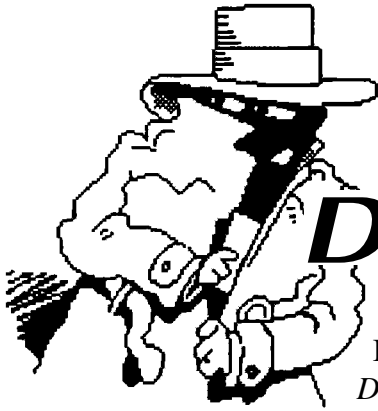


In previous issues of *Occasional Downtime* we discussed the history of the World Wide Web, how it works, and how to access it using Netscape and other browsers. But now that you've had a chance to "surf" the Web, you're probably anxious to move on to the next step: creating your own Web documents. There are many reasons why you might want to create your own Web pages. The main reason most people want to do so is to advertise who they are, what their background is, what they're working on, how to contact them, etc. In addition to personal information, though, you can also create resources that other people can use. For instance, faculty members can create pages for the courses they're teaching. These pages could include the syllabus, homework assignments and solutions, and other information relevant to the course. Similarly, a department could publish documentation on policies and procedures, schedules and calendars, and directories. If there is any kind of information that you want many people to access, the Web is the place to put it—both because it is accessible to people from many different locations and platforms (i.e. UNIX, VMS, Macintosh and Windows) and because it is easier to maintain and keep up to date than printed documentation.

HOW DO I CREATE A WEB PAGE?

Web documents are just text documents that contain HTML (HyperText Markup Language) commands. HTML is a set of special codes, or *tags*, that are interpreted by the browser to format the document and to create the hyper-text links when it is displayed. The tags usually consist of the name of the tag enclosed in angle brackets. Most tags are used in pairs, with one tag at the beginning of the text being tagged and one at the end. The ending tag is the same as the beginning tag except that there is a slash before the name of the tag. For example: `<h1>A Heading</h1>` would be interpreted by the browser as a level 1 heading (there are 6 levels of headings in HTML). Browsers interpret tags differently, so some browsers would display this as text in a large font and in bold whereas others might display it as underlined text. There are also dialects of HTML which not all browsers support. For example, Netscape supports a number of tags which are not recognized by other browsers (other browsers will just ignore them). HTML files can be created using any text editor or word processor as long as they are saved as "plain text files."

HTML is not difficult to learn. In addition to references on the Web itself there are now a number of books available on teaching yourself to write (continued on page 4)



TOP SECRET

Data Privacy

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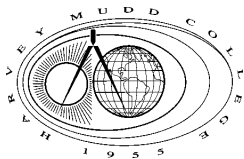
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In the last issue of *Occasional Downtime* we discussed how to prevent files from being accidentally deleted and ways to recover data that had been lost. In this issue we discuss another aspect of data protection—how to protect the privacy of your data from other users.

The first step is to become familiar with the concept of file protection. On a multi-user system all of your files have protection levels associated with them. These specify what degree of access you and other users have to your files. By setting file protections, you can control who can read, write and execute your files. Protecting your directories and files is an important step in preventing your data from being changed or deleted by accident or by a malicious user.

File protections are usually associated with different categories of users. For instance, a file always has an *owner* who is the person who created it. Each file is also assigned to a *group* which is just a collection of users. For example, some of the groups defined on *osiris* include students (for all students), *ac* (for the Academic Computing staff), and *sysadmin* (for the *osiris* system administrators). Each user has a default group which is the group that a file belongs to when it is created by that user.

FILE PROTECTION ON UNIX

To see the protections on your files in UNIX, type `ls -l`. The third column of each line shows the owner of the file and the fourth column shows the file's group. The first column indicates the protections, and will look something like `-rw-r--r--`.

If the first character of this column is a 'd', then the entry is a directory; if it is a '-', then the entry is a file. The next three characters indicate the permissions granted to the owner of the file. The three positions indicate read, write, and execute access, respectively. If the permission is enabled, an *r*, *w*, or *x* will appear in the corresponding space; if not there will be a dash. The next three characters are organized the same way, but specify the permissions for members of the file owner's group. The last three specify permissions for "world", that is, any other user who is not in the owner's group. So, in the above example, the file owner would be able to read the file and write to the file, while all other users would only be able to read the file.

The `chmod` command is used to modify the permissions on a file. It is used by specifying which set or sets of permissions should be modified, followed by how the permissions should be changed, and finally a file or list of files to apply the changes to. When specifying which user category's permissions are being modified, *u* (for user) specifies the owner, *g* specifies the group, *o* (for other) specifies world, and *a* specifies all. A minus sign indicates that permissions should be removed, a plus sign indicates that they should be added and an equals sign indicates that the specified permissions should be added, while removing all others for that user category. Read, write, and execute permissions are specified by *r*, *w*, and *x*, respectively. For example, the command `chmod go-rx homework.cpp` would remove read and execute access for group and world for the file `homework.cpp`.

FILE PROTECTION ON VMS

In VMS, the command DIR/SECURITY will show file and directory protections. The first column lists the files and directories. The second column shows the group and owner of the file or directory and the third displays the protections. The protections will look something like (RW,RWED,RE,RE). This lists the protections for four categories of users. The first is system, and applies only to system administrators. The second category specifies access for the owner of the file. The next set of permissions applies to the file owner's group, and the last set is for world; i.e. anyone who does not fall into any of the other three categories. There are four types of permissions in VMS: read, write, execute, and delete, indicated by R, W, E, and D, respectively. Permissions are modified with the SET PROTECTION command. The new permissions are specified by the file (or list of files) that they are to be applied to. For example: \$ SET PROTECTION= (S:RW,O:RWED,G,W) HOMEWORK.PAS will give read and write access to system, all access to the owner of the file, and no access to group and world. Protections are only altered for the categories specified, so a command like SET PROTECTION= (G:RE,W:RE) only modifies the group and world categories.

FILE PROTECTION ON THE FILE SERVER

File protection can also be set for the files stored in your home directory on the file servers Kato and Lurch. Student home directories are created so that only the individual student can read and write to the directory.

Faculty and staff home directories are created as requested. Generally they are created so that the owner can read and write to the directory and others can read the directory. This is so that faculty members can use their home directories to share files with students in their classes. Some faculty members have both private and public folders in their home directory with the former (continued on page 6)

Editor's Notes

In this issue of *Occasional Downtime* we conclude our series on the Web with an article on creating your own resources. We also continue our series on protecting your data with an article on data privacy.

In the next issue we look forward to having several articles by members of the HMC community. The Physics department will be contributing the first in a series of articles on the use of specialized software in research and teaching at HMC. Joshua Hodas in Computer Science will also be writing the concluding article in our series on data protection with an article on data encryption.

This semester AC provided electronic mailing lists for all of the courses taught at HMC. This is the first time we have tried to automatically generate mailing lists for all of the courses and, while there were a few glitches getting things ready in time, we hope that everyone has found them to be useful. We'd also like to provide everyone with a list of some other useful e-mail addresses and mailing lists that are available. You'll find them on page 6 of this issue. We'd also like to remind everyone of the availability of the new help desk line at 7-7777.

—Elizabeth Hodas

Occasional Downtime is published bimonthly by the Academic Computing Department at Harvey Mudd College. It is also available in plain text format on the HMC Gopher Server and in a variety of formats on the HMC Web Server. Comments and questions can be directed to downtime@hmc.edu.

HTML (several references are given at the end of this article). There are also alternatives to typing HTML commands directly. Some word processors will now save in HTML format. There are also programs for converting from various formats into HTML. How you create your HTML document is purely a matter of personal preference.

HOW DO I PUT MY PAGES INTO THE WEB?

Once you've created your Web pages you'll want to make them part of the HMC Web. There are a number of different options at this point. Some departments at HMC have their own Web servers and may have their own procedures for maintaining pages on their servers. If your department has a Web server you may want to contact the person maintaining the server first.

Academic Computing also maintains several Web servers. The main Harvey Mudd College server is located on a machine called *info*, but we also maintain servers on *thuban* and *osiris*. Both the *thuban* and the *osiris* servers have been configured so that users can maintain Web pages in their home directories on these machines. Detailed instructions on how to do this can be found in AC's documentation library on the WWW at <http://www.hmc.edu/comp/doc/www/>.

Another option is to maintain your own Web server on your personal computer. There are a number of freeware or shareware server packages. Commercial server software is also available. For example, there is a freeware server called MacHTTP and a commercial version called WebStar for the Macintosh. If you maintain your own Web server, you will need to send mail to webmaster@hmc.edu in order to link to your server from the HMC Web.

BEING A RESPONSIBLE WEB PROVIDER

It is important to remember that when you put documents and images up on the Web

you are making them available to the entire world. (It is possible to limit access to certain IP addresses, though). This means that you have certain responsibilities. For instance, you must make sure that the material you are presenting is not copyrighted by someone else. Just because someone has made material available on the Internet does not mean that it is not copyrighted. For more information on copyright issues you can read the document at <http://www.clari.net/brad/copymyths.html>. You are also responsible for maintaining your Web pages and making sure that the content is reliable, accurate, and up-to-date.

If you are running your own Web server you have additional responsibilities. In particular, you should make sure that your server's performance is reliable and consistent. In addition, students are required to register their Web server with Academic Computing. This is a new policy which was introduced this semester. More information on this policy can be found on the Web server at <http://www.hmc.edu/comp/policy/>. While at the moment the policy is limited to students, it may in the future be extended to other members of the HMC community.

These warnings aside, creating your own Web pages can be fun and rewarding. If you need help getting started be sure to check out Academic Computing's *Guide to Creating Your Own Web Documents* at <http://www.hmc.edu/comp/doc/www/>.



WHERE TO GO FROM HERE

- ▼ I. Graham, *The HTML Source Book*, Wiley & Sons, 1995.
- ▼ E. Tittel, *HTML for Dummies*, IDG Books, 1995.
- ▼ M. Morris, *HTML for Fun & Profit*, Prentice Hall, 1994.

SLIP/PPP Dial-In Access

In the June issue of *Occasional Downtime* we mentioned that Academic Computing was testing a new type of dial-in connection called SLIP/PPP. We are happy to announce that SLIP/PPP is now available to any faculty or staff member who is interested in using this service to dial-in to the HMC campus from home. Use of SLIP/PPP is intended primarily for HMC faculty and staff, but students living off campus with a legitimate need may also obtain SLIP or PPP accounts.

WHAT ARE THE ADVANTAGES OF SLIP/PPP?

If you have been dialing in to the HMC campus network using a modem you have most likely been using a terminal emulation program such as Zterm, MacSamson, or ProComm. These programs use a communication mode called *asynchronous terminal-to-host communication*. With minor exceptions this mode of communication is limited to alphanumeric characters and symbols. Most people have used this mode of communication to dial-in to a host computer at HMC like *thuban* or *osiris* in order to read e-mail with VMS MAIL or elm.

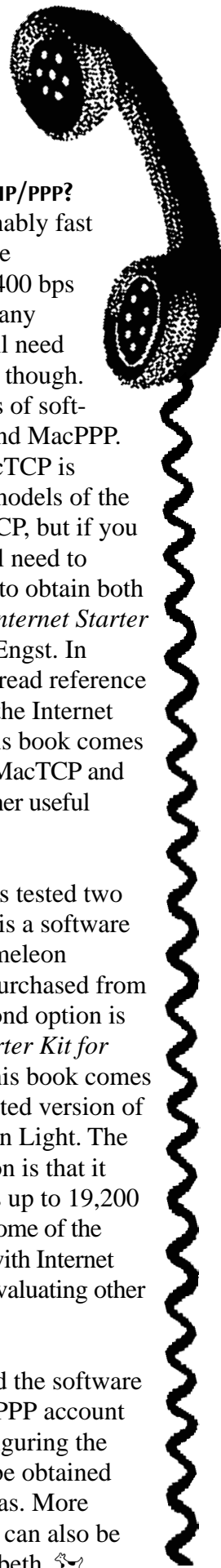
In contrast, the SLIP (Serial Line Internet Protocol) and PPP (Point-to-Point Protocol) modes of communication allow your computer to dial up and become part of the Internet. Once you have connected to the network over SLIP or PPP, your computer functions as if it were connected to the network via ethernet. You can use all of the Macintosh and Windows TCP/IP programs you normally use in your office. You can even run several different programs at once, just as you do in your office. So you can read your mail with Eudora, surf the Web with Netscape, and use FTP or Fetch to transfer files. The main difference is that the speed will be slower than what you are used to in your office.

WHAT DO I NEED TO USE SLIP/PPP?

As long as you have a reasonably fast computer and modem (we are recommending at least a 14,400 bps modem) you shouldn't need any additional hardware. You will need to obtain additional software though. On the Macintosh two pieces of software are needed: MacTCP and MacPPP. MacPPP is freeware but MacTCP is commercial software. New models of the Macintosh come with MacTCP, but if you have an older model you will need to purchase it. The easiest way to obtain both is to buy a book called *The Internet Starter Kit for Macintosh* by Adam Engst. In addition to being an easy-to-read reference on getting started exploring the Internet and the World Wide Web, this book comes with a floppy disk with both MacTCP and MacPPP as well as a lot of other useful software.

Academic Computing has tested two options for the PC. The first is a software package called Internet Chameleon (version 4.1) which can be purchased from Huntley Bookstore. The second option is to purchase *The Internet Starter Kit for Windows* by Adam Engst. This book comes with floppy disks with a limited version of Chameleon called Chameleon Light. The main limitation of this version is that it only supports modem speeds up to 19,200 bps. It also does not include some of the TCP/IP programs that come with Internet Chameleon. AC is currently evaluating other options as well.

Once you have purchased the software you also need to get a SLIP/PPP account and the instructions for configuring the software. Both of these can be obtained by contacting Elizabeth Hodas. More information about SLIP/PPP can also be obtained by contacting Elizabeth. 🐾



USEFUL E-MAIL ADDRESSES

- ▼ Addresses for reporting problems or questions with various services:

e-mail: postmaster@hmc.edu
Web: webmaster@hmc.edu
mailing lists: listmaster@hmc.edu
ftp: ftpmaster@hmc.edu
gopher: gophermaster@hmc.edu
net news: news@hmc.edu

- ▼ Addresses for reporting system problems or questions:

help-desk@hmc.edu
mac-system-l@hmc.edu
network-admin-l@hmc.edu
pc-system-l@hmc.edu
system@osiris.ac.hmc.edu
system@thuban.ac.hmc.edu

- ▼ Addresses for HMC departments:

admin_computing@hmc.edu
admisssions@hmc.edu
alumni@hmc.edu
budget_office@hmc.edu
business_affairs@hmc.edu
career_planning@hmc.edu
college_relations@hmc.edu
copy_center@hmc.edu
corporate_relations@hmc.edu
dean_of_faculty@hmc.edu
dean_of_students@hmc.edu
development@hmc.edu
financial_aid@hmc.edu
personnel@hmc.edu
president@hmc.edu
registrar@hmc.edu
stolleworks@hmc.edu
student_accounts@hmc.edu
treasurer@hmc.edu

- ▼ Miscellaneous other addresses:

Judicial Board Chair: jb@hmc.edu
Associated Students of Harvey Mudd
College: ashmc@hmc.edu

Data Privacy continued from page 2

being readable and writable only by them and the latter being readable by everyone.

To see the protections on the files in your home directory on the file server (the H: drive) you must use a PC and type the command NDIR at the DOS prompt. You will be able to see the protections on all of your files, including your Macintosh files. If you would like to change your default protections contact Patience Brooks.

FILE PROTECTION ON YOUR PERSONAL COMPUTER

In general, most people have their personal computers set up so that only they have access to their files and directories.

However, it is possible in the Macintosh operating system and in Windows for Workgroups and Windows 95 to set up your computer to share files over the network (AC does not currently support Windows for Workgroups or Windows 95, however). If you do decide to do this you should make sure that you use passwords to limit access to your computer.

Otherwise you may find yourself sharing your files with the entire network. In addition, students must register their computer with AC if they are sharing files over the network (for more information on this policy see the documentation at <http://www.hmc.edu/comp/policy/>).

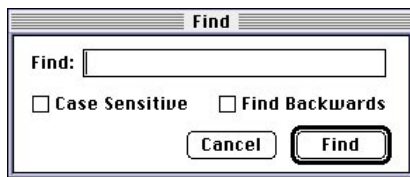
There are also numerous software packages that allow you to protect the data on your personal computer's hard drive from people who might have physical access to your computer. These programs usually work by requiring you to enter a password when you start-up your computer. Most will also let you password-protect individual files and directories on your hard drive. AC does not support these programs, however, so if you decide to use them you do so at your own risk. Most importantly, if you forget your password AC cannot reset it for you! 🐶

Tricks & Tips

& Tricks

THE NETSCAPE FIND FEATURE

How many times have you found a long document in Netscape and then had to read through the whole page looking for the specific part you want? Well, Netscape has a built-in feature that will help you find a specific word or phrase within a page. Just click on the Find button at the top of the page. A dialog box will appear asking you to enter a word or phrase to find. You can specify it to be case sensitive or to search backwards in the page. When you've finished typing, click the Find button. Netscape will search the current Web page for your word or phrase and highlight it on the page when it finds it. To search for another occurrence just click the Find button again. Remember, this will only search within the current Web page. It will not search for other Web pages. If you want to find other Web pages on a specific topic use one of the many search engines such as InfoSeek or Yahoo.



RUNNING WINDOWS APPLICATIONS ON KATO FROM YOUR DORM ROOM

by TJ Kelly, HMC '97

First, you should permanently map the Kato PC volume (the disk with all of the applications) to the G: drive on your computer. If you logged in through MS-DOS using the standard configuration, this has been done for you; if you log in through Windows, you will have to map G:\ yourself. Windows drive mapping can be achieved using the File Manager or the NetWare tools programs. From the FileManager, choose the Network Connections option from the Disk menu. This will load the NetWare tools program. From the NetWare Tools program, drag the Kato/PC icon from the Resources section (located on the right) to the G: drive label on the left. Once the drive is mapped, pressing the Permanent button will map the drive every time you start Windows.

If the software you want to run is a commercial package you must also install KeyAccess. Instructions for installing KeyAccess can be found on the Web at <http://www.hmc.edu/comp/doc/networking/ezconfig.html>.

The next step in running a program from the server is to copy its initialization, or INI, file over to your computer. Using the FileManager, choose the G: drive icon. This will display the contents of the PC application volume. From the G:\APPS\ARCHIVE\CONFIG\INI directory, copy the INI file for the program you wish to run to the Windows directory on your computer. For example, to run Photoshop, copy PHOTOSHOP.INI to your computer.

Next you need to copy modifications of the WIN.INI over to your computer. First make a backup copy of your WIN.INI file and then using a text editor, open the WIN.INI located in G:\APPS\ARCHIVE\CONFIG\INI and the one on your computer. Find all the references to the program you wish to run and copy them over to the WIN.INI file located in your Windows directory. Make sure you copy these modifications to the same [BOOT] section. If the WIN.INI contains a section that is not in your WIN.INI file, copy the entire section, including the label, over to your WIN.INI file. Be careful not to replace your entire WIN.INI file with the one on Kato. It is not set up for your machine.

Many programs require additional files, such as DLL files, in order to run. These are usually located in the Windows directory.

The last step in running a program on your machine is to create an icon for the program. Refer to the Q&A section in the June issue of *Occasional Downtime* for help on doing this. 🐾

QUESTIONS *and* ANSWERS

Q: I have sent e-mail to request an IP address and my message bounced. What did I do wrong?

A: To request an IP address you should send e-mail to `IP-request@hmc.edu`. You must specify the entire address. If you send to `IP-request` without specifying a host machine the system will automatically append the address of the local machine (the machine you are logged in to), for example `IP-request@osiris.ac.hmc.edu` or `IP-request@thuban.ac.hmc.edu`. The mail will then bounce.

Q: How do I find out someone's e-mail address?

A: At HMC we have Mail Central addresses for everyone. So the address `FirstName_LastName@hmc.edu` should work for everyone at HMC. If you're looking for the e-mail address of someone who isn't at HMC it's a little more complicated. The best way is to just call the person on the phone and ask them, but if you can't do that you can try one of the directories on the World Wide Web. Academic Computing has a link to some of them on our e-mail documentation page in our Documentation Library at <http://www.hmc.edu/comp/doc/email/>. Keep in mind that even if you do find someone's e-mail address this way, it doesn't guarantee that they actually use e-mail.

Q: How do I delete a mailbox in Eudora?

A: Look in the Windows menu and select the Mailboxes menu item. This will bring up a window with two columns

which display your Eudora mailboxes. You can select a mailbox by clicking on it and then delete it by clicking the Remove button. The mailbox and any mail messages in the mailbox will be deleted, so be careful the mailbox doesn't contain any e-mail you want to save! You can also use this window to rename mailboxes, create new mailboxes and folders, and move mailboxes into folders. To move a mailbox into a folder first create the new folder, or if it already exists open it in one of the two columns by double-clicking on it. In the other column select the mailbox you want to move and click the Move button.

Q: Have a question that's been bugging you?

A: Send it to *Occasional Downtime* at `downtime@hmc.edu` and we'll try to answer it! 🐾

FUN AND TOTALLY USELESS SITES

Getting tired of visiting all of those useful educational Web sites? Try some of these purely fun sites. They are guaranteed to be silly, but well-done.

▼ Nutscapify! See what a Web page would look like if only it took advantage of all of Netscape's HTML extensions:
<http://thule.mt.cs.cmu.edu:8001/tools/nutscap/>

▼ George Goble's home page (or "how to start a barbeque in 3 seconds flat"):
<http://ghg.ecn.purdue.edu/>