



News about information systems throughout



Volume 12 • Number 2

November / December 1996

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### MIT Alumni/ae Association Tests Its First Online Service

Lee Ridgway

**A**t a place like MIT, creating online services for alumni sounds like a natural thing to do, and this is what the MIT Alumni/ae Association is about to launch with its Alumni Network Services (ANS). The impetus for ANS came from two directions:

- In 1994, surveys conducted for the Association's Long-Range Strategic Planning Committee indicated that alumni wanted services which only MIT could provide, including better alumni directory services. Alums also wanted to see more creative use of technology in delivering these services.
- Advances in interactive network services, including the World Wide Web, were providing relatively easy ways to make extensive information available over the Internet.

The Alumni/ae Association recognized that the Internet, and especially the Web, could be the basis for online services for alumni. This technology would also make it easier for alumni to maintain their connections with MIT and other alums, thereby fostering a greater sense of "virtual" community.

In 1995, a Committee on Online Communications was formed with a broad representation of alumni, and charged with developing a plan to deliver network services to alumni.

### E-Mail Forwarding for Life

The first ANS to be offered is E-Mail Forwarding for Life (EFL). EFL provides a permanent, lifetime e-mail address that acts as a forwarding service: messages sent to an alum's EFL address are automatically forwarded to that person's actual e-mail address. Alumni registered for EFL will be able to update their e-mail address in the ANS system and are, in fact, responsible for keeping it current.

EFL is now undergoing beta testing by volunteers from the 1996 graduating class and the Class of 1991. Plans are to have the testers put EFL through its paces for two months. During this time, changes may be made to the system in response to feedback from the testers. If all goes well, the Association will begin a staged rollout of EFL to all alumni early in 1997.

Once EFL is in place, the next service will be a searchable online alumni directory.

Access to ANS, and to EFL, is through the Alumni Network Services Gateway at

<http://web.mit.edu/alum/ans/>

Because of the way security and authentication are being handled for ANS, Netscape Navigator 2.0 or later is the recommended browser for accessing the system. Other browsers will be evaluated during the beta test. Details on browser setup and connecting will be included in the notices to alumni about registering for ANS.

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### EFL Registration and Formats

Alumni register for ANS and EFL through a series of Web pages. The alum sets up an ANS username and password, and supplies other information that will authenticate him or her as a bona fide MIT alum. Part of the information includes the e-mail address to which the alum wants messages forwarded.

The format for EFL addresses is name.class@alum.mit.edu, where name is some form of the alum's name and class is the year of graduation. A sample address for an undergraduate alum would be: <JaneDoe.87@alum.mit.edu>. A graduate alum known by his nickname might have an address like this: <BobBonzai.G91@alum.mit.edu>.

This format is designed to be consistent and fairly intuitive, so that if you wanted to try to send e-mail to an alum whose name and graduation year you knew, you could make an educated guess at what that person's EFL address might be (although some name combinations might take a couple of tries). EFL subscribers may also publicize their addresses on their own.

Recipients of messages forwarded through EFL receive them via their regular e-mail service. Header information will always indicate when a message has come through EFL. EFL is not an e-mail service itself and messages are not stored on any of the ANS or EFL servers.

### Privacy Concerns

In using the Internet to deliver services to alumni, the Association is well aware of the need to guarantee – as much as possible – a secure environment that protects privacy and personal information. This is particularly crucial when it comes to online directory information. When an alum logs onto ANS with Netscape, data transmitted between his or her computer and the ANS server is protected through “security certificate negotiation.” This is an automatic process that establishes an encrypted link between the two systems.

ANS subscribers indicate what address information they want displayed in the online directory using the same online form they use to log in and update their EFL addresses. This form also has a box for Online Notes, where a subscriber can enter personal information and automatically send it to his or her class secretary.

### Under Consideration

EFL and a searchable alumni directory are just the first two of a range of possible online alumni services. Other services being considered are

- Publishing a calendar of Alumni/ae Association and MIT events around the world
- Enabling online registration for MIT and Alumni/ae Association events
- Publishing an electronic version of *Technology Review's* ClassNotes and CourseNews sections
- Providing career assistance
- Setting up chat and newsgroups around topics of interest to alums
- Making some MIT Libraries' services available through ANS
- Facilitating distance learning opportunities and making MIT lectures and seminars available over the Web
- Providing news about MIT research.

For more information about ANS and EFL, go to the Alumni/ae Association home page at

<http://web.mit.edu/alum/www/>

and select the Network Services link. You can contact the Acting Director of ANS, Jason Slibeck ('91), at x3-8262 or <ansinfo@mit.edu>. ☺

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## MIT Press Releases Third Edition of *The New Hacker's Dictionary*

You may not be a computer whiz, but with *The New Hacker's Dictionary* in tow you can decode much of the cryptic slang used by the hacker crowd at MIT and beyond. This lexicon, now in its third edition, gives you the lowdown on cybercrud, laser chicken, and raster burn. Find out (in the shelter of your own room) if you're a lurker, luser, or lion food.

### Origins

*The New Hacker's Dictionary* began life as the Jargon File, during the era of time-shared computing and LISP programming. It continued to evolve as C and UNIX came to dominate the computing landscape. Today you can find the Jargon File on the Web at

<http://www.ccil.org/jargon>

It was and is maintained by volunteers, and new entries and modifications are welcomed.

In 1991, The MIT Press published the first edition of *The New Hacker's Dictionary* – a polished version of the Jargon File edited by Eric Raymond. More than just a lexicon, the *Dictionary* included essays about hacker culture and cartoons by Guy L. Steele Jr. A second edition was published in 1993.

The third edition, published in October, has more than 100 new entries and 200 updated ones. The essays and cartoons are still insightful and entertaining. Reading the lexicon is also great fun, since wordplay is a hallmark of many hacker terms.

### Getting a Copy

If you'd like to explore the world of J. Random Hacker, *The New Hacker's Dictionary* is the place to start. The book is available in cloth (\$32.00) or paperback (\$16.50) at the MIT Press Bookstore in Kendall Square. For complete ordering information, see

<http://mitpress.mit.edu/bookstore/orderform.html> ☺



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*i/s* is published six times a year on a bimonthly schedule. MIT faculty and staff receive copies through campus mail; *i/s* is also available in lobbies around campus. Individuals at MIT may subscribe by contacting the managing editor.

Send comments or subscription requests to:

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Cambridge, MA 02139-4307

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*i/s* is also published online at

<http://web.mit.edu/is/pubs/isnews/>

Contact the managing editor if you would like to be notified when new issues are published online.

Articles are also posted in TechInfo. The path is Computing → Publications → Information Systems Publications → *i/s* Newsletter.

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## PageMill Lets You Create Web Pages without Knowing HTML

Robyn Fizz

Adobe Systems recently released PageMill 2.0 for the Macintosh. (The Windows version is scheduled to ship in late November.) PageMill is Web page creation software “for the rest of us” – that is, content providers who don’t want to learn the intricacies of HyperText Markup Language (HTML).

PageMill 1.0 was a pioneering product, but fell short in many ways. The new version adds features and flexibility that meet the primary needs of Web page designers. PageMill 2.0 includes

- Support for tables, including tables imported from Microsoft Excel
- Support for frames
- Support for Netscape plug-ins, including PDF Viewer, QuickTime, and Shockwave
- Client-side image maps
- Search capabilities for all page elements
- Ability to view and edit HTML source code (which PageMill creates behind the scenes)
- A full-featured spell checker.

### Platforms/Requirements

PageMill 2.0 runs on Macintosh and Windows platforms. Minimum system requirements are as follows.

#### Macintosh

- A 68020 or greater processor
- System 7.1 or later
- 8 MB of RAM and 10 MB of hard drive space

#### Windows

- A 486 or greater processor
- Windows 95 or NT 3.51 or later
- 8 MB of RAM for Windows 95; 16 MB of RAM for Windows NT
- 10 MB of hard drive space

### PageMill Basics

PageMill has two modes: Preview and Edit. Preview mode shows how a page will look and act when displayed in a Web browser. Edit mode lets you create or modify text, images, and links: this is where the page-building gets



The graphic from PageMill’s packaging was adapted for use in the Preview Mode button.

done. Edit mode offers a two-row Toolbar with buttons for formatting text, aligning elements, creating forms, and manipulating tables.

Another key part of PageMill’s interface is the Inspector, a floating palette with four tabbed panels for working with the current page, forms, frames, and objects.

While PageMill’s interface offers many controls, the program’s look and feel is less appealing than that of other Adobe applications. For example, the buttons in PageMill’s Toolbar are small, and some have icons that aren’t intuitive. Fortunately, when you move the pointer over a Toolbar button, descriptive text indicates its function.

### Handling Graphics

PageMill 2.0 isn’t an image processing package, but it does offer several features for handling Web graphics. You can scale graphics and do simple text wraps. You can add interlacing to a GIF file, or select one color per image to be transparent. If you open a PICT image in PageMill, it automatically changes into a GIF file. Creating a tiled background pattern is a snap.

### Tables

Tables can have two different functions in Web pages. They can be used to organize data in columns and rows, or to structure elements on a page. In the latter case, a table may not have borders and may be invisible to viewers. PageMill supports both of these uses of tables.

Creating tables in PageMill is easy. You use the Table button to set the number of rows and columns. You can add, delete, or resize rows and columns at any time. Table cells can be filled with text, numbers, images, links, lists, even movies or sounds. You can also create cells that span rows or columns.

One major drawback in PageMill’s implementation of tables is that you must format the contents of each cell separately. This can lead to a lot of repetitive handwork.

### Forms

PageMill has adequate tools for forms creation, although you can create only one form per Web page. Form elements include text fields, checkboxes, radio buttons, pop-up lists, password fields, and submit and reset buttons.

While PageMill helps you design forms, it is a CGI script on a Web server that receives and processes the form data. Unless you are running your own Web server, you will probably use the “cgiemail” script on web.mit.edu, which sends the data as e-mail to an address you specify. After you create your Web forms, contact the CWIS group at <cwis-help@mit.edu>; they will set up the CGI scripts you need.

### Frames

Framesets let you place multiple frames on a Web page (in the same way that a window can have several panes). Frames are often used for static information such as a navigation menu or table of contents: when you click on an item in a static frame, related content appears in an adjoining frame. The relationship between frames is handled by target links.

PageMill 2.0 excels at creating and editing frames. The Frame panel in the Inspector palette lets you adjust frame size and margins and turn scroll bars on or off. The program also has a straightforward interface for setting up target links.

If you do use frames, don’t forget to create text-based partner pages. This ensures that your information will be available to the visually impaired and others who use text-only browsers.

### Purchase and Support

The MIT Computer Connection doesn’t keep PageMill 2.0 in stock, but can special order it. Their price is \$65.

Right now, IS is evaluating Web page authoring packages and does not officially support any program. The two main contenders are Adobe PageMill and Claris Home Page. You can see a demo of Home Page at a CWIS presentation on December 12. It will be held from noon to 1pm in E40-302. ☺

## How to Tame the "Time out of Bounds" Error

Mary Ziegler

If you run Eudora, SAP, or any other application that uses Kerberos authentication, you may encounter "Time out of bounds" or "clock skew" errors. This article explains why these errors occur and what you need to do to correct the situation.

### The Role of Kerberos

Kerberos is MIT's authentication system. In simple terms, you prove your identity to a service on the network by providing your password, and Kerberos decides if you should have access to that service based on your identity.

As part of the authentication process, Kerberos compares the time on the network time server (time.mit.edu) to the time on the accessing computer. If the times are very different, Kerberos will refuse to authenticate, instead displaying the "Time out of bounds" error. To correct this, you need to synchronize your computer's system clock to within five minutes of the time on the network time server.

### Secrets of Synchronization

The time on the network time server should be close to the time given when you dial the Time of Day Service at 637-1234. If you prefer, you can determine the exact time on the network time server: a few ways to do this are described near the end of the article.

Once you know the time, you are ready to synchronize. The procedure depends on the platform and operating system you use; see the bulleted section that follows. Keep in mind that your computer's clock is sensitive to daylight savings time and time zone settings. You should check these settings before you reset the time. After you have synchronized, you will need to restart your machine.

- **Macintosh 7.5.x:** Open the Date & Time Control Panel. Click the Set Time Zone button to select a city in your time zone – Boston is listed. Then set the system clock to the correct time. (Don't turn on the Daylight Savings Time checkbox, since it's not in effect at this time of year.)

Also, if you have the Map Control Panel installed, be sure to select your current location.

- **Macintosh, operating systems earlier than 7.5.x:** Open the Map Control Panel to set your location and the General Controls Control Panel to set the time.
- **Windows 3.1:** If you use Windows 3.1 on MITnet, you should have LANWorkPlace installed on your machine. LANWorkPlace has a batch file that sets the time zone and gets the network time whenever the program loads, so it's unlikely that you'll get a "Time out of bounds" error with this setup. If you do, check the time on your system clock.
- **Windows 95:** Check the settings under the Date/Time Control Panel: be sure that the correct time zone has been selected and that you have turned on the checkbox that reads "Automatically adjust clock for daylight savings changes." You should also make sure your system clock is set to the right time.

If you still have problems after restarting your machine, check your autoexec.bat file to make sure it includes the line

```
set tz=edt5edt
```

This sets the time zone correctly.

### Checking the Network Time

As mentioned earlier, it's possible to determine the time on the network time server. Here's how.

- **Macintosh:** Install Network Time 2.01, a shareware Control Panel available from the CSS File Server in the IS-CSS AppleTalk zone. The path is Public:Freeware-Shareware:Network:Network Time. Read the accompanying Network Time QuickStart for directions.
- **Windows:** Open the Leash.exe program (in c:\net\mit) and click on the Synchronize Time button. The server time will be displayed.
- **Athena:** At the athena% prompt, type date.

### Time for Help?

If you continue to have problems with "Time out of bounds" errors, contact the Computing Help Desk at x3-0001 or <computing-help@mit.edu>. ☺



This column presents news and tips from the consultants who staff the Computing Help Desk, x3-0001. Check out their Web home page at <http://computing-help.mit.edu/>

**Q** In Eudora, how do I reply to all of the original recipients of an e-mail message, along with the sender?

**A** When you select the Reply command under the Message menu, Eudora's default is to reply only to the sender of a message, not to the recipients in the Cc: field. If you want to reply to all recipients of a given message, do the following:

- On a Macintosh, hold down the Option key when choosing Reply from the Message menu or press Command-Option-R.
- On a PC, hold down the Shift key when choosing Reply from the Message menu or press Shift-Control-R.

If you prefer to *always* reply to all recipients of a message, you can change Eudora's default:

- On a Macintosh, go to the Special menu, select Settings..., and scroll to Replying. Under "Reply to All:" select the By Default radio button.
- On a PC, go to the Tools menu, select Options..., and scroll to Replying. Click on the "Reply to all" checkbox.

You can also set other options – such as including yourself in your replies – under the Replying Settings.

**Q** In Netscape Navigator, is there a way to find out which of my bookmarked Web pages have been updated since I last looked at them?

**A** Yes, if you have Netscape 2.0 or later. Open the Bookmarks window (Macintosh: Command-B; PC: Control-B), then go to the File menu and select What's New? Netscape scans all the bookmarked pages and highlights the bookmarks that have been updated since you last looked at them.

You can also specify that only specific bookmarks be checked. This is especially useful if you have a lot of bookmarks; depending on the sites and network traffic, it could take a long time to check all your pages. ☺



## Silicon Graphics Introduces O2 Desktop Workstations

Ginny Williams

**S**ilicon Graphics recently unveiled its O2 desktop line. These workstations offer an integrated approach to 3D imaging, audio and video processing, and compression, making them a good choice for CAD modeling, scientific visualization, and Web site creation.

### Technical Specifications

The O2 desktop family is based on a high-performance Unified Memory Architecture (UMA). The new systems ship with either a 64-bit MIPS RISC R5000 or R10000 processor.

The O2 features 32-bit, double buffered graphics. With hardware-accelerated 3D graphics and texture-mapping features, the O2 line delivers real-time, photo-realistic interactivity.

The O2 ships with a new version of the company's UNIX-based operating system, IRIX 6.3, which is backward compatible. O2s also come bundled with Netscape Navigator 3.0, Netscape



Screen image of underwater camera courtesy of Katz Design. Image courtesy of Silicon Graphics, Inc.

FastTrack Server 2.0, and Insignia SoftWindows. SoftWindows supports a range of applications running under Microsoft Windows 3.1 or, optionally, Windows 95.

### Web-Friendly User Interface

The O2 graphical user environment integrates Internet and Intranet publishing and file transfer capabilities.

The file manager lets users view a Web site via a split window. The bottom portion displays the Web site, while the top portion lists the files that make up its content. Users can select these files and drag and drop them onto their desktop, or publish them using the Web authoring tools that come bundled with the system.

The O2 documentation and help system is completely Web-based; it runs locally on the user's machine.

### Ordering from the MCC

The MCC sells O2 workstations by special order. Buyers customize the base system at the time the order is placed – configuration choices include amount of memory, processor type, hard drive, monitor, and optional equipment.

SGI also offers solution bundles that include software for specific purposes: two examples are the Modeler bundle and the WebFORCE bundle.

Retail pricing for O2 base systems ranges from \$5,995 to \$9,995. The MCC price range for these systems is \$4,000 to \$6,600. For more information about O2 workstations, call the MCC at x3-7686. You may also want to check out the Silicon Graphics Web site at

<http://www.sgi.com>

## PC Service to Repair Dell Computers

Linda Lancaster

**A**s of December 1, PC Service in W20-028 will be authorized as a Dell Premier Service Provider. PC Service will be able to provide warranty service *if it is selected as the warranty service provider at the time the Dell computer is purchased.*

Unlike Apple, Dell requires that the warranty service provider be chosen at the time of hardware purchase. Currently, the default warranty service provider is BancTec, U.S.A. Dell computers sold previously by the MIT Computer Connection have BancTec as the warranty service provider.

After the warranty expires, PC Service can repair any Dell computer.

### Dell Warranties and Upgrades

Dell computers typically come with a 3-year hardware warranty. The first year is a full warranty covering parts

and labor. (Not all repairs are covered by warranty – for example, repairs required due to accident or abuse are not covered.) In the second and third years, the warranty covers parts only.

Dell offers a warranty upgrade for the second and third years at an attractive price – currently \$99 – if bought at the same time as the computer. With a warranty upgrade, parts and labor are covered for the full three years.

The MIT Computer Connection in W20-021 can sell Dell warranty upgrades at the time of hardware purchase. To buy a warranty upgrade afterwards, you need to contact Dell for a price quote and buy the upgrade directly from Dell.

### Other PC Service Offerings

PC Service has provided computer hardware services to the MIT community since 1984. In addition to its new Dell offering, PC Service repairs Apple computers and printers, IBM PCs, and HP laser printers. It offers hardware maintenance contracts for Apple and

IBM, with repairs done in-house, as well as maintenance contracts for DEC, Sun, and SGI, with repairs done by vendors under contract to MIT.

If you have a computer that needs repair, you can call PC Service to request pickup from an Institute office. You will need to provide the location of the equipment, a contact name and phone number, and a brief description of the problem. Pickup is typically done the next day.

There is no charge for repair estimates from PC Service. Their current labor rate for work not covered by warranty is \$50 per hour. Payment may be made by MIT requisition or, for personally owned equipment, by check, MasterCard, or VISA.

PC Service is open Monday through Friday, 8am to 5pm. For information about Dell repair services or other PC Service offerings, send e-mail to [pcservice@mit.edu](mailto:pcservice@mit.edu) or call x3-0815.





## RTFtoHTML 3.0 Converts Word Processing Files into HTML

Suzana Lisanti

**D**o you have Microsoft Word documents that you'd like to convert to Web pages? A new release of an excellent shareware program can help you convert these documents automatically, one by one or a folder at a time. The program, RTFtoHTML 3.0, is being used at MIT to convert the *Reports to the President and Dealing with Harassment*.

At the simplest level, the process involves two steps: you first save the document from Word to Rich Text Format (RTF), and then use the conversion program to turn the RTF into Hypertext Markup Language (HTML). Most word processors can export their documents in RTF format (look at the formats listed in your word processor's "Save as..." dialog box).

If you do no more than these two steps, RTFtoHTML will make its best guess as to what constitutes a heading, subheading, and so on. The conversion works nicely with Word tables, converting them to HTML tables without manual coding. Any charts or graphics in your Word file will automatically be converted to GIF images and saved in the same folder as the document. RTFtoHTML will even create links to the images.

### Single-Source Publishing

If you plan ahead, you can use RTFtoHTML as a tool for single-source publishing – using the same file for paper and on-screen versions. This capability is based on using the Styles feature in your word processor, and gives you a lot of control with very little investment of time. For example, you can customize Word's existing styles "heading 1" and "heading 2" to print in the exact font face and

size you wish, and then use the same designations to specify the level of heading to be used on your Web pages.

### Platforms and Purchase

RTFtoHTML 3.0 has been released for Macintosh, DOS/Windows, and selected UNIX platforms. The new version adds support for many HTML extensions that have been added since RTFtoHTML was first developed.

To get a copy of RTFtoHTML 3.0, go to the Web page

<http://www.sunpack.com/RTF/latest/>

and select the link for your platform.

RTFtoHTML 3.0 is shareware, unlike previous versions, which were free. If you try out RTFtoHTML 3.0 for 30 days and plan to continue using it, be sure to send in the \$29 shareware fee. For details, see

<http://www.sunpack.com/RTF/License.htm> ☺

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## IS Launches IT Partners Program for Local Experts

Susan B. Jones

**O**n October 2, 65 members of the MIT community, representing 59 departments, gathered for the first meeting of the IT (Information Technology) Partners Program. These staff were invited because they function as computer experts in their departments. About 20 IS staff also attended.

The purpose of IT Partners is to create a mutual technical support structure for IT professionals at MIT. Recognizing that local office experts are often the first line of computing assistance, IS hopes to forge a partnership that recognizes and supports this contribution.

The event began with welcoming remarks from Mike Sampson, Program Coordinator; Jim Bruce, Vice President for Information Systems; and Bill Hogue, Director of the IS Support Process. Joanne Costello, Coordinator for IT Support Planning, then led participants in a brainstorming session about their needs for IT support and frustrations with current support from IS.

### Concerns and Suggestions

Concerns voiced in this session ranged from how the Institute recognizes the work of local experts to uncertainty about which platforms can run SAP, MIT's new financial system.

A recurring theme was how information gets communicated. Local experts felt that IS needs to find a way to disseminate information about software and operating systems quickly and in a way that gets their attention. Web pages, they suggested, are good for distributing information, but an e-mail alert mechanism would also be useful. Telephone alerts were suggested for situations in which networks were down and e-mail inaccessible.

One topic that provoked a lot of discussion was the IS Computing Help Desk. Issues included response time and procedures. Participants suggested that the new Help Desk tracking tool, Scopus, might be used to gather statistics to demonstrate how having local experts in departments affects the flow of calls to the Help Desk. Local experts also expressed a desire to have access to Scopus to track the status of calls from their departments.

The local experts suggested ways the Help Desk could offer assistance. These included pairing local experts with consultants, and setting up a process for quickly escalating problem reports from local experts to IS experts.

After the brainstorming session, Costello moderated a panel of IS staff (Harold Pakulat, Theresa Reagan, and Al Willis) who spoke about the status of the Help Desk, SAP, and IS support of Macintosh and Windows operating systems (see "New Directions for the Macintosh Operating System" on p. 7 for issues related to old and new Macintosh operating systems.)

### Into the Future

IT Partners plans to meet twice a year and perhaps more frequently for targeted sessions on technical issues.

IS has created a Web page for IT Partners at

<http://web.mit.edu/itpartners/>

This page has an application form for those who wish to become IT Partners. Benefits of joining may include use of an unpublished Help Desk phone number, free seats in training classes, and inclusion on an IT Partners mailing list. ☺

## New Directions for the Macintosh Operating System

Albert Willis

Apple Computer has announced that the current version of the Macintosh Operating System – 7.5.5 – will be the last to support Macintoshes without 32-bit clean ROMs. Models that are not 32-bit clean include the Mac Plus, SE, SE FDHD, Classic, Portable, PowerBook 100, II, IIX, IICX, SE/30, and LC.

Before considering the implications of Apple's announcement, it's worth understanding what being 32-bit clean is all about.

### Being Clean

The Macintosh ROM (Read Only Memory) contains a series of routines known as the Memory Manager. Software written for the Macintosh calls the Memory Manager to get memory for its use.

The original Macintosh was based on the 68000 microprocessor. While the 68000 was a 32-bit microprocessor – it used 32 bits for every memory address – it physically had only 24 address lines. This meant that only 24 of the 32 bits were meaningful. Apple's Memory Manager took advantage of this fact by using three of the unused bits to keep track of the status of memory blocks. Creative third-party programmers used the remaining five bits for their own purposes.

When System 7.0 was introduced in 1991, it came with a new version of the Memory Manager that used all 32 bits of a memory address. Programmers who wanted to be fully compatible with System 7.0 had to make their programs 32-bit clean – clean in the sense that their programs didn't make use of any bits of a memory address.

System 7.0 was the first Macintosh Operating System (Mac OS) that could address more than 8 MB of memory – but only if 32-bit addressing was turned on. A software company called Connectix created Mode32, a utility that allowed some non-32-bit-clean Macintoshes (II, IIX, IICX, and SE/30) to run in 32-bit mode. Models with older ROMs (Mac Plus, SE, Classic, and Portable) don't support Mode32.

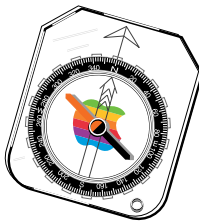
### Implications

Although some users may feel left behind by Apple's announcement, Apple has actually supported older hardware a lot longer than most vendors do. It's almost unheard of for a

company to release system software like 7.5.5 that still runs on machines that were manufactured ten years ago.

By developing system software only for machines that are 32-bit clean, Apple will be able to make future versions of the Mac OS more robust. This strategy also paves the way for features that have been in the planning stages for a while.

These changes in direction won't have any noticeable effect for some time. Software that works on older Macintoshes will continue to work, and software developers will continue to support these machines in the short term. However, as time goes on, developers will gradually drop support for older Macintoshes. Microsoft has announced that the next version of Office will run only on PowerPC-based Macintoshes, for example.



### Consequences on Campus

In addition to the issue of developers gradually dropping support for older Macintoshes, newer components of the Mac OS are critical for running some widely used applications on campus. The SAP financial system and Tether dialup service are two applications that require newer system software components in order to run on Macintoshes connected to MITnet.

For security reasons, SAP requires a software component called Code Fragment Manager (CFM). CFM has been part of the system software of all Power Macintoshes, but is optional for 680x0 machines. CFM requires a 68020 or greater processor, System 7.1 or higher, and 32-bit addressing turned on. This means that SAP will never be able to run on machines with 68000 processors (like the Plus and SE), and that machines which aren't 32-bit clean may not be able to run SAP securely.

Open Transport, Apple's new networking software, has requirements similar to CFM, except that it requires a 68030 or greater processor to run. Open Transport will be required by Apple's new Point to Point Protocol (PPP) client, which IS will use in the near future to support its Tether service. While older versions of the PPP software will continue to work for older Macintoshes and the Tether service, the third parties who developed the PPP programs are no longer actively supporting them.

### What To Do

Macintosh managers and users on campus need to start evaluating their current situation with respect to 68030 and earlier Macintoshes (roughly six years or older). It's important to assess how many of these machines a group or department has, and what they are being used for.

If you have older Macintoshes that are being used to perform Institute business, and you expect to make the transition to new applications such as SAP, it's time to start planning for new machines.

Information Systems is working on guidelines for when you should upgrade or continue to use your existing Macintosh models, depending on their typical application use. That document should be available by the time you read this article. For more information, including the latest Macintosh recommendations from IS, check the Web page at

<http://web.mit.edu/desktop/>

If you'll need to buy new equipment, the good news is that all Macintoshes based on the PowerPC chip (both Power Macintoshes and clones) will run current and future operating systems from Apple and support CFM and Open Transport. SAP and connection software for the Tether service will also run smoothly on PowerPC machines.

### Now and Near Future: 7.5.5. and 7.6

As was mentioned in the previous issue of *i/s* (Sept./Oct. 1996, page 4), System 7.5.5 is an update for users who are running System 7.5.3. The update is available from Apple's various ftp sites, as well as the CSS File Server in the IS-CSS AppleTalk zone; the path is Public:AppleSoftware: SystemSoftware: System 7.5.5 Update.

The planned January 1997 release of the Mac OS (version 7.6) will run on all Macintoshes except for the ones mentioned at the beginning of this article. System 7.6 consolidates several components that have been available separately, such as OpenDoc and Cyberdog. It will also include the latest versions of QuickTime, QuickDraw 3D, Open Transport, and Open Transport PPP, Apple's PPP client.

### Concerns

If you have questions concerning Macintosh system software and supported models, contact the Computing Help Desk at <computing-help@mit.edu> or x3-0001. ☺



## Getting Help

If you don't know where to get help for your computer, network, or telephone problems, call the IS Help Line, **x3-2001** – or direct dial one of the help lines listed to the right.

If you prefer to use e-mail, you can send your questions to the corresponding addresses on the far right. (When logged into Athena, you can also use the `olc` command to send questions to Athena's online consultants.)

For a complete list of services offered by Information Systems, see the Web page at

<http://web.mit.edu/is/>

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