight the empty space right above QUICKLIST in the Menus field (the left-hand field). You will notice when you do this that the right-hand field (Items) will display the statement "Click 'Insert' to add a toplevel menu."
3. Click on the Insert button and the Add Item window will appear.
4. Since we're creating a top-level menu, only the Title box is available. Notice also that the Menu radio button is the only selection available. Enter a title for this menu, "My Hotlists," for instance.
5. When you've entered the title, choose OK.
6. You will be returned to the Menu Editor, where you should see your new menu in the list of top-level menus. See Figure 3-30.
7. From the Menu Editor you can now select your new menu and begin adding document titles and URLs (or you can select the new menu as your Current Hotlist and then start building the list as you travel through cyberspace). Remember, you can either add documents directly to this top-level menu or create submenus within it (see below).

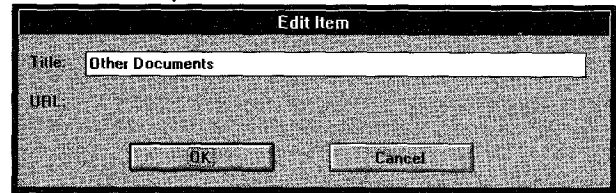


Figure 3-28: The Edit Item window.

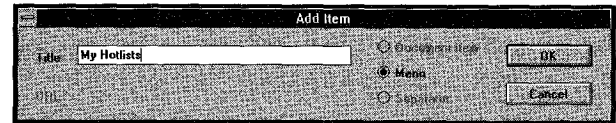


Figure 3-29: Creating a hotlist menu.

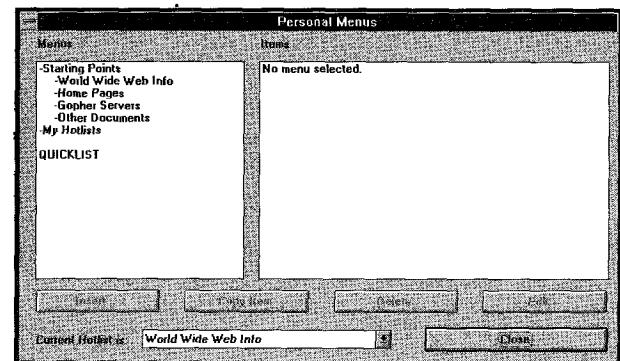


Figure 3-30: The new top-level hotlist menu.

Adding a Submenu

Adding a submenu to an existing top-level menu is easy.

1. Go to the Menu Editor and highlight the top-level menu you wish to add a submenu to. In this case I want to add the submenu Art and Design to My Hotlists.

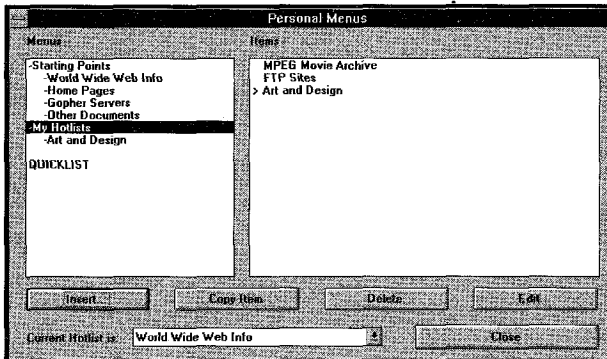


Figure 3-31: *The new hotlist submenu for Art and Design.*

2. With My Hotlists highlighted, click the Insert button.

3. The Add Item window will appear. Click on the Menu radio button.

4. Enter Art and Design or whatever you are calling your list and choose OK.

5. You will be returned to the Menu Editor and you should see your new submenu in the Items field (set off by a >).

6. You can now select the Art and Design hotlist in the Menu field to begin adding documents (or you can select the new submenu as your Current Hotlist and then start building the list as you travel through cyberspace).

Sharing Hotlists

If you want to share one or more of your lists with other Mosaic users,

1. Close the Mosaic program and open up the mosaic.ini file.

2. Find the list you want to send to someone. Highlight the Title/URLs of these items.

3. Select Notepad's Copy command from the Edit menu.

4. You can now paste this list into a new text document that can be sent to another Mosaic user.

Note: Unfortunately there is currently no way of automatically exporting or importing hotlists in Mosaic for Windows. The person who receives your list will have to cut and paste to the Menu Editor to integrate these items. Alternately, lists can be easily converted to HTML documents with each document as a link anchor. See Chapter 4 for a primer on basic HTML coding.

Navigation in Mosaic

Obviously the reason you're in Mosaic is to go places—to explore that expanding universe of hypermedia we rattled on about in Chapter 1. The main controls for doing this are located in the toolbar and the URL box at the top of the Mosaic window. After you've entered your destination, this area tells you where you're going and gives you the options of retracing your steps or instantly returning home.

The Toolbar

The toolbar is one of the most helpful features of Mosaic. It puts many of the often-used functions of the pull-down menus onto your main Mosaic window for easy access. The toolbar includes the following buttons:

Open URL/Current Hotlist

This is equivalent to selecting Open URL from the File menu. The Open URL window will pop up allowing you to enter a URL or to select an existing hotlist.

Load to Disk

Allows you to save items to disk. Equivalent to selecting Load to Disk from the Options menu.

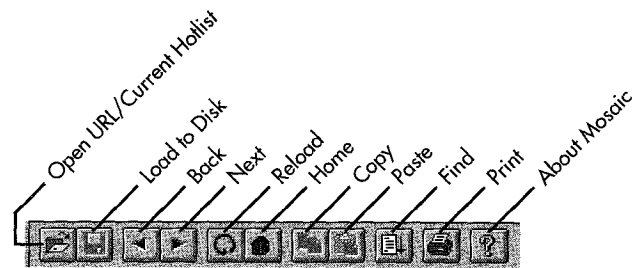


Figure 3-32: Mosaic's toolbar.

Back

The Back button (the arrow pointing to the left) takes you back through all the documents you've accessed during your session. If there are no previous documents loaded, this button will be grayed out.

A Little Background on HTML HyperText Markup Language (HTML) is a specialized set of "tags" that tells Mosaic (and other Web browsers) how to display the text, hyperlinks, images and other multimedia elements you see on your screen. These tags are guidelines for how a browser should display the material. Some tags are required by all HTML browsers, while other tags are optional. All Web browsers are different. Some, like Mosaic, are graphical, while others are text-based. Since HTML is only a set of guidelines for displaying the documents, not everyone has to have the same capabilities to access Web information. Once the HTML document arrives at its destination, the browsing software can use whatever tags are appropriate to it and ignore the rest. For instance, Lynx, another popular Web browser, supports text only. It therefore ignores the HTML style information that's not relevant to it. Mosaic, on the other hand, presents documents in all their multimedia glory and even gives you further display options. This flexibility allows you to change the way Web documents look on your system. →

Next

The Next button (the arrow pointing to the right) takes you forward to any documents that are "ahead" in the documents that have already been loaded. This button is only available if there are forward documents available (documents that you've accessed during your session, but then moved back through in the document queue).

Reload

Causes the current Web page to be redrawn in the document view window. Some sites also use the reload command as a way of loading a series of pictures. Instead of going to several Web pages to view a succession of images, you stay on one page and hit Reload to see new images. Reload is also used when you make changes in or delete an annotation and you want the changes to take effect immediately.

Home

Clicking this icon at any time during your Mosaic session takes you back to your designated home page. If you have not changed your home page in the mosaic.ini file, clicking Home takes you back to the Web server at NCSA.

Note: Back, Next, Reload and Home are also available under the Navigate menu. They work exactly the same as their toolbar equivalents.

Copy

Copies selected text. You can copy text from any of the data entry boxes, URL boxes and from the Document Source window. At this time, you cannot copy material from Web documents. Hopefully the NCSA developers will implement this in the future (the Mac version already allows it). For now, you can use the Save As command under the File menu to save text documents to disk. A copy command is also available in the Edit menu.

Paste

Pastes the contents of the Clipboard into the active pop-up window. You cannot copy things into Web documents.

Find

Locates text within the currently displayed document. A window pops up asking "Find What:". A Find command is also available in the Edit menu.

Print

Prints the currently selected document. If you want the printing to be the same as what you see in Mosaic, you must have scalable versions of the fonts installed on your system. Check font selections (and change as needed) in the Choose Font section of the Options menu. A print command is also available in the File menu.

About Mosaic

Displays the About Mosaic information panel.

For more information on how HTML works, check out the following Web documents:
The HTML Primer at <http://www.ncsa.uiuc.edu/General/Internet/WWW/HTMLPrimer.html> and the HTML Documentation at <http://www.ucc.ie/info/net/html/doc.html>

The URL Box

In Mosaic 2.x, you can enter URLs directly into the URL box. Press Enter and the connection to an HTTP server will be attempted. The URL box will always display the currently selected Web document. See below for more detailed information on URLs.



Figure 3-33: The Document URL window.

Note: The other method of entering URLs is found under the File menu as Open URL... (or Control+O).

The Mosaic Status Indicator

The planet icon in the upper right-hand corner of the Main Mosaic window is called the Status Indicator (or simply the NCSA logo). When Mosaic is searching for a URL or otherwise involved in a data transfer, the Status Indicator becomes animated, with little “lights” zooming around the spinning Earth (neat, eh?).



Figure 3-34: The Status Indicator.

The Status Indicator can also be used for canceling a document transfer. If, in the middle of a download, you decide that you don't want to continue, simply click on the animated Status Indicator and the transfer will be terminated.

The Status Bar Message Area

This area, directly below the document view window, displays messages about what's happening during your session when Mosaic is connecting to a site, downloading documents or having trouble with a transfer. These messages can be turned on or off in the Options menu (Show Status Bar). See Figure 3-35.



Figure 3-35: The Status bar message area.

History

Next to the toolbar, URL box and Status Indicator, perhaps the most important navigation feature in Mosaic is the History list (located under the Navigate menu). Unfortunately there is no icon on the toolbar and no quick key that you can use to access History. You have to go to the Navigate menu each time you want to access it.

Search

When you access an online index or document with lookup features, the Search box appears in the bottom of the document view window (directly above the Status bar). Search is different than the Find command (located under the Edit menu), which only looks within the current document for specified text matches. Search looks through an index of documents on your keyword(s) and then presents you with a hyperlinked list of the relevant items the search has uncovered. From this list, you can click on any of the linked documents to view them. See Figure 3-37.

What Is a URL?

Uniform Resource Locator (or URL) is a system that the World Wide Web uses to standardize the addresses of various types of Internet services. Each type of service, HTTP (HTML document transfer), Gopher, FTP, USENET News, etc., has a constant type of URL address that Web browsing software can read. Although these addresses are lengthy, and look intimidating at first, they become easier to read as you get more familiar with their structure.

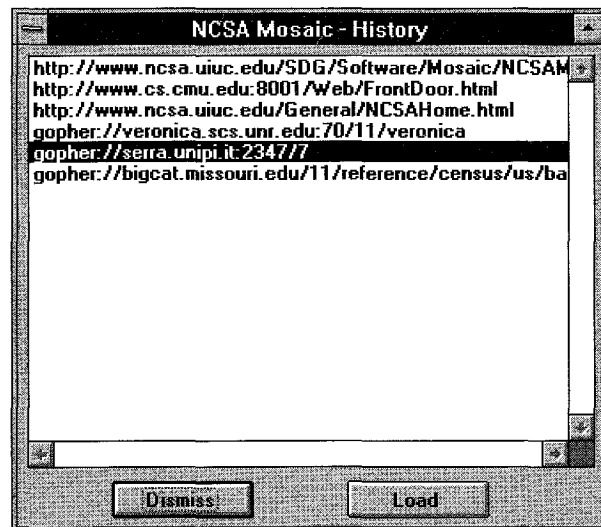


Figure 3-36: *The History window.*



Figure 3-37: *The Search Index box.*

Anatomy of a URL

A URL usually consists of three parts: the method of access, the location of the computer where the desired files or services are available and the path to those files.

- The Access Method (or Protocol)

This is the first part of the address, usually separated from the rest of the address by a colon and a double slash (://). This tells Mosaic what type of service it will be connecting to.

- Location of Computer Site

The name of the computer site where the service or file is located (usually found directly after the double slash).

- File Pathname

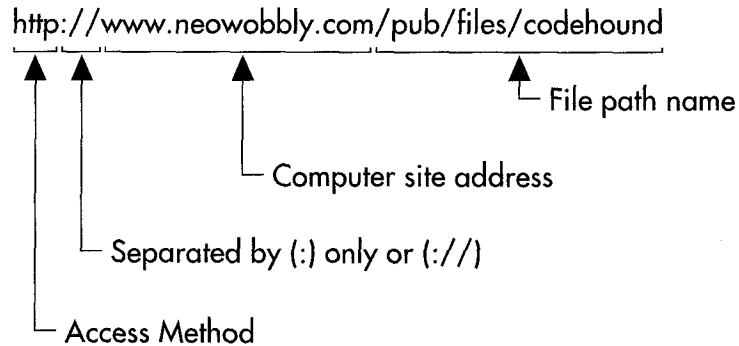
The specific name and location of the file being sought. This can be anything from the name of a file directory to the full path to the file itself. Sometimes a URL consists of only the first two parts with no file specified (i.e., <http://www.wired.com>).

Access Method	Type of Access
http	World Wide Web server file (HyperText Transport Protocol)
file	Files on your local system or on anonymous FTP server
ftp	Remote file transfers (File Transport Protocol)
gopher	Connects you to a Gopher server
news	USENET Newsgroups (reading only)

Table 3-6: *Common types of URLs.*

Reading URLs

The basic structure of a URL looks like this:



Here are some examples of URLs and what they mean:

`http://www.wired.com`

`http://www.wired.com/Etext/2.07/features/patents.extras.html`

The first http URL takes you to the home page of the WWW server at `wired.com`, an electronic magazine stand by *Wired* magazine. The second URL takes you directly to an electronic text version of an article on patents that appeared in *Wired 2.07*.

`gopher://well.com`

`gopher://gopher.well.sf.ca.us/00/Publications/authors/Sterling/fsf/buckymania`

The first URL accesses the Gopher site at the WELL BBS. The second URL goes directly to an article called "Buckymania" written by Bruce Sterling. This article is located in the authors section of the Publications directory.

<ftp://ftp.eff.org>

<ftp://ftp.eff.org/pub/EFF/about.eff>

The first URL takes you to the EFF's (Electronic Frontier Foundation) FTP site. The second one accesses an introduction to the EFF located in the EFF section of the Pub directory.

MIME Gets a Face Lift When Mosaic displays an icon indicating that a media item is available, and you ask to have it transferred, the conversation that takes place over the Web is directed by something called MIME. Multi-purpose Internet Mail Extensions (MIME) was originally developed as a method of attaching different types of files, especially multimedia files, to regular email messages transferred over the Internet. Mosaic and the World Wide Web have adopted MIME file types to specify what application should handle the transferred file. If a text/html file is received, for example, Mosaic knows to take care of that document itself. If an image/gif, image/jpeg or other MIME file type arrives, Mosaic will send that file off to the appropriate application on your hard drive.

<news:rec.music.industrial>

[news:2upl68\\$3b9@jimbo.muppet.bt.co.uk](news:2upl68$3b9@jimbo.muppet.bt.co.uk)

The URL form for accessing a USENET Newsgroup through Mosaic is different than the other forms discussed above. Here it's just news: (with no double slash) followed by the name of the newsgroup. In this example, we have accessed the industrial music group found within the rec (recreation) category of newsgroups. The second example shows the full path name to an article located in rec.music.industrial. To find out more about using Mosaic to read newsgroups (and alternative newsreaders), see Chapter 4, "Web Walking With Mosaic."

Moving On

If you've read through this chapter, congratulations! You now know most of what you'll need to be a Web walker extraordinaire. You at least know your way around all of Mosaic's most commonly used features. These are the tools you'll need to venture deep into the Web.

In review, three features, Helper Applications, fonts and Custom Menus/Hotlists, are important to understand before you move on. Be sure you

- Have all the Helper Applications you'll need to view graphics and movies and to hear audio clips (see page 61).
- Learn enough about how fonts and styles work in Mosaic to control the look of your Web documents (see page 65).
- Know how the Custom Menus/Hotlists feature works (see page 68–74).

In Chapter 4, we'll finally move beyond the confines of the Mosaic program and into the rich fabric of the Web itself. We'll look at how to find your way around and how to access the various forms of hypermedia that are floating about. We'll also explore the many Internet services you can access with Mosaic and how you can stay abreast of the latest news and information about Mosaic and the Web.

Now that we have the basic technical aspects out of the way and we're ready to roll, let's go for a stroll through the Web to see what kind of trouble we can get ourselves into. Cyberspace beckons.

WEB WALKING WITH MOSAIC

*All that is gold does not glitter,
All those that wander are not lost.*
— J.R.R. Tolkien
Lord of the Rings

Jumping into cyberspace has always been an exciting experience for me. Even my first login, as frustrating as it was, gave me the Net bug. I had acquired a funky 300 baud modem and was itchin' to see what it could do. It came with no documentation and I really had no clue how to install or use it. Sticking the circuit board inside my Apple IIe, I did get it up and running—sort of. I tried logging into some local BBSes and the newly formed (now rather famous) Whole Earth 'Lectronic Link (the WELL) in Sausalito, California. It was like hearing a radio message from a ship lost at sea. There was so much line noise in among the text that I could barely make out what was going on. But I was still fascinated. I immediately got a sense that there were all these tiny ports of call in some vast electronic ocean. There were people "in" there... talking to each other...having fun...exchanging information...building something unique. After several more noisy modem sessions, I gave up in disgust. I would have to wait for a real modem. I held out for about

six months, until I couldn't take it any longer. I had to get back online to see what I was missing. I went out and bought a new computer and a 2400 baud modem, dialed up the WELL and have hardly been off-line a day since. That was 1987—several lifetimes in computer years.

Mosaic is not your parents' Internet. Until recently, the language of the Internet (and its ancestors) was rather harsh and intimidating to learn. To navigate through the Net, you needed persistence and a head for second guessing how machines "think." And, on top of that, everything had to be communicated in plain text. It was far from what you would call a user-friendly environment. Information services like CompuServe, Delphi and America Online have tried to make things easier, with login software and graphic interfaces, but they are not the Internet. The quality of the information and virtual community they offer is not nearly as impressive as the Net at large. Mosaic and programs like it will change all that. They are bringing the ease of an online service to the information riches of the Internet. And, with the addition of hypermedia and an easy-to-use document creation system, they are moving far beyond the media desert of the "old" Internet and into an uncharted oasis.

Web walking feels different than other types of Internet experiences. The beehive of activity taking place there is visible regardless of how you're logged in, but a screenful of text, however brilliant, is very different from a hyperlinked web of texts with accompanying multimedia. When I log onto the UNIX-based WELL BBS, I run through a text list of conferences, and then through topics within those conferences. I come to the end of a topic, and if I want to say something, I post a response. Then I move on to the next conference down the line. It's all very list-like—from top to bottom.

On the Web, there is this feeling of being potentially everywhere at once, or at least everywhere that's hyperlinked to the site you're on and everywhere that those subsequent sites are linked to, and so on. It feels

vastly interconnective in a fashion that certainly makes “web” an apt description. Being in the Web, with its graphical user interface and all of its hypermedia offerings, is an immense thrill to a Net old-timer like myself. Having been involved in hypermedia, specifically Macintosh’s HyperCard, for many years, the Web is like a HyperCard stack that spans the globe. It even has pop-up QuickTime movies, graphics windows and a Home button!

But enough hyping Mosaic for a moment. Let’s stroll onto the Web and I’ll show you a bit of what I’m talking about.

A Web Session

The first place Mosaic takes you upon launching is the home page. Since I don’t want to add to the high volume of data traffic the NCSA site (the default home page in Mosaic), I’ve entered my own home page URL in the mosaic.ini file. See Figure 4-1. This page lives on my hard drive and is not actually on the World Wide Web. Once my home page is loaded into Mosaic, I can go anywhere on the Web from there. The home page I’ve made has hyperlinks to the Web sites I frequent. Later on in this chapter, I’ll show you how to create your own home page.

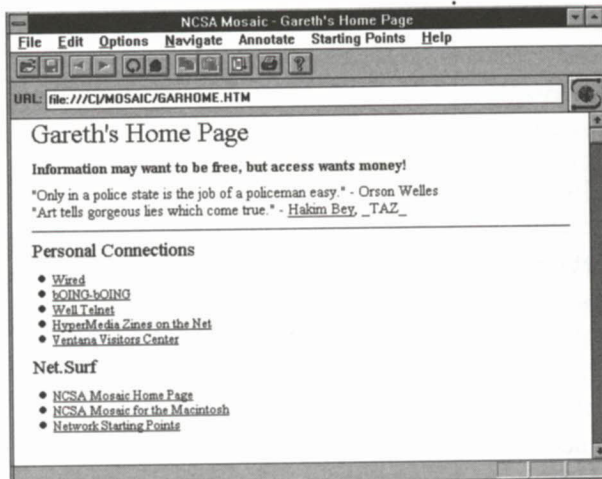


Figure 4-1: Gareth's Home Page.

Internet Connections List

From our home page, let’s check out Scott Yanoff’s Special Internet Connections List. It’s a great source of links to a diverse range of Internet offerings. I press Ctrl+O to pop up the URL box and then type in the location (<http://info.cern.ch/hypertext/DataSources/Yanoff.html>). Pressing the Enter key (or the OK button) starts the connection. Once connected, Scott’s List appears in the Mosaic window. It includes lots of hyperlinks to telnet addresses, gopher sites, finger sites and, of course, more Web sites.

The range of topics and interests include agriculture, ham radio, games, philosophy, aviation, careers and family issues. Since I'm in the mood for something more recreational and for sites I can show off to you, let's take a hyperlink to the Internet Mall to see if it's gotten any better since the last time I was there.

The Internet Mall

Nope. It still has a rather vacant, gloomy feeling to it, like a new real-world mall with only a couple of stores open, and all the rest curtained with signs that promise: Coming Soon! Everyone's trying to pretend that there's excitement in the air, but it's not heartfelt. The Grand Opening hasn't happened yet. The Internet Mall feels exactly like that. It's organized by floors: First Floor: Media, Second Floor: Personal Items, Third Floor: Computer Hardware and Software, Fourth Floor: Services telnet books.com. There are currently only a few items on each "floor." Not finding much of interest here, I decide to try the link to the Future Fantasy Bookstore.

<http://www.kei.com/internet-mall.html>

Future Fantasy Bookstore

This virtual bookshop has its real-world counterpart in Palo Alto, California. On the Web, they offer their book catalog, new book listings, back issues of their newsletters and some fantasy art. In the new book area, you can click on the name of the book and view its cover art or click on the author's name to see all the books that Future Fantasy carries by that author. Trouble is, I don't like fantasy. I came, attracted to the "Future" part of their name, but I don't see much in the way of sci-fi titles. I *do* see a link to the Science Fiction Resource Guide at Rutgers University. After goofing around for a while, looking at some full-color scans of book covers and searching on a few authors, I jump across the Web in search of the sci-fi guide.

<http://www.commerce.digital.com/palo-alto/FutureFantasy/home.html>

Science Fiction Resource Guide

This place turns out to be the mother lode. The Guide contains a staggering amount of information on science fiction literature, film, TV and criticism. The first thing I see is a hyperlink to "A Short History of the Internet" by my WELL buddy, sci-fi writer and cyberpundit Bruce Sterling. (Nice essay, BTW. I hope people will read it. If you do choose to read this, be sure to return to the Science Fiction Resource Guide to keep up with our tour.) Scrolling through the home page of the Guide I pass dozens of links to essays, reviews, articles, interviews, even whole books (e.g., Sterling's *Hacker Crackdown*). There are long lists of subject bibliographies, sci-fi film and TV show synopses, links to sci-fi critical journals, conventions and awards—and if that's not enough, there are links to all the other sci-fi archives in the Web!

<ftp://gandalf.rutgers.edu/pub/sfl/sf-resource.guide.html>

If I were on my own, I would probably spend the rest of the night scrambling along these interconnected threads, reading some of the interviews and other material available here (a FAQ for *Brazil*, my favorite movie, and a three-part FAQ on the *Alien* films). But since I'm trying to show off the Web to you tonight, I'll move on. Before I leave, I choose Add Current to Hotlist from the Navigate menu. (See "Creating Your First Hotlist" on page 68 in Chapter 3 for more information on hotlists.) I notice a link to the Best of the Net page (of which the Science Fiction Resource Guide is a worthy recipient). Let's go and see who else was so honored.

Best of the Net

A nice big blue logo welcomes you to the Best of the Net sponsored by *GNN Magazine*.

<http://src.doc.ic.ac.uk/gnn/meta/internet/feat/best.html>

The award winners are listed and described, with hyperlinks to each of them. The 1994 winners are (envelope please):

ArtServe

ArtServe is an art history database consisting of 2,800 images of prints, largely from the 15th century to the end of the 19th century, and 2,500 images of mainly classical architecture and architectural sculpture from around the Mediterranean. From here, you can also link to the Canberra School of Art.

<http://rubens.anu.edu.au/>

The Currency Converter

The Currency Converter is a script that converts currency from one denomination to another. Choose the country that interests you and view its approximate rate of exchange with other countries.

<http://www.ora.com/cgi-bin/ora/currency>

Edupage Newsletter

Educom is a non-profit consortium of higher education institutions seeking to transform education through information technologies. The Edupage Newsletter, published three times a week, summarizes printed news coverage of interest to all Net citizens.

<http://www.educom.edu/>



Figure 4-2: GNN's Best of the Net logo.

International Teletimes

International Teletimes is a general-interest magazine published online by sixteen-year-old Ian Wojtowicz. According to Ian, "Teletimes seeks to present informed opinion and observation drawn from the experience of living in a particular place."

http://www.wimsey.com/teletimes.root/teletimes_home_page.html

Internet Underground Music Archive

Billed as the "Net's first free hi-fi music archive." The Archive also seeks to promote obscure and unsigned bands.

<http://sunsite.unc.edu/ianc/>

New Zealand Information

Everything you always wanted to know about New Zealand—and then some. Geography, language, food, culture and wildlife.

<http://www.cs.cmu.edu:8001/Web/People/mjw/NZ/MainPage.html>

The Paleontology Server

An interactive natural history museum on the Net. Learn about phylogeny, the "Tree of Life," or examine photographs of great white sharks off the California coast.

[coast.http://ucmp1.berkeley.edu/welcome.html](http://ucmp1.berkeley.edu/welcome.html)

Science Fiction Resource Guide

"More information on science fiction than any one person can comfortably keep track of." I'll say!

<ftp://gandalf.rutgers.edu/pub/sfl/sf-resource.guide.html>

Taxing Times

Taxing Times is a repository of tax forms, including many electronic IRS publications.

<http://www.scubed.com:8001/tax/tax.html>

U.S. Census Information Server

Here you can get financial data on state and local governments as well as schools. The Census Bureau Art Gallery has a display of posters used to promote participation in the census.

<http://www.census.gov/>

Hypertext USENET FAQs

A hypertext database of FAQs (Frequently Asked Questions) available on the Internet.

<http://www.cis.ohio-state.edu/hypertext/faq/usenet/FAQ-List.html>

Xerox PARC MapViewer

MapViewer is an application that dynamically renders a map based on user input. Click on a region and MapViewer zooms in on it. You can also use a geographic name server to locate a particular location by name.

<http://pubweb.parc.xerox.com/map>

This looks like an exciting list of Web locations (well, I might skip the tax and census sites). First let's take a look at ArtServe. But before we do, we'll add this document (Best of the Net) to our hotlist by choosing Add Current to Hotlist from the Navigate menu. That way, we can come back and check out all of these documents at our leisure.

ArtServe

This site offers both an art and architecture collection and some art tours. You can view the databases alphabetically, with or without thumbnail images, or you can search the databases on keywords. I

decide to browse through the print collection with the inline images turned off. Pressing on the image I want to see (with the right mouse button), a small thumbnail reproduction pops up. If I then want to view the entire image, I press on the thumbnail to begin downloading a larger version. When the download is complete, Mosaic opens up LView (assuming you have the LView Helper Application on your hard drive) and begins decompressing the image (see Figure 4-3). When I'm done viewing, I quit LView and return to the art database. After some more browsing and downloading, I decide to leave. But again, before I do, I'll add this site to a hotlist. I plan to come back and take a tour of the architecture section. As a graphic designer, this could prove to be a significant resource for me. Because I perceive this site as a valuable work-related resource, I add it to my "Art and Design" hotlist instead of my general hotlist (Hotlist1). From here I check out the Xerox PARC MapViewer and then call it a night. Because the MapViewer is not hyperlinked on this document, I need to return to the Best of the Net page to take the link from there. I select the History list from the Navigate menu, click on Best of the Net, and then click the Load button. From the Best of the Net page, I take the hyperlink to Xerox PARC.



Figure 4-3: *Heinrich Aldegrever (1502-1555?), Intemperance.*

Xerox PARC MapViewer

The MapViewer proves to be very easy to use. First, to find out what your map coordinates are, you have to take a hyperlink to the U.S. Geographic Name Server. By typing in the city and state in Mosaic's Search box, you find the map coordinates you want to view. The coordinates are hyperlinked. By clicking on them, you're taken back to the MapViewer and your location is plotted on the map. I typed in my hometown, Arlington, Virginia. Here's what my map looks like. See Figure 4-4.

After about two hours online, I'm bushed. I press Alt+F, X to quit Mosaic and then go to Chameleon to disconnect my PPP connection. The main thing I'm excited about from this little jaunt is the Science Fiction Resource Guide. I plan to return there as soon as I have some free time (after this book is finished!). The Best of the Net had other offerings I want to check out as well. An electronic magazine called *International Teletimes* edited by a sixteen-year-old kid seemed enticing. Toto, I don't think we're in Kansas anymore.

Now that we've had a full-blown trip through the Web and have tried some of its hypermedia offerings, let's take a closer look at how these media (hyperlinks, inline images, graphics and movies) work. In the previous chapter we looked at the features contained within the Mosaic program. In this chapter, we'll look at the contents of the Web itself and how to bring its awesome resources to your desktop using Mosaic.

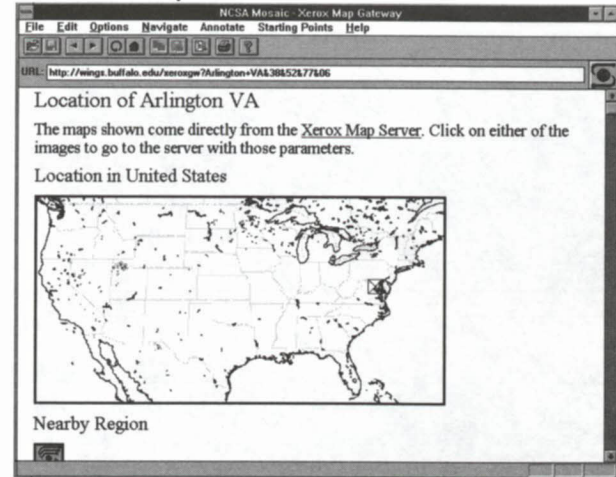


Figure 4-4: The Xerox PARC MapViewer.

HOT TIP

If you want to keep a record of your entire Web session, create a new hotlist (see “Creating Your First Hotlist” on page 68 in Chapter 3) and name it something like “Web Session [date]” or whatever is appropriate for you. Now, every time you go to a new page, select Add Current to Hotlist from the Navigate menu. This will add each new URL to your session hotlist. You’ll end up with a record of all the places you visited during your session. After you quit the session, your record will be saved (unlike the regular History list).

Hypermedia in Mosaic

As we discussed in Chapter 1, hypermedia is the marriage of hypertext and multimedia (sounds, graphics, movies). While the real lifeblood of the World Wide Web is still text, its multimedia aspects are important and will become more so as the Web expands, as connections become faster and as browsers like Mosaic become more sophisticated. While onlookers may find the MPEG movies and the pop-up images of a SLIP/PPP-connected Mosaic pure novelty, the visionary knows that he or she is looking at the future. It may appear as though we’re getting all excited about silent films in an age of breathtaking color cinematography, but it’s the potential of the medium that’s so alluring. The sense of anticipation and a spirit of cooperation is everywhere in cyberspace, with lots of people working alone or in small groups, chipping in to wire the planet for a hypermedia feed.

Right now things *are* rather crude. A SLIP/PPP-connected machine running Mosaic can be a tortoise-like media delivery system. Compressed images do well—some are downright stunning—but they take several minutes to download. Movie downloads are even slower, and

the quality is often poor. Hopefully, multimedia technology will see some breakthroughs in the near future (QuickTime 2?) and Net-based hypermedia will get a much needed upgrade. Lots of sites are now using forms, user-input boxes, digital signatures, pictures with multiple hyperlinks in them and other advances in Web interactivity. Next year's Web will be a far cry from this year's Web. Or so we hope.

The main forms of media currently available in Mosaic are

- Inline Images—color and black-and-white graphics that appear as part of the Web document.
- GIF and JPEG images—color and black-and-white graphics that are transferred to your PC and opened up by an external viewing application.
- MPEG movies—moving images in the MPEG format that are transferred to your PC and played on an external movie player.
- QuickTime movies—moving images in the QuickTime format that are transferred to your PC and played on an external movie player.
- Audio—music, spoken words and sounds that are transferred to your PC and played on an external audio player.

Inline Images

Next to text, the most common element in a Web document is the inline image. These are graphics that can either be transferred with the rest of the page (if Display Inline Images has been turned on), or marked by an icon that gives the option of loading (or not loading) the image after the page has been downloaded.

Inline images might be confusing at first because a similar icon is used to hyperlink larger graphics, sounds, movies and even other Web documents. The difference between an inline image and a piece of



Inline image icon



Hyperlinking icon

hyperlinked media is that inline images all load to the screen when Display Inline Images is selected. They are resident to the current document. Hyperlinked media will not load automatically. You must click on the icon to retrieve the image, movie or sound, or to go to the page hyperlinked via the inline icon. This type of hyperlinked file is also outlined in the anchor color (which is defaulted to blue).

On a directly connected Internet machine, you can choose to keep the Display Inline Images option checked. This way, you'll instantly see the whole Web page as its creator intended it, as soon as it's been transferred. On a SLIP/PPP-connected machine, having all the inlines transferred when you connect to a site can be very time-consuming, especially if you have no idea beforehand how many images are stored on the page. For this type of connection, the best procedure is to

1. Keep Display Inline Images turned off in the Options menu.
2. When you get to a site and you've read through the text, click on the inline image and hyperlink icons that interest you. Use the right button on your mouse to view the inline image and the left button to go directly to the linked file. Sometimes you will be given clues in the text as to what's behind these icons, sometimes you won't.

Really thoughtful Web page makers will put a small caption under the inline icon telling you what the item is and how large it is. Also, images are sometimes repeated on the same page (or in a series of linked pages). Since they are cached, they don't take any extra time to download.

Here are the various inline image icons encountered in Mosaic.






Inline Icon	What It Means
 <p>Image</p>	<p>Basic inline image icon with image not loaded.</p>
	<p>Basic inline image loaded.</p>
	<p>Inline image with size specified.</p>
	<p>Hyperlink with inline image not loaded. (If you don't want to load the inline image before taking the link, you can press the right mouse button.)</p>
	<p>Hyperlink with inline image loaded (by clicking on this image with the left mouse button, you will be taken to a text link or a sound, image or movie).</p>

Table 4-1: *Inline image icons.*



Inline image icon



Picture preview



Speaker icon

There are three phases to accessing something indicated by an inline image icon with an anchor color border around it (defaulted to blue). Assuming you have Display Inline Images turned off and you want to see the inline image before taking the hyperlink, you would follow these steps:

1. Using the right mouse button, click on the inline image icon with the anchor color line around it.
2. A small graphic or preview image is loaded.
3. If you still want to access the full file, click anywhere inside the preview image (using the left mouse button). The larger image, movie or sound will be transferred and displayed. If this icon is being used to indicate a link to another Web document, by clicking on the inline image you will be taken to the new page. In the above example, clicking on the preview image icon will bring you to a small image of Vice President Gore. Click on this image and a full-screen JPEG version of the same image will be transferred.

Note: If you don't wish to view the inline image before going to the linked item, you don't have to. Clicking on any hyperlinked inline image with the left mouse button will move you directly to the hyperlinked item.

4. If the inline image icon is a link to an audio file, when you load the inline, you will usually get some type of speaker icon. Click on this icon with the left mouse button, and the audio file will be downloaded. When the transfer is complete, Mosaic opens up the audio Helper Application and immediately plays the clip.

As long as the little yellow lights and spinning planet are visible on the Status Indicator, a download is still in progress. Sometimes things will temporarily stop moving. The transfer is not complete until the lights are "turned off" on the Status Indicator and the cursor has returned from the hourglass to the pointing finger icon.

GIF & JPEG Images

While Mosaic has embedded within it the resources to present small images, larger, more complex images are best handled by one of the external viewing programs such as LView. When you click on an inline image or a text anchor that is attached to a larger graphic, the Status Indicator will light up and start spinning and the transfer will begin. Once an image has been transferred, it's stored temporarily and the external viewer assigned by Mosaic to handle that file type is launched. For GIF and JPEG images, LView is the default application (see Chapter 3 for full details on how to select other viewers). The viewer application begins to process the image and displays it as soon as it's decompressed.

After viewing the image, you can either save or manipulate the image using LView's many image tools, or you can quit and return to Mosaic. Mosaic automatically reopens the viewer each time it's needed.

QuickTime & MPEG Movies

If you encounter any movies online, you can transfer and view them if you have the appropriate players installed (see Chapter 3). It's a good idea to have both the QuickTime and MPEG players installed since Web documents will not always specify what type of format their movies are in (although MPEG is the most common). You also want to be careful to check out how big the files are before you transfer them (if any clues are given). Some movies are megabytes in size. Luckily, most Web documents do tell you the file sizes (see Figure 4-5).

MPEGPLAY is available at most of the sites listed in this book that offer Mosaic. QuickTime players are harder to find. The Movie Player is available at lister.cc.ic.ac.uk in the directory `/pub/wingopher/viewers/movies/qtwplay.zip`. You need the current version of QuickTime for Windows installed on your PC to use the QuickTime Player.

Files: Size (bytes) - Date - Name (sorted)

60502	-	22 Mar 09:16	-	3d-mri-brain.mpg
369069	-	22 Mar 09:16	-	3d-mri-head.mpg
740175	-	22 Mar 09:11	-	BigE_Anim.mpg
339528	-	22 Mar 09:23	-	DebbieHarry.mpg
730973	-	22 Mar 09:37	-	IMloopy.mpg
873335	-	29 Mar 08:14	-	andrew.mpg

Figure 4-5: Example of how movies should be listed in a Web document. Some lists give no indication of movie format or size.

Figure 4-6 shows a typical movie viewer. Your mileage may vary depending on which viewers you're using. The one pictured here is MPEGPLAY (MPEG).

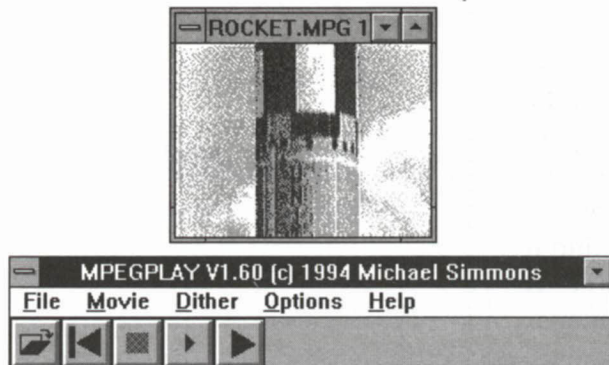


Figure 4-6: *Movie viewer.*

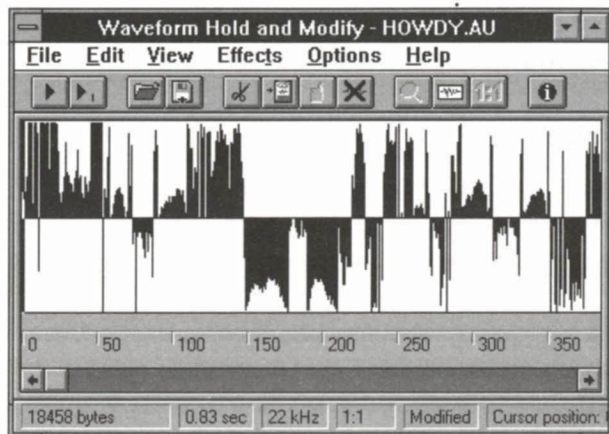


Figure 4-7: *Wham, a typical audio playback application for Windows.*

The way MPEG handles frame-to-frame compression is fascinating. Since most video consists of a series of objects moving in the foreground and relative static in the background, MPEG only transmits the motion of the foreground objects, rather than retransmitting both the foreground and the background over and over again. MPEG uses a form of pattern recognition to decide which pixels are part of moving objects (and therefore transmittable) and which are not.

Audio

Mosaic lets you access spoken words, music and other forms of audio. These are transferred in the same manner as images and movies. Since audio of any significant length can take up a lot of disk space (and take forever to download), look to see if the Web page tells you how big the file is before you transfer it. Some Web pages will tell you the size, others won't. Figure 4-7 shows the control window of a typical audio playback application. The application shown here is Wham. Wham can be found at [ftp://ftp.ncsa.uiuc.edu](http://ftp.ncsa.uiuc.edu).

Using Mosaic as an Internet "Front End"

One of the things that distinguishes Mosaic from other Web browsers is that it's not only a hypermedia browsing tool—it can also be used to access regular Internet services such as FTP, telnet, Gopher and WAIS. You can even read

USENET Newsgroups from within Mosaic. In the following section, we'll run through each type of service and describe how you can best take advantage of it using Mosaic.

FTP

File transfer, the ability to freely move documents and programs from computers all over the Internet into your home computer, is one of the big advantages of Net connectivity. Using Gopher, Web search engines and other tools, you can find information on just about anything. If I hear about a new piece of free software, an electronic magazine or something else that's recently floated into the Net, I can usually find it and download it in a matter of minutes. File Transfer Protocol (FTP) is the main standard used on the Internet for transferring files from one computer to another. While FTPing is not difficult in any of its forms (see Chapter 2), it is especially easy with Mosaic. To access an FTP site you'll need the FTP server's URL. This address will be in the form ftp://site/filepath (if any). See Table 4-2 for more information on URL forms for Internet services. Many FTP sites are hyperlinked, so all you have to do is click on the link and you will be transported either to the site or directly to the file itself. Once you're at the site and have found the document you're looking for (usually stored in a document hierarchy not unfamiliar to Windows users), all you need to do is

1. Choose Load to Disk, either from the Options menu or from the toolbar (the Disk icon).
2. Click on the name of the file you want to FTP.
3. A typical Save As dialog box pops up asking you to name and direct the file to the appropriate directory on your hard drive. Mosaic then transfers the file. The Status Indicator lights up and spins while the transfer is in progress. The Status bar also keeps you informed as to how many bytes have been transferred.

That's all there is to it. See Table 4-3 for descriptions of many of the file types found on an FTP site and how Mosaic handles them.

Note: Clicking on the file folder or document icon within an FTP directory will do nothing (if icons are visible). These are nonfunctional internal images that are used to indicate the directory hierarchy and the various file types. You must click on the file name, not the icon, to begin the transfer.

Service Name	URL Form	Type of Service	Notes
World Wide Web	http://site[/filepath]	Hypermedia documents	Use HTTP (Hypertext Transport Protocol) for connecting to HTTP servers (Web sites).
FTP	ftp://site[/filepath]	File transfer	Used for transferring files to your computer.
Gopher	gopher://site[/filepath]	Menu-driven info. browser	Used for browsing and transferring files to your computer.
Telnet	telnet://site	Remote login	Use to connect to another machine on the Internet.
News	news:newsgroupname	Reading USENET news	You need to enter the name of your local news server in the Preferences box to access newsgroups.
Email	(not applicable)	Electronic mail	To send mail while in Mosaic, use a telnet program to log into a host that offers mail or use a mail program like Eudora.
WAIS	waisindex wais://site/ database	Searchable databases	Search on keywords for text documents (mostly) that can then be transferred to your computer.
Finger	http:// www.cs.indiana.edu/ finger/	Get information about users	In Mosaic, you need to go through a hostname/username gateway to access the UNIX finger command.

Table 4-2: Internet services and how to connect to them through Mosaic.












Icon	Extension	File Type	Downloading Notes
	(none)	Directory	Cannot be downloaded. The folder icon is simply used to indicate a directory on the FTP server.
	.zip	Compressed binary	You will need the PKUNZIP utility data file to decompress. You may encounter other compression types such as .ila, .arc and .hqx, although .zip is the most common.
	.txt	Plain Text	Will be transferred to Mosaic's document view window.
	.mpg	MPEG movie format	Mosaic will transfer file and launch external MPEG player.
	.mov	QuickTime movie format	Mosaic will transfer file and launch external QuickTime player.
	.au	Audio file format	Mosaic will transfer file and launch external audio player.
	.jpg	JPEG image format	Mosaic will transfer file and launch external JPEG viewer.
	.gif	GIF image format	Mosaic will transfer file and launch external GIF viewer.
	(none)	Unknown file format	The server is unable to identify the file type.
	(none)	Telnet access	You must have a telnet program installed and in the proper filepath in your mosaic.ini file. (Gopher sites only.)
	(none)	Searchable index	Access to searchable indexes and directories. (Gopher sites only.)

Table 4-3: Common file types found on FTP and Gopher sites using Mosaic.

Notes:

1. External applications will only automatically “launch” if you have the appropriate Helper Applications on your hard drive and properly mapped in the mosaic.ini file. For the file types above, Mosaic has defaulted the following applications: PKUNZIP (for compressed files), MPEGPLAY (for MPEG Movies), Movie Player (for QuickTime), Wham (for audio), LView (for GIF and JPEG files). See Chapter 3 for instructions on how to locate and add Helper Applications to your mosaic.ini file.
2. The icons pictured above will not appear at every FTP and Gopher site. Some sites will not have icons at all, and you’ll have to look at the extension (.mpg, .zip, .au, etc.) to figure out what type of file it is.
3. In the alpha releases of Mosaic, the FTP/Gopher icons are very finicky. Sometimes, as you navigate through the directory hierarchy, the icons will disappear and be replaced by dots. Hopefully this will be fixed in future versions.

Gopher

The Internet Gophers (“go for”) provide information search and retrieval on computer systems throughout the world. Connecting to a Gopher server using Mosaic works exactly the same as connecting to an FTP site. You browse through a hierarchy of directories and files until you find the file you wish to transfer. When found, you simply choose the Load to Disk option and click on its name to begin the transfer. You can access a Gopher site either by clicking on a hyperlink that’s pointing to a Gopher or by typing a Gopher URL into the URL box. The form would be gopher://site/filepath (if any). Table 4-3 shows many of the file types you might encounter in Gopherspace.

Telnet

Telnet is a computer terminal protocol that lets you log onto other computers on the Internet. For instance, I use the telnet command to

log onto the WELL in Sausalito, California. To do this, I log onto my UNIX account at a local Net site and then give the telnet command to "open well.com." I am instantly transported to the WELL's front door where I can log in and go about my business. In Mosaic, there is no ability to send email or to log into another computer remotely. The solution to this is to get a telnet program and point to its location in your mosaic.ini file. It will then work the same way as any Helper Application. If you come to an Internet resource that requires you to log into a remote machine to access it, the telnet address will either be typed out or hyperlinked. If typed, you'll need to enter its URL in the URL box (in the form telnet://site.domain) and choose OK. If it's hyperlinked, all you do is click on the link. If you have a telnet program installed on your machine (and linked via the mosaic.ini file), Mosaic automatically launches it and makes the connection. That's all there is to it. If you're using the Chameleon Sampler disk or Trumpet Winsock, you already have a suitable telnet program. The Trumpet Winsock applications (which include a telnet program) can be FTPed from ftp.ncsa.uiuc.edu in the directory PC/Mosaic/sockets or from ftp.utas.edu.au in the directory /pc/trumpet/winsock. Make sure you download the winapps.zip file. See Figure 4-8.

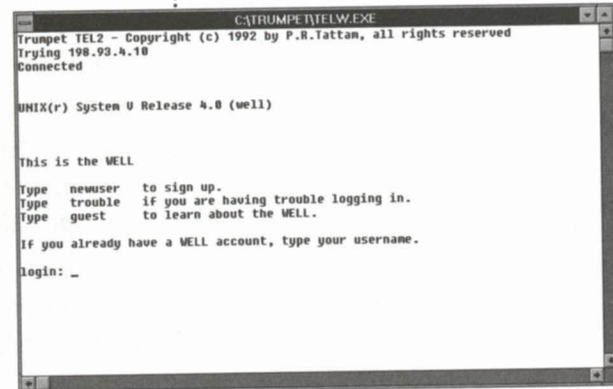


Figure 4-8: A remote login from Mosaic using the Trumpet Winsock telnet program.

HOT TIP

Don't forget that you can use the Windows Notepad to cut and paste URLs you find while in Mosaic or while using other Internet services. That way, by saving them electronically and not writing them down, you remove the risk of copying them incorrectly.

USENET Newsgroups

USENET Newsgroups are one of the biggest attractions on the Internet. These are discussion groups covering every conceivable subject. The discussions are often erudite, funny, feisty and bizarre. They are like global town meetings divided into special interest groups of staggering variety.

While Mosaic allows you to read these USENET groups, you can't join in on the conversations or have much control over the news feed. If, after listening in for a while, you get interested in posting messages, it's recommended that you download a freeware newsreader program and use that instead of Mosaic. That way, you'll not only be able to read the discussions, you'll be able to roll up your sleeves and dive right into them.

Reading newsgroups with Mosaic is a cinch. If you remember, in Chapter 2 we entered the address of an NNTP Server in the mosaic.ini file. This is the address of the local Internet service provider that carries USENET News (NNTP stands for Network News Transport Protocol). Mosaic accesses this local server when you want to read your groups. To access a newsgroup, you need to know its name. Many of the Internet books in the bibliography include lists of all newsgroups. Once you know the group's name, say rec.arts.tv, you need to put it in a form that Mosaic understands. This would be news:rec.arts.tv. All you do is type **news:newsgroupname** in the URL box and click OK. In a few seconds, you'll be looking at the current discussion on that topic—in this case, the latest offerings on the *other* monitor in your house.

The titles of the 20 most recent postings (called "articles") to a newsgroup appear on your screen in a hyperlinked list. To read one of

Newsgroup Readers Mosaic, for all its virtues, only gives you a peek at USENET Newsgroups. You can read groups, but you can't respond to them. If you're interested in participating in these global discussion groups, you need to use a newsreader program. There are a number of good newsreaders that are freely available over the Net. Trumpet is a popular newsreader for Windows. It is available from the following FTP sites:

FTP Site	Directory Path
sunsite.unc.edu	/pub/micro/pc-stuff/ ms-windows/winsock/ apps
ftp.utas.edu.au	/pc/util/trumpet/ wintrump
biochemistry.bioc .cwru.edu	/pub/wintrumpet

The file you're looking for is wtwsk10a.zip.

the messages, just click on the title and the full article will be displayed. There is always a hyper-linked item at the top of the window called Earlier Articles. By clicking on this, you can access the previous 20 postings. See Figure 4-9.

WAIS

WAIS (pronounced “ways”) is a text search and retrieval system similar to FTP and Gopher. An acronym for Wide-Area Information Server, WAIS gives you the ability to search databases of mostly text-based documents by using keyword queries. Similar to Gopher, you don’t have to know anything about what type of database is being accessed or where it’s located. WAIS deals with all this for you. Unlike Gopher, you can’t browse the databases; you can only keep trying keyword combinations and hope for a match. WAIS databases cover everything from agriculture to social sciences. The easiest way to plug into the WAIS system is to go to <http://info.cern.ch/hypertext/Products/WAIS/Sources/Overview.html>. There you’ll find a master index of WAIS databases.

Finger

Finger is a utility that lets you look up information about users on UNIX systems. Most of the time a user’s Finger file consists of their login name, their real name, the last time they accessed their account and if they have any unread mail. There is also an area in the Finger file to show a “plan,” which can be a bio or anything else the user wants other people to see. Many UNIX system administrators don’t make the Finger files available over the Internet without the express permission of the users of their system. Some people use Finger files as a way of broadcasting information to the Net. There are Finger files with base-



Figure 4-9: A USENET newsgroup in Mosaic.

ball scores, quotes of the day, California earthquake information and other news and trivia. These public information Finger files are traded over the Net like other cool sites, newsgroups and mailing lists. Some Net artists put ASCII-based art into their files. In Mosaic for Windows, you can access Finger files by going through a gateway that accesses Finger. The gateway address is **http://cs.indiana.edu/finger/gateway**. This site is already offered as a menu choice (Finger Gateway) under Starting Points. At the gateway site you can read more information about Finger files and the WWW gateway to them. You can also search on a Finger file from anywhere within the Web by using the URL **http://www.cs.indiana.edu/finger/hostname/username**. For instance, to view a Finger file of late-breaking NASA news, type **http://www.cs.indiana.edu/finger/space.mit.edu/nasanews**. See Figure 4-10.

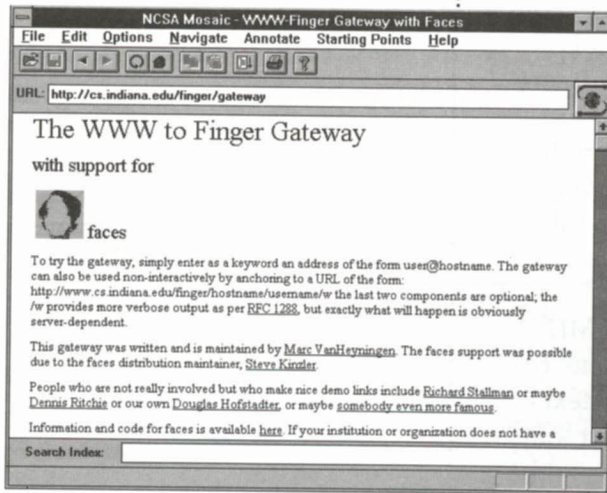


Figure 4-10: *The Finger Gateway.*

HTML ASAP: Making Your Own Web Documents

Making your own Web documents isn't rocket science—in fact, it isn't hard at all. If you can use a word processor and are familiar with fonts and style changes (bold, italic, underline), you can create HTML documents. HyperText Markup Language is simply a method for marking text in such a way that it looks and behaves the way you want it to when it's viewed in a Web browser. The marking codes may look arcane at first, but once you get the hang of them, you'll be confident in moving on to more sophisticated document construction. Let's get started by making a simple home page. All you'll need is a text editor and a little patience.

Format Containers

Browsers that read HTML (like Mosaic) use only the formatting tags you enter when formatting text. All spaces, tabs and indentations you put in the original text are ignored when your HTML document is displayed in Mosaic. So, to make things look the way you want them, you've got to use the appropriate formatting tags.

For the most part, HTML formatting tags surround (or contain) the text you want to format. For instance, if you want something to appear in boldfaced type, you need to tag the text with bold codes, like this:

```
<B>The Web is Wide, Wild and Wonderful</B>
```

The first three characters, , mark the beginning of the HTML formatting. The "B" character indicates boldface. The "Less Than" (<) and "Greater Than" (>) symbols set the tags off from the actual text. The message "The Web is Wide, Wild and Wonderful" is the text that is being marked for presentation in boldface. Finally, the line ends with the code . This marks the end of the area that is tagged as bold. All HTML tags end with the same </code> form.

The important thing to remember is that HTML considers most formatting codes to be "containers" that hold data to be formatted (in this case the sentence "The Web is Wide, Wild and Wonderful"). The neat thing about this concept is that you can place containers within containers. This is called "nesting" and can be used for things like applying two attributes to one object. For example:

```
<I><B>The Web is Wide, Wild and Wonderful</B></I>
```

Now our sentence "The Web is Wide, Wild and Wonderful" will appear as both bold and italic, because it is contained within bold and italic formatting containers.

Believe it or not, those are the basics. Armed with the knowledge that WWW browsers only look at formatting codes to decide how to

show your text, and that these codes are containers that can be nested, you're now ready to dig deeper—constructing your own home page, complete with images and hyperlinks.

The HTML Style Tags

The foundation of any HTML document is its many formatting codes, or "tags." Table 4-4 lists the basic tags and what part of an HTML document they affect.

Begin Code	End Code	Format	Description
<TITLE>	</TITLE>	Title	What your document is called on the Web.
<H1>	</H1>	Headers	Headings differentiate between parts of your document.
	Not applicable	Image	This causes an inline image to be displayed.
		Link	A way of pointing at a different Web document, a media clip, etc.
<P>	Not applicable	Paragraph	A paragraph of text. Unlike the other formatting commands, you only have to put the <P> tag at the beginning of the paragraph.
 	Not applicable	Line break	Same as a hard return.
		Bold	Shows text in boldface type.
<I>	</I>	Italic	Shows text in italic type.
<U>	</U>	Underline	Underlines a word or phrase.
		Internal Link	Links to other parts of the same document.
		Ordered (numbered) List	Causes a list of items to appear with identifying numbers next to each element.
		Unordered (bullet) List	Causes lists to appear with bullets, asterisks or + signs next to each list item, depending on the browser.

Table 4-4: Basic HTML formatting tags.

Building Your Home Page

Your most basic home page would consist of a title, a header or two and some text. At this point, we won't worry about links, images and sounds. To begin,

1. Open a new document in your favorite text editor or word processing program.
2. Decide on a title for your home page. "My Home Page" is probably as good a place to start as any. Since the title of your page should appear as the first line in your HTML document, type `<TITLE>` to indicate you are about to enter the title of your page.
3. Next, type in the name of your home page and then `</TITLE>` to indicate the end of the title. Your document should look like this:

```
<TITLE>My Home Page</TITLE>
```

4. Let's put a header at the top of the page. There are six levels of header tags in HTML, with each level down a slightly smaller typeface. Since this is your top header, and you want to make it big, you should use Header level 1.

5. Type `<H1>` to indicate the beginning of your header and then type the actual header. Something like "Welcome to My Home Page." Finally, type `</H1>` to indicate the end of the header. So far, your home page HTML document should look like this:

```
<TITLE>My Home Page</TITLE>  
<H1>Welcome to My Home Page</H1>
```

6. Now, add some text or a blurb about yourself. Since this information might be several lines long, you'll want to use the paragraph HTML

Top 10 Signs Your WWW Home Page Is Not Cool

10. Hotlist is only lukewarm.
 9. Links to your page keep using the adjective "fetid."
 8. Disney wants to buy the rights to use it in Mighty Ducks III.
 7. On Adam Curry's list of neat home pages.
 6. WWW Worm got bored and left.
 5. Condemned by the housing authority.
 4. Word "cool" is in the title.
 3. Nancy Kerrigan says it's the corniest page she's ever seen.
 2. Geek Code replaced by Geek C++ Code.
- And the number one sign your home page is not cool...
1. Access log shows tons of visits by Al Gore.
- Found on the Web

tag so that it formats correctly. Type a <P> tag, hit enter to get to the next line and type some stuff about your home page, like this:

```
<P>
```

This is my first home page. It will be my jumping off point into the rest of the Web. Hello cyberspace!

*Note: Remember, Mosaic doesn't care how many blank lines you use, or how many spaces you indent your paragraph, or where you put the line breaks. Mosaic is only concerned with the way the document is tagged. So, if you do want the lines to break at a specific point, such as in a poem, you need to put a
 code at the end of the line where the break should occur. This is like hitting a hard return at the end of each line in a word processor. If you do this, no matter how big or small the Mosaic window is, it will go to the next line when it encounters the
 code.*

At this point, your home page HTML document should look like this:

```
<TITLE>My Home Page</TITLE>
```

```
<H1>Welcome to My Home Page</H1>
```

```
<P>
```

This is my first home page. It will be my jumping off point into the rest of the Web. Hello cyberspace!

You have now constructed a working home page! A little dull maybe, but it *is* an HTML document and will function quite nicely as a home page until you want to get more elaborate. Let's go look at it in Mosaic.

7. Save your document as a text file in the Mosaic folder. Call it whatever you like (e.g., "home.htm"), but make sure it ends in .htm.

Note: On the World Wide Web, HTML documents end with the extension .html. On the PC, since extensions can only be 3 characters, all HTML documents stored on your hard drive need to end in .htm to be readable on your PC.

8. Launch Mosaic and select Open Local File from the File menu. From the Open dialog box, find your text file and click the OK button. Your home page should now load and be visible within the Mosaic document view window. How does it look?

9. To make this your permanent home page, change the Home Page= line in your mosaic.ini file by typing the file path and name of your HTML document. Also make sure that Autoload Home Page is set to yes. You've done it! Now when Mosaic starts up, you'll go directly to this home page on your local hard drive rather than having to wait to connect to NCSA. If you want to go to NCSA once you're in Mosaic, you can still get there by choosing its name from the Starting Points menu.

Adding Some Pizzazz

Face it, a home page like this is pretty boring. If you've been doing any Web walking, you know that the WWW is just bursting at the seams with graphics, sounds and hyperlinks. In fact, if you came upon a home page like the one you've just constructed, you'd probably keep right on walkin'. The great thing about HTML is that adding all the media files is as easy as formatting them!

To add a link to a picture on your hard drive,

1. Find a suitable picture. If you have a scanner, you can scan something in—a picture of yourself, for instance. Or, how about a piece of computer art? It doesn't matter what it is, as long as it's in GIF format (and not too huge).
2. Put the picture in the same subdirectory as your home page and name it <name.gif>, with "name" being whatever you choose.
3. Open your home page HTML document in your text editor. To insert a link to your picture, enter a special tag that tells Mosaic where to look for the picture when it opens your home page. Type

You need to type this in the place in your document where you want the picture to appear. For example, if you want the picture to appear below the first header in your home page, you would add the line like this:

```
<TITLE>My Home Page</TITLE>  
<H1>Welcome to my Home Page</H1>  
<IMG SRC="name.gif">  
<P>
```

This is my first home page. It will be my jumping off point into the rest of the Web. Hello cyberspace!

4. Save your HTML document (as a text file!) and open up Mosaic. Choose Open Local File from the File menu.

If you look at the Status Indicator as your home page is being opened, you'll see that the icon lights up and starts spinning. That's your multimedia home page being loaded!

If you have the Display Inline Images option checked, your picture will appear when your page does. If you have this option turned off, you'll see an inline image icon where your picture is "stored." If for some reason your image doesn't load (if it's not a GIF or you didn't type the name in correctly) you'll get an Error Accessing message.

Now that you have a picture on the page, how about adding some sounds?

1. First, record your sound with SoundBlaster or some other PC recording application and save it as an .au sound file in the same directory as your home page. Say you record a greeting—you could call it "greeting.au".

Since Mosaic won't auto-load sounds as it does images, you'll have to put in a link anchor to your sound. A link can be anything: a word, a sentence or an inline image. In this case, we'll use a word as our link.

2. Construct the link to your sound by typing the tag into the place where you want the link to appear on your home page. For example,

```
<A HREF=
```

This tag tells Mosaic you want to link to whatever comes after the = .

3. Next, type the name of your file in quotes.

```
<A HREF="greeting.au"
```

4. To make a link show up in your home page, you need to type in the description of what you are linking to. First, type >, the beginning of the container for the link's name. Next, type in the name of the link as you want it to appear on your home page. In this case, let's use "Click here for greeting." Your line should now look like this:

```
<A HREF="greeting.au">Click here for greeting
```

5. To end the line, type to mark the end of your tag. Your final sound link tag looks like this:

```
<A HREF="greeting.au">Click here for greeting!</A>
```

6. Save your home page HTML document, open Mosaic and watch your home page load. You should see your new greeting link appear. Click on it to hear the audio.

Links to the Outside World

You now have a snazzy little multimedia home page! But something important is still missing. You have no way of getting onto the Web. You need to add some hyperlinks so you can easily take off from this home page to global ports of call.

The basic format of any link is the familiar URL. If you were asleep during the URL discussion in Chapter 3, you should go back there now and brush up on what a URL is and how it works.

Before you add any links to your home page, you'll want to add a new header to indicate that this is a hyperlinks section of the document.

1. Open your home page in your text editor. Go to the end of the document. Since this header is below the first header in terms of the layout priority of the document, you'll want to use a Header level 2 this time. Type something like

```
<H2>Links to the Outside World</H2>
```

2. Now you can add a few handy links. A good one is the NCSA What's New Page. By checking this page frequently, you can keep track of all the latest Web happenings and announcements.

3. To construct a link to this page, you'll use a format similar to the one we used to link sound. The sound link was to a file on your own machine. Since here you want to connect to a file (the NCSA What's New Page) on another server, a URL is needed to make the connection.

Below your second header, type `<A HREF="HTTP://www.ncsa.uiuc.edu/SDG/Software/Mosaic/Docs/whats-new.html"`

This line tells Mosaic to go to the NCSA WWW server (www.ncsa.uiuc.edu), skip to the /SDG/Software/Mosaic/Docs/ directory and grab the file "whats-new.html."

4. Just like the sound file, you need to have some way of indicating on the home page that there's a link. Add a link description similar to the one for sound. Type `>What's New on the Web` at the end of the URL line. The whole line should now look like this:

```
<A HREF="HTTP://www.ncsa.uiuc.edu/SDG/Software/Mosaic/Docs/whats-new.html">What's New on the Web</A>
```

When this line loads into Mosaic, you'll see "What's New on the Web" underlined.

5. How about adding another link? Sometimes you want to search for something on the Web but have no idea where to find it. Something called a Web search engine keeps an index of all the contents of the WWW and lets you search on it by keywords. When it finds a match, you get a list of those matched items, presented as hyperlinks. These search engines are like robot librarians with a collection that spans the globe. An excellent and highly recommended search engine is called the WebCrawler. To add a link to it, go to the next line in your document and type `WebCrawler Search`

When this appears in your Mosaic document, all you'll have to do is click on the words "WebCrawler Search" and you'll be instantly transported to the WebCrawler's home at the University of Washington.

Now that you've got two links in a row, you've got a list! Well, at least *you* think it's a list. Mosaic still thinks that it's two links right next to each other. Remember, Mosaic doesn't know diddly about text formatting! To put the two links into list form for Mosaic, you have to attach HTML tags.

There are two major types of lists: numbered and unnumbered. Numbered lists have numbers appearing at the beginning of each unique list item. Unnumbered lists have a bullet in front of each item. They both work the same way, so it's up to you which one to use. Here's how to add a list-format container:

1. Go to a point just above the first item (NCSA What's New Page) and hit Enter to insert a blank line. If you want your list to be numbered, type `` for "ordered list." If you want an unnumbered list, type ``.
2. Next to each link, type `` to indicate that the link is a *list item*.
3. Close the container by going to the line right beneath the last link and typing `` if you have a numbered list and `` if you have an unnumbered list.

4. Save your document, open it up in Mosaic and gloat—you have now constructed a full-featured home page!

You can add as many links as you like by either adding them as we've outlined above, or by cutting and pasting them from other HTML documents.

Your First HTML Document

Your home page HTML document should look like this (see Figure 4-11):

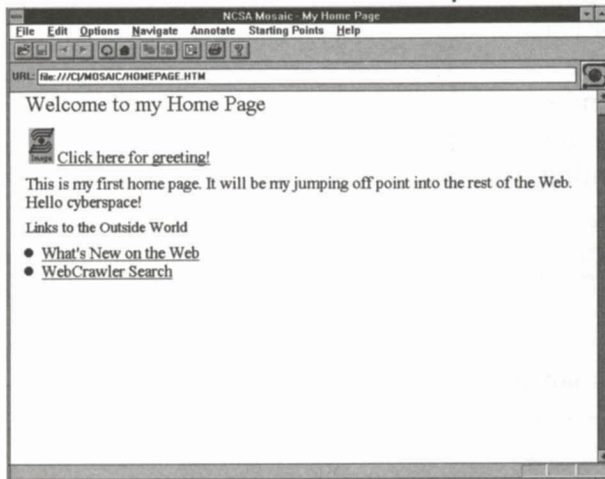


Figure 4-11: *My Home Page*.

```
<TITLE>My Home Page</TITLE>
<H1>Welcome to my Home Page</H1>
<IMG SRC="name.gif">
<A HREF="greeting.au">Click here for greeting!</A>
<P>
```

This is my first home page. It will be my jumping off point into the rest of the Web. Hello cyberspace!

```
<H2>Links to the Outside World</H2>
<UL>
<LI><A HREF="HTTP://www.ncsa.uiuc.edu/SDG/
Software/Mosaic/Docs/whats-new.html">What's New
on the Web</A>
<LI><A HREF="HTTP://www.biotech.washington.edu/
WebCrawler/WebQuery.html">WebCrawler Search</A>
</UL>
```

Now that you've gotten your first taste of HTML document making, you may want to delve deeper into how it's done. Why not use this as an opportunity to ask your robot librarian for some advice. Go to the WebCrawler and do a search on "HTML" (or maybe more specific things like "HTML Primer" or "HTML Style Guide").



HOT TIP

A great way to learn how to create HTML documents is to look at other people's. You can mimic, copy, cut, paste and add to/change what they've done. Choose Save As... from the File menu to save a Web document to your hard drive. Open it up in a word processing program and monkey around with it to your heart's content. Remember to always save it as a text file with an .htm extension. Then, choose Open Local File from the Mosaic File menu, find the document and double-click on it. If it didn't turn out the way you planned, you can open it up again in the word processor. Make further changes, save the document and then open it again under Mosaic's File menu. The altered document will appear inside the Mosaic document view window. By tinkering and experimenting back and forth, you can learn a lot about how HTML making works.

Winning Web Page Design

With the increasing number of Net users with Web access, and thanks to the ease with which HTML documents can be created, there's starting to be a glut of really bad page designs. Terrible text layout, unnecessary use of large images and audio clips, and content of questionable merit are elements in far too many documents. As in many situations where there's a spirit of openness and an "anyone can participate" attitude, mediocrity can quickly take over. Here are a few design suggestions to keep in mind when creating Web documents.

- "KISS" is an acronym commonly used in graphic arts. It stands for "Keep it simple, stupid!" This and all basic rules of graphic design should apply to Web pages. You are publishing something that thousands of people may see. *Add* to their visual

field, don't clutter it with trash. Try to keep the number of stylistic elements to a minimum and work the flow of the document so that it has as much impact as possible. An old graphic arts trick is to squint when you're looking at a page of design. By fuzzing your vision a bit, you can see the elements of a page as interacting objects rather than their specific content. Do this on your documents until the elements are balanced (or unbalanced in a pleasing way).

- Keep in mind that different types of browsers will be used to view your documents. While lots of graphics and jazzy color elements might look great on your browser, someone using a text-based browser (such as Lynx) might just see a confused mess.
- White space can be a good thing. Learn how and when to use it to your advantage. Set things off for emphasis by surrounding them with white space.
- Try to "chunk" information into logical units. Use common sense and an eye toward logical organization when you're laying out your documents. It is best to let the material unfold in levels, rather than having everything appear at once.
- Integrate your links into the material. Don't put "Click here!" off by itself with no point of reference. Your links should go where they make the most sense, ideally in context. If you do put them off by themselves, say what they are: "More information on widgets."
- Check your links! It's a nuisance to find a document that has links that don't go anywhere. Before you post your documents, make sure that everything works.

- Be literate. Again, this is as much a publishing environment as anything else. Use a spell checker and read over everything before you post it. One writer's tip: Read out loud what you've written. If it sounds good spoken, chances are it will read well on the page.
- Sign *all* of your documents. People like to know who wrote Web documents, and ideally, how to contact them. Don't just sign the "front" page of a document series. Sometimes people will come in the back or side doors to your documents (if they have a URL to a page that's not the first). If you don't label these secondary pages, no one will know whose handiwork they are.
- Give as much information as possible about the size and content of inline images and hyperlinked media. You can label inline images with a caption (57k image) or hyperlinked media with a written description: "1.2mb performance video in MPEG format." If a media item is really huge, it should have an even more emphatic message: "CAUTION: This QuickTime movie is 2.7mb in size!" (Remember, people don't read instructions. You have to shout sometimes.)
- Limit your use of inline images. Try to find small, high-impact images, and overall, use images sparingly. Think in terms of the different types of users who will be accessing your pages. Some may have fancy Silicon Graphics workstations connected to T5 lines, but others will be putting along at 14,400 baud. Try to create pages that will communicate and satisfy at all levels. It's a challenge, but it can be done.
- Don't be afraid to break any of these rules if you've got a good reason for doing so.

Staying on the Crest of the Wave

Things move quickly in cyberspace. Just when you think you have a handle on what's going on—when you think you're in the vanguard—you discover a whole new corner of the Net that you knew nothing about. Mosaic and WWW are like that. It seems as though the Web has just now caught the attention of many Net citizens. They are often shocked to learn that the Web has been around for years and that it's as large as it is. Now that you're a full-fledged Web walker, you can use the impressive resources of the Web to stay on top of its development. Listed below are many of the key documents, Web sites and USENET Newsgroups that cover the late-breaking news and announcements concerning WWW and Mosaic.

FAQs & Other Reading Material

An amazing collection of Web information packed into a single document. The *comp.info-systems.www* FAQ covers just about everything you need to know about starting out on the Web, the basics of HTML, a description of relevant terms and lots more.

comp.infosystems.www FAQ

http://sunsite.unc.edu/boutell/faq/www_faq.html

WWW Primer

The *WWW Primer* is a friendly introductory guide to the Web. Much more accessible than a lot of the FAQs and a lot better written than most "primers."

<http://www.vuw.ac.nz/who/Nathan.Torkington/ideas/www-primer.html>

Entering the World-Wide Web: A Guide to Cyberspace

A thick treatise by Kevin Hughes on the World Wide Web, with history, basic concepts, places to visit, a hypermedia timeline and a glossary of terms. This is a very thorough document.

<http://www.eit.com/>

Information Sites

Mosaic Information Site

A great starting point for seeking any type of Net/Web-related information and help. Lots of links fan out from here.

<http://www.ncsa.uiuc.edu/SDG/Software/Mosaic/MetaIndex.html>

WWW Information Site

The WWW Information Site graciously provides a link breakdown of WWW-related information. Users, developers, service providers and Web page authors will all find plenty of interest here. And, because it's all hyperlinked, each of the links connects to even more interesting Net points. A good place to start if you have a specific subject area you want to explore.

<http://www.bsdi.com/sever/doc/wes-info>

Newsgroups

news.answers

The repository for FAQ files from across the Internet. A huge body of information is accessible here. Before you ask, get the FAQs! All FAQ files that are posted to this newsgroup are archived at <ftp://rtfm.mit.edu/> or <ftp://ftp.uu.net/usenet/news.answers/>

They are also available in HTML format at <http://www.cis.ohio-state.edu/hypertext/faq/usenet/FAQ-List.html>

Tales From Hyperspace Members of the academic community have been keenly interested in hypertext since the 1960s. Within the realm of progressive literature, it's seen as a writing technology ideally suited for communicating the fragmented and multifaceted nature of postmodern life. So far, most of the experiments in "hyperlit" have been done by individual authors, in HyperCard or other hypertext programs, and distributed on disk as electronic books. John Schull and Charles Deemer have a different idea. They want to grow the world's first collaborative Web novel. Called *Stories from Downtown Anywhere*, this hypertext work will incorporate many voices and many levels of talent. Anyone on the Net is free to submit work for consideration by the book's editors. Interlocking smaller stories are hyperlinked to create a larger fictional universe. If you read a story thread and see something you want to develop, a character, a physical space or anything else that strikes your fancy, you email your suggestions to the project's editors for approval. Once your contributions have been accepted, they are hyperlinked into the story. The novel is also →

interactive, with at least two choices in narrative direction available within each story fragment.

The URL for the project is <http://www.awa.com/stories/>

From here, you can link to all the existing parts of the story (so far there are only a few) or find out information on how to contribute your own tales.

comp.infosystems.announce

This newsgroup for the announcement of new information systems has also become the de facto place to announce new Web pages and sites. The University of Rochester has created a Web document announcing all the new pages announcements posted to this group. You can access the Rochester document at <http://www.cs.rochester.edu/users/grads/ferguson/announce/>

It's a good idea to add this address to one of your hotlists.

comp.infosystems.www.users

For discussions of browsing software, new user questions and general news, information and assistance.

comp.infosystems.www.providers

If you're interesting in setting up and administering a WWW server, this is the place to find out more about it.

comp.infosystems.www.misc

This group is set up to discuss everything not covered in the other WWW newsgroups. The future of the Web, protocols and standards have been recent topics of discussion.

comp.infosystems.www (defunct)

comp.infosystems.www was the original group created for discussing WWW. It has now been subdivided into the groups listed above. Many sites that carry USENET News still include it, but it will soon dissolve in favor of the other comp.infosystems.www.* groups.

alt.winsock comp.protocols.tcp-ip.ibmpc

These groups carry discussions of Winsock specifications and Winsock-compliant applications. Also check out newsgroups in the comp.os.ms-windows.networking hierarchy and the trumpet hierarchy of groups.

alt.hypertext

Discussions of hypertext, both in and out of the World Wide Web. People often announce their Web hypertext projects here. The FAQ file for this newsgroup can be found at <gopher://ftp.cs.berkeley.edu>.

alt.etext

Discussions on all forms of electronic texts. Not strictly related to hypertext or the WWW, but often includes postings on where to find electronic texts on the Web and how to set up your own e-texts in Webspaces.

Other Applications to Ease Your Net.Life

The Helper Application scheme used in Mosaic is brilliant. As has been said earlier, it frees Mosaic up to do what it does best and it gives you, the user, the flexibility of choosing what types of applications and which specific applications you want Mosaic to use for media presentations and file decompression. Even the telnet applications, while not considered an "official" Helper Application, work like one within Mosaic (see section on telnet above). But, alas, Mosaic doesn't think of everything. Most importantly, it doesn't handle email or full newsgroup participation. Here are a number of excellent freeware programs that you can use to fill in the gaps left by Mosaic.

PC Eudora

Even if Mosaic does get email support in a future upgrade, chances are you'll still need an extra program to read mail. PC Eudora is one of the best email programs for Windows. It's compatible with Winsock and it handles SMTP and POP3 (Post Office Protocol, in case you were wondering). Like the Mac version, PC Eudora allows you to attach and receive files. To use this feature you'll need to get BINHEX.EXE. PC Eudora is also easy to find on the Net. You can get it directly from the source (Qualcomm) via [ftp.qualcomm.com](ftp://ftp.qualcomm.com/quest/windows/eudora/1.4/eudora14.exe) in `/quest/windows/eudora/1.4/eudora14.exe`.

Trumpet for Windows

Trumpet for Windows is a dedicated USENET Newsgroup reading program that uses a Windows point-and-click interface. By using a full-functioning newsreader, you not only get to read the news (as in Mosaic), but you can make the news as well by posting to newsgroups that interest you. Trumpet lets you set up lists of newsgroups you want to subscribe to, loading only the lists you want to view. You read the news by clicking on the names of the articles as they appear in the newsgroup window. To post a response, you simply choose the group and select the Post button. This is worlds beyond trying to negotiate USENET with a command-line interface. Trumpet for Windows can be found at many of the FTP sites mentioned in this book. WinVN is another popular Windows newsreader. It is available from [titan.ksc.nasa.gov](ftp://titan.ksc.nasa.gov/pub/win3/winvn) in the directory `/pub/win3/winvn`.

HGopher

There may be times when you don't want to fire up Mosaic just to look up some information. For those quick and dirty info grabs, you might want to use HGopher or another Gopher client. It's definitely no substitute for the hyperlinked, multimedia Web, but HGopher is still

great for a quick burrow through the Net. HGopher was recently sold to FTP Software and the current shareware version (2.4) is no longer widely available (although you still may be able to find it at some sites). The earlier 2.3 is still around and is fully functional. Try the FTP site at lister.cc.ic.ac.uk in the directory /pub/wingopher.

WS_FTP

Even though you can easily access and download FTP-based files in Mosaic, you may still want to have a stand-alone FTP program on hand. If you are using the Chameleon Sampler disk, it comes with an excellent FTP client. A popular freeware program for Windows is called WS_FTP (or Winsock FTP). You can FTP it from ftp.usma.edu in the directory /pub/msdos/winsock.files.

Full Winsock Applications List

The above are just a few of the freeware and shareware applications that will work with Winsock. If you'd like a list of all the Winsock applications that can be FTPed, send an email message to info@lcs.com with FAQ as the Subject and nothing in the body of the message. The Winsock Application FAQ will be automatically returned to you.

Note: Most, if not all, of the programs listed above are available from the Ventana Visitors Center at [ftp://tvmedia.com/pub/PC](http://tvmedia.com/pub/PC).

Moving On

Hopefully you've now had enough time online to understand how the Web works and what Mosaic has to offer. If you haven't tried all of its features, take some time to go back through this chapter, focusing especially on browsing the Best of the Net award-winning sites and trying out the various Internet services that Mosaic can access. Doing this will put both you and Mosaic through your paces and in Mosaic's case, make sure that it's properly configured and that all the Helper Applications are installed.

Chapter 5 is a directory of Web sites, covering everything from online libraries and art galleries to electronic magazines and recreation centers. This is not an exhaustive catalog, but thanks to the beauty of hypermedia, all these sites are connected to dozens more, which are connected to still more, and so on and so on. There are enough access points here to take you deep into the fabric of the Web, enough connections to keep you busy for years. So pack a lunch, lace up your power walking shoes and scamper onto the first available Web link that strikes your fancy.