

Are You Prepared for a Disaster?



Picture this: One day you turn on your computer and nothing happens... Your hard drive has died! Has this happened to you yet?

I say “yet”, because if it hasn’t, chances are that it will someday. Even with the best of maintenance and care, hard drives can fail unexpectedly.

Sometimes the data on the drive can be recovered through the use of disk repair utilities, but not always. The data on your hard drive can be lost in other ways as well. Computers can be stolen or destroyed by fire; laptops can be lost or stolen; and individual files or folders can be deleted or overwritten by mistake.

Regular backups can make the difference between a major disaster and a relatively minor inconvenience. With a recent backup of your entire hard drive you can reformat the drive (or purchase a new one) and restore the contents in just a few steps. Even if you only backup your data you can still reinstall the operating system and your applications and then restore all of your files and folders. But without a regular backup, you could lose everything. Depending on what you store on your computer, this could represent weeks, months, or even years of lost work.

BACKING UP YOUR COMPUTER

There are many backup strategies for safeguarding your data. One of the easiest backup strategies at HMC is to store your important data files on one of the central servers on campus. All of the main servers on campus, including *Orion*, *Thuban*, *HMCADM*, *Kato*, *Lurch*, *Igor*, and the departmental machines such as *Turing* and *Aslan*, are backed up regularly. So any files that you store on these machines are backed up for you; you don’t need to worry about them. Administrative staff can store their files on *Lurch*. Faculty can store their files on *Kato* or *Igor* and academic staff can store files in their home directories on *Kato*. Students can use *Kato* to store their files as well.

Another easy strategy is to make backup copies of your important files onto another medium such as a floppy disk, ZIP cartridge or even an external hard drive. There are some obvious disadvantages to this strategy, however. As hard drives get larger it’s not as easy or as practical as it used to be to fit the files you want to backup onto floppies or even a ZIP drive. Backing up your system and application files in this way is also not practical. The main problem, though, is having the time and the discipline to actually perform your backups. The best backup system in the world is no good if it’s not done regularly.

The administrative staff have only recently all started using PC’s and it was relatively easy to set up their PC’s so that, by default, users’ files are saved in their home directories on *Lurch*. The diverse mix of computer platforms and the lack of a standard software “image” make it difficult to use the file server as an (*continued on page 5*)

Mac OS 8.5 is Here!

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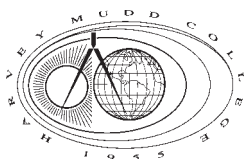
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Occasional Downtime is composed on a Power Computing PowerBase™ 180 using Aldus PageMaker 6.0 and Microsoft Excel 5.0. The primary typefaces used are Times and Optima. We wish to thank Sally Rich Arroyo of the HMC Office of College Relations for all her help.



The newest release of the Macintosh operating system software is Mac OS 8.5 which was released in October 1998. CIS did not immediately upgrade to OS 8.5 due to some early reports of upgrade problems and conflicts. However, these problems were addressed in a recent update, and we have now upgraded our Macintosh labs to Mac OS 8.5. New Macintosh computers are also arriving with OS 8.5 installed so we thought this would be a good time to introduce you to some of the new features of the operating system.

SHERLOCK

The most widely reported, and probably the most fun, new feature of the operating system is Sherlock, the Macintosh's new Find utility. Selecting Find from the File menu in the Finder or selecting Sherlock

hard drive. After telling Sherlock to first index the contents of your hard drive (which may take a couple of hours the first time), you can type keywords in the search field and Sherlock quickly brings up a list of files that contain those words.

The third tab allows you to search the Internet by simply typing keywords or phrases in the search field. Sherlock uses multiple Web search engines simultaneously to find Web sites that match your search. The results are returned with great speed in a single list ranked by relevance. Double-clicking on a result launches your preferred Web browser and retrieves the Web page for you. You can even save your search criteria for later use.

FAVORITES

OS 8.5 has many other exciting new features. Most Macintosh users are familiar with the Apple menu items folder in the System Folder. A new feature, Favorites, allows you to create aliases to documents, applications, zones, servers, and volumes, as well as to Internet locations such as Web pages and email addresses. The Favorites feature is easy to use: just select the item in the Finder and use the Add to Favorites command under the File menu. The great advantage of the Favorites feature is that it not only appears under the Apple menu, but in the Network Browser and the new Save and Open dialog boxes (more on these below).

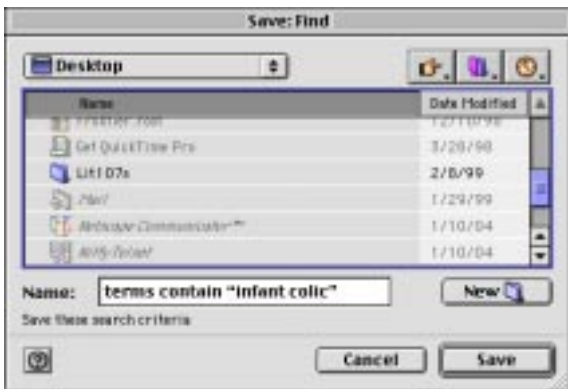
SAVE & OPEN DIALOG BOXES

The Save and Open dialog boxes have been completely redesigned. The scrolling window of files and folders now includes a



from the Apple menu brings up the new Find dialog box, which is now called Sherlock. The dialog box has three tabs. The first tab is Find File. It is basically the old find utility which lets you find files on your hard drive by file name or other file attributes. The second tab is Find by Content. You can now find a file by searching the content of the files on your

Date Modified column. The window can be sorted by either column, in either ascending or descending order. Best of all, it is now possible to open several files at once by using the Shift key. The Save and Open dialog boxes also feature three very useful buttons. The Shortcuts button lets you quickly connect to AppleShare servers. The Favorites button shows the list of items in your Favorites folder, while the Recent button shows a list of recently opened documents and folders. If you've ever been frustrated by having to cancel out of a save or open operation because you've forgotten to login to *Kato*, *Lurch*, or *Igor*, then you will appreciate the Shortcuts button in particular.



Unfortunately, the new Save and Open dialog boxes only appear in applications that support them, so you may have to wait until the next upgrade of your favorite applications to see them.

NETWORK BROWSER

The Network Browser is a completely new utility. It is similar to the Network Neighborhood feature in Windows 95 and 98 in that it allows you to view all AppleShare servers on the network grouped by AppleTalk zones. You can use the Network Browser to connect to a server such as *Kato* or *Lurch*.

The Network Browser also features the Shortcuts, Favorites and Recent buttons. In this context the Shortcuts button lets you login to a server using its IP address. The Favorites button (continued on page 6)

ditor's Notes

Occasional Downtime is arriving a little late in your mailboxes this month. CIS has been hard hit by illness this semester and *Occasional Downtime* has suffered as a result. Hopefully you'll find this issue to be worth the wait.

Our main article is about backing up your desktop computer. CIS cannot emphasize enough the importance of backing up your data so we hope you will read this article.

This month we are also featuring an article about the new Macintosh operating system, Mac OS 8.5. We recently upgraded the Macintosh lab to OS 8.5 and we're taking this opportunity to introduce our users to it's new features.

And finally, we have an article by Michael Cope (HMC, '00) on the LDAP directory server. If you haven't used the LDAP directory server you should give it a try. We include instructions for configuring Eudora Light and Netscape to access LDAP. The article also includes important information for students for using LDAP to control access to information on their Mudd Shots pages.

—Elizabeth Hodas

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



Introduction to the LDAP Directory Server

As many of you already know, we introduced a new directory server last fall at HMC which coordinates email, phone, and other information in a central database. The directory is accessible by Web, finger or with specialized LDAP clients. The purpose of this service is to allow students and faculty to access directory information, control access to their own information, and change some of their information including controlling where their Mail Central email address (FirstName_LastName@hmc.edu) is forwarded to.

THE LDAP PROTOCOL

The backbone of this service is the Lightweight Directory Access Protocol (LDAP). The LDAP server is a TCP/IP service, much like a Web server or FTP server, which provides a uniform interface to the database. LDAP clients, including recent versions of Eudora, Netscape Messenger, Outlook Express, and Pine, can directly connect to the server and use it as a remote address book (see sidebar). There is also a finger gateway (finger help@hmc.edu for more info) and a Web gateway (<http://ldap.hmc.edu/>).

ACCESS CONTROL

It is important to us (as well as required by law) that you be allowed to decide who gets to access your information. We use a simple access control model that divides access into four categories—none, local, Claremont-wide, and foreign—for each set of attributes. You can decide what group (yourself, all HMC, all Claremont, or everybody) you want to allow to view each set of attributes. Since access control is

enforced at the server, all the different gateways will automatically respect your access control decisions. By default, students' access control is set to local and faculty/staff is set to Claremont. More complete information about access control is available on the Web gateway.

THE WEB GATEWAY

The Web gateway is the most flexible interface as it allows you to modify your information, including access control information. To modify your entry, search for yourself, then click on the Modify option at the bottom of the entry display. You can then enter your password (*Orion* for students, *Thuban* for faculty and academic staff, and *HMCADM* for administrative staff) and change the information you desire. Read the instructions before changing Forwarding Address or acl-list. Those change the email address your Mail Central addresses are forwarded to and how your entry can be accessed, respectively. Any email address change takes effect the following morning around 6:30 AM.

MUDD SHOTS

The Course and Dorm Mudd Shots pages (Web pages that include information about students in courses and dorms) now use student home pages that are generated automatically using data from the LDAP directory. This means that students can now control access to the information displayed on their Mudd Shots page selectively. For example, if you don't want your dorm room number displayed on your Mudd Shots page you can use the Web gateway to the LDAP server to change the access control list to include "room-none."

CONFIGURING YOUR EMAIL CLIENT TO USE THE LDAP ADDRESS BOOK

NETSCAPE 4.XX

Select Edit->Preferences->Mail & Groups->Directory->New. Enter the following information in the boxes.

Description: Whatever you want

LDAP Server: ldap.hmc.edu

Search Root: o=Harvey Mudd

College,st=California,c=US

Port Number: 389

Maximum Number of Hits: (blank)

The LDAP directory can be accessed by selecting Address Book from the Communicator menu. In the Directory list click on LDAP and type in your search string.


EUDORA LIGHT

Select Tools->Options on the PC or Special->Settings on the Macintosh. In the box labeled Finger enter "hmc.edu". Click OK.

To search the LDAP directory, select Directory Services from the Special menu on the Macintosh or from the Tools menu on the PC (the command may also be called "Ph" in older versions of Eudora). Type your query in the search box and click the Finger button.

PINE 4.X

Pine 4.x on *Orion* is already configured to use the LDAP directory. Press ^T from the header line to use the LDAP address book.

Faculty members, and you yourself will be able to override and see all the information that is available on Mudd Shots including Advisor information. Mudd Shots can be found from the Directory Services Page <http://www.hmc.edu/dir/>. 

by Michael Cope (HMC, '00)


Backup continued from page 1

effective backup on the academic side, however. A catastrophic crash means not only lost work, but significant time and effort by both the user and CIS staff to recover as much data as possible and to restore the computer to a usable state. For these reasons CIS has been testing a new backup server to regularly backup desktop machines in the academic departments.

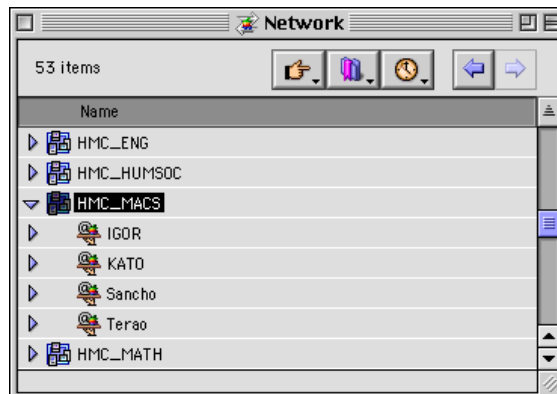
RETROSPECT BACKUP SERVER

The backup server being tested runs software called Retrospect. Retrospect is produced by Dantz Development Corporation and is a popular backup package for the Macintosh. Dantz recently developed a backup client for Windows 95/NT so Retrospect can now be used to backup both Macintosh and Windows computers over the network. The backup client software is installed on each computer on the network that is going to be backed up.

The software uses backup scripts that run automatically during the night so that users do not need to worry about initiating the backups themselves. The data is backed up to a DAT drive attached to the backup server.

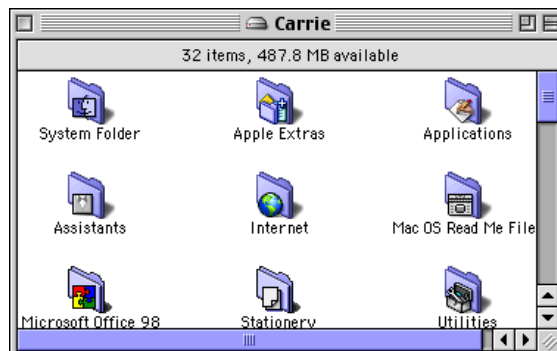
We first tested the backup server by using it to backup the desktop machines in the CIS department itself. We are now expanding to add the Physics, Chemistry, and Humanities and Social Sciences departments. Each department is backed up on a different night of the week. The backups are performed only once a week so users will still be responsible for backing up important documents they are actually working on. Once we have the backup system working smoothly we will also add the Office of College Relations and the Dean of Faculty's Office. 

accesses the items in your Favorites folder and the Recent button allows you to quickly access recently used servers.



SMART SCROLLING

Another new feature is called Smart Scrolling. The scroll bars at the right side and bottom of windows have been redesigned to include both up and down arrows at the bottom and right ends of the scroll bars. The scroll box on the right side of the window resizes according to the visible content of the window.



FINDER VIEWS

In addition to Smart Scrolling, windows in the Finder have some additional new features. The title bar of a folder or volume window contains an icon that can be used to quickly move or copy the folder or volume and its contents. Just drag the icon from the title bar and it is as though you had dragged the icon of the folder itself. The width and order of the columns in list view can be changed. You can also set standard views for list, icon, and button

views in the Views section of the Finder Preferences window. These settings apply to all Finder windows, unless you customize a particular window's view options.

INTERNET CONTROL PANEL

You can now specify your preferred email, news and Web browser in the new Internet control panel. With the new ability to create Internet aliases, you can create an alias to an email address, Web page, newsgroup, or server by selecting it and dragging it to the desktop.

When you open the alias, from the Favorites list for example, your email client or Web browser will automatically launch. In the case of the Web browser it will immediately go to that Web page. In the case of the email client it will create a blank email message addressed to the email address of the alias.

APPLESCRIPT

AppleScript is Apple's scripting language which allows you to automate many tasks on your computer. OS 8.5 features a new version of AppleScript written entirely in native PowerPC code, so your scripts will run up to five times faster than before. AppleScript scripts can now be attached to folders that respond to folder actions, such as opening or closing the folder, moving or resizing the window, or adding or removing items.

Some other new features include a redesigned Apple Help system, a tear-off application switcher palette that allows you to quickly switch between applications, and the ability to set the time and date using network time servers based on the worlds' atomic clocks. Network file copying performance has also been enhanced. 🐾

More CIS News

FTP SERVER

In order to save precious bandwidth and provide faster downloads for popular packages, we have started FTP mirroring. FTP mirroring refers to the practice of creating an exact copy of an archive on the Internet on another server. The copy is created automatically by mirroring software and is usually updated daily. Using a local mirror site instead of the remote server saves the user time and cuts down on network traffic. We currently have Netscape 4.xx, the GNU archive, NT service packs, Red Hat Linux 5.2, Red Hat Linux updates, and FreeBSD 3.1 on our FTP site.

You can get more information on the FTP mirror at <http://www.hmc.edu/comp/ftp/>. There are also instructions on doing a Red Hat 5.2 upgrade or install over FTP (it takes about 20 minutes). You can also access the site directly through FTP at <ftp.hmc.edu/pub/mirrors/>.

CLAREMONT NEWS SERVER

For many years, HMC has hosted a UseNet news server for the use of all of the Claremont Colleges. In order to support the approximately 16 thousand discussion groups, it takes a tremendous amount of resources. One of the most important resource was incoming traffic bandwidth on our connection to the Internet. The news server was consuming about 5% of the connection, 24 hours a day. This was to support a daily news readership of 125 users.

The bandwidth consumed by local readers is far less than what is needed to support an entire server. It was decided, therefore, to outsource the news server to an off campus location. This was done in mid January. The results have been better than expected. The new server is several times faster, has twice as many discussion groups, and provides a longer article retention time. 🐶

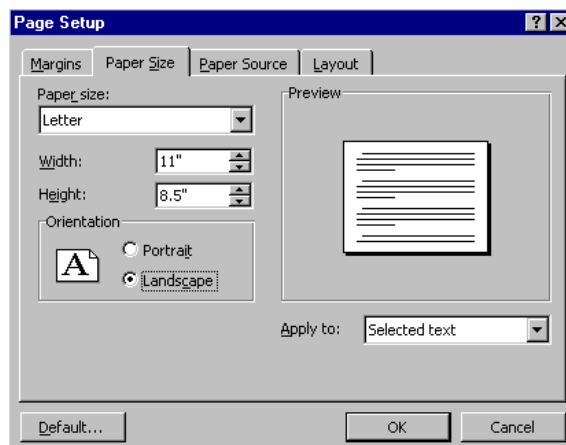
Tricks & Tips

& Tricks

PAGE ORIENTATION IN MS WORD

Have you ever had an MS Word document with a table that was too wide to fit on the page? Well, there's a relatively easy way to fix this problem. You can change the page orientation of selected pages from portrait to landscape mode.

In MS Word 97 on the PC, first select the text and/or table that you want to be printed in landscape mode. Select Page Setup from the File menu and click on the Paper Size tab. Make sure that "Selected Text" is selected from the pop-up menu labelled "Apply To:" and then click the Landscape radio button. Click OK. To check the results, click the Print Preview button in the Standard Toolbar.



Word automatically inserts section breaks before and after your selection.

In MS Word 98 on the Macintosh the procedure is essentially the same. After selecting the text and/or table, select Page Setup from the File menu. Click the Landscape radio button. Then select MS Word 98 from the pop-up menu in the upper-left corner of the dialog box and make sure that "Selected Text" is selected in the "Apply size and orientation to:" box.



QUESTIONS *and* ANSWERS

Q: Can I import bookmarks from Netscape on one computer to Netscape on another computer?

A: Netscape bookmarks are actually just stored in a text file so it is pretty easy to import them to another copy of Netscape. First you need to locate the bookmarks file on your computer. On the Macintosh the Netscape bookmarks file is called `bookmarks.html` and is usually located inside the Netscape Preferences folder in your System Folder. On the PC the bookmarks file is usually located in the Users directory inside the Netscape program directory on your hard drive.

Once you've found the file you need to transfer it to the other computer. You can copy it to a floppy, email it, or copy it to *Kato* or *Lurch*, whichever is most convenient for you. After you have copied the file to the second computer, launch Netscape Communicator. Select Edit Bookmarks from the Bookmarks menu on the Macintosh or from the Communicator menu on the PC. From the File menu select the Import command. Select the file you want to import and click the Open button. You can use the Edit Bookmarks window to rearrange and organize your bookmarks once you're done importing them.

Q: I want to use Eudora to check my email from home. Can I do this?

A: To use Eudora at home you first need to be setup for dial-in access using PPP (Point-to-Point Protocol). PPP access is available to HMC faculty and staff and to students by special permission. PPP

dial-in is different from terminal emulation dial-in in that it allows you to use TCP/IP applications such as Eudora and Netscape over a phone line. You can contact Elizabeth Hodas at extension 7-4583 for more information on getting PPP access.

Once you have PPP dial-in access you can use Eudora at home just as you would in your office. If you need help configuring Eudora there is a cheat sheet available in the CIS main office.

The only complication with using Eudora on more than one computer is that it can lead to your email being divided up and stored on multiple machines. This is not usually desirable so you need to first decide which machine will be the central repository of your email. Usually this is your office machine. Then you need to configure any other machine that you use Eudora on to use a feature of Eudora called "Leave mail on server." On those machines Eudora will retrieve your new email but will leave a copy on the server. When you return to your office all of your new email will be downloaded to your office computer and deleted from the server.

To configure Eudora in this way select Options from the Tools menu on the PC or Settings from the Special menu on the Macintosh. Click the Checking Mail icon and check the box labelled "Leave mail on server." Please do not use this feature on your office computer! If you never delete mail from the server Eudora will eventually timeout trying to retrieve your new mail. ☹