



News about information systems throughout

Upcoming Conference Focuses
on Computers, Freedom, Privacy 2

Software Spotlight
Apple's QuickTime VR:
Virtual Reality Gets Real 3

Network Notes
MIT Gets a Site License for
the Eudora E-Mail Program 4

Computer Corner 4

**MIT Computer Connection/
Bits and Bytes**
Apple Computer Offers Power
Payback Promotions 5

RealAudio Plays Sound and
Music on the Internet Airwaves 5

Publishing Pointers
Usability: Good Design +
Good Content = Great Site 6

Telecom Talk
New Octel Voice Mail System
in Place 7

Search MIT's Subject Listings
and Schedule on the Web 7

Getting Help 8

**Top Ten Publications from
Information Systems** 8

Notes from the 4th International World Wide Web Conference

Lee Ridgway
Publication Services

The World Wide Web, developed at the European Laboratory for Particle Physics (CERN) in Geneva, debuted in 1991 as a networked information project for researchers. It has since blossomed into a universe of computer-based resources. What makes the Web work so well is a freely available body of software, protocols, and hypertext and multimedia techniques. The other contributing factor is that just about any kind of computer with an Internet connection can access it.

In May 1994, the First International World Wide Web (WWW) Conference was held in Geneva. Heavily oversubscribed, it has been referred to by Web veterans as "the Woodstock of the Web." Soon thereafter, the International WWW Conference Committee was established to coordinate future conferences, which occur about every six months. In December 1995, the Fourth International WWW Conference was held in Boston, organized by MIT's Lab for Computer Science and the Open Software Foundation Research Institute.

Four days of tutorials, workshops, panels, speeches, and exhibits brought together about 2000 registrants from 37 countries. This article presents highlights of the conference as noted by some IS staff members who attended.

The Web as a Swiss Army Knife

Katie Livingston, a Faculty Liaison in IS Academic Computing Support, was intrigued with the tutorial on porting interactive applications to the Web. Livingston's view is that the Web seems to have become a "Swiss Army Knife" for computing, where everyone wants to "webify" their applications, even when an application may not be well-suited for it. Brian Gaines, from the University of Calgary, discussed this suitability question, and covered the technical framework for porting, design issues, and possible problems.

The benefits of porting an application to the Web are that

- Users have a common interface
- The application can run on just about any platform
- The application can be distributed easily

On the other hand, for some applications it may be more difficult to write CGI scripts or Java code (two programming languages for the Web) than to use HyperCard or another authoring language. Web programming will become easier in the future, but for now people need to take care not to force a Web interface onto an application without first considering alternatives.

An HTML version of Gaines's presentation is at

<http://ksi.cpsc.ucalgary.ca/articles/WWW/PortWeb/>

continued on page 2 ►

Getting Down to Business

Peter Roden of IS chaired a panel on business-to-business electronic commerce using the Web. The panelists, representing academia, manufacturing, financial services, and journalism, looked at how businesses are relying more heavily on electronic commerce to reduce costs while improving business processes. A major topic of discussion was what level of security is needed for businesses to be comfortable using the Web for transactions and communications with each other. A related issue is how to develop standards to facilitate transactions such as placing orders and dealing with credit cards.

Other issues raised included the ability of the Internet infrastructure to support the expected increased load; whether we can expect universal connectivity of businesses at the desktop; and how regulatory agencies will help or hinder development of commerce on the Web.

For more information on the panel's presentations and discussion, send e-mail to <roden@mit.edu>.

Online Design

"Cool or Content: Design on the Web" was the catchy title of a panel discussion among a group of commercial Web designers. Although each panelist had different concepts of Web design, all agreed on the need for a clean, consistent approach. Key points included the following:

- Keep in mind the main function of the site: is it to be informative or to be an "experience"?
- Keep graphics simple and limit the number of colors, so that transfer isn't bogged down. As one panelist put it, "Design small to travel fast."
- Navigation aids need to show users where they are and where they are going. Try to differentiate links so that users know if a link is inside or outside of your site; you may need to provide some sort of site diagram or map. Develop a hierarchy of information so that users can get a clear sense of direction.
- Make testing with users part of the design process.

A related event, Jakob Nielsen's tutorial on "Designing and Maintaining a Highly Usable Site," focused on usability. His presentation is summarized in Publishing Pointers on page 6.

People Over Sixty Online

The Poster Proceedings at WWW4 provided a low-tech way to find out about projects, technical developments, research, and work in progress. One interesting poster reported on People Over Sixty Online (POSO), a six-month project conducted in Cambridge that introduced a group of 30 elders to the Web. Project director Betsy Campbell found the participants eager to explore. They started by learning about e-mail and ended by creating their own home pages and coaching peers. They also wrote about and discussed their experiences.

Campbell found that elders are quick adapters of interactive media when they are ready to learn about it and are within a supportive environment. She also found they are more interested in tools when the use is immediately apparent.

Campbell's project report is at <http://www.wedcom.com/campbebe/wwwconf2.html>

Next WWW Conference in Paris

The Fifth International WWW Conference is scheduled for May 6-11, 1996, in Paris. For information, check

<http://www.w3.org/pub/Conferences/WWW5/> ☉

Upcoming Conference Focuses on Computers, Freedom, Privacy

The Sixth Conference on Computers, Freedom, and Privacy (CFP96) will be held at the Cambridge Hyatt Regency Hotel from March 27 to March 30, 1996. CFP96 is hosted by MIT and the World Wide Web Consortium, together with a distinguished group of CFP96 sponsors and cooperating organizations.

Since its inception in 1991, the CFP Conference has brought together experts and advocates from the fields of computer science, law, business, public policy, law enforcement, and government to explore how computer and telecommunications technologies are affecting freedom and privacy.

These technologies already enrich our lives in many ways - from access to information to electronic commerce. The networked world enhances freedom of speech, freedom of association, and the exercise of political power. Yet these technologies and the organiza-

tions that control their development and use pose new threats to freedom. Personal privacy is increasingly at risk, as is the privacy of electronic communications and transactions.

These technological advances enable new forms of illegal activity, creating new challenges for the legal and law enforcement communities. In turn, the technologies used to combat cybercrime threaten freedoms we take for granted. The lack of recognizable borders in cyberspace also raises unprecedented legal issues.

The CFP Program

The CFP conference offers a neutral ground where people from widely different backgrounds and positions can learn from each other. The CFP96 program includes a reception and Technology Fair, plenary sessions, tutorials, workshops, and birds-of-a-feather sessions. For program information and an electronic registration form, visit the CFP Web site at

<http://web.mit.edu/cfp96> ☉



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Apple's QuickTime VR: Virtual Reality Gets Real

Albert Willis
IS Help Desk

You've probably heard of virtual reality (VR) – the ability to explore and interact with a spatial environment through a computer. The term conjures up researchers with high-end workstations and exotic equipment, like goggles and gloves. But now, thanks to a technology developed by Apple Computer, there's virtual reality for the rest of us. QuickTime VR lets Macintosh and Windows users experience virtual reality using nothing more than a computer, keyboard, and mouse.

QuickTime VR Breakthroughs

QuickTime VR supports two important breakthroughs. One is a panoramic movie technology that lets you explore spaces. You can view a panoramic scene as if you were standing in a single spot and turning full circle. You can look left or right, up or down, or get closer or farther away while the scene maintains its correct visual perspective. In multi-node scenes, different panoramas are linked together. When you place the cursor on a hot spot, it turns into an arrow. If you click, you're transported to the linked panorama. In this way, for example, you could move through different rooms in a museum.

The other breakthrough is an object movie technology that lets you examine objects interactively. If, for example, there were a QuickTime VR scene of Symphony Hall before a concert, you could pick up a musical instrument, look at it close up, and turn it around to see its details. By clicking on various hot spots in the scene, you could hear what an instrument sounds like or bring up a related movie clip.

QuickTime VR presents many kinds of opportunities. Wouldn't it be nice if, when trying to reserve an MIT room for an event, you could examine all of them without having to criss-cross the campus? A QuickTime VR-savvy room reservation application would let you walk around a room and note its seating capacity, network drops, and so on.



Using QuickTime VR

At the time Apple announced QuickTime VR, it was clear that there wouldn't be end-user applications that took advantage of it for a while, until developers got acquainted with the technology. The first commercially available application that uses QuickTime VR is Simon & Schuster Interactive's *Star Trek: The Next Generation Interactive Technical Manual*. It was developed using an early version of QuickTime VR and provides a virtual tour of the Starship Enterprise, incorporating both panoramic and object movie technologies.

Now, more QuickTime VR scenes (and applications that incorporate them) are beginning to appear. To sample these virtual spaces, you need both QuickTime 2.0 and the QuickTime VR Player. You can download these free programs – for Macintosh or Windows – from Apple's *QuickTime VR* home page on the World Wide Web. The URL is

<http://qtvr.quicktime.apple.com>

The QuickTime VR Player comes with directions to configure it as a helper application for Netscape Navigator.

Minimum Requirements

To play QuickTime VR scenes, your computer must meet the following minimum system requirements:

Macintosh

- 25MHz 68030 processor
- System 7.1 or later

Windows

- 33MHz 80386 processor
- Windows 3.1 or Windows 95

In addition, both Macintosh and Windows machines must have:

- 8MB of RAM
- 8-bit color support (16-bit preferred)
- A double-speed CD-ROM for playing CD-ROM-based titles

QuickTime VR as a Web Standard

Apple is positioning QuickTime VR as a standard on the World Wide Web. Apple and Netscape Communications recently came to an agreement to have Netscape add QuickTime VR support to Netscape Navigator 2.0. However,

as of this writing, support for QuickTime VR hasn't been added to the beta versions of Netscape 2.0 that are publicly available. It is expected to be included in the release version of Netscape 2.0.

Creating QuickTime VR Scenes

The other component of QuickTime VR technology is the QuickTime VR Authoring Tools Suite – a product sold through the Apple Developers Association. These tools let experienced multimedia authors create QuickTime VR titles that can run under HyperCard or Macromedia Director.

The authoring tools are Macintosh-based; the minimum requirements are a 33MHz 68040 or PowerPC-based Macintosh, 16-bit video, System 7.0.1 or later, at least 40MB of RAM and about 10MB of disk space per panorama.

To create a QuickTime VR scene, you need to photograph a panorama of the space. This can be done using a 35mm camera on a tripod. You photograph the panorama by taking the first shot, rotating the camera by a calculated number of degrees to the next position, taking the next shot, then repeating these steps until you have rotated full circle. The Authoring Tools Suite ships with documentation and a videotape that describes how to photograph a panorama in detail.

The next step is to get the pictures into digital format. This can be done by scanning the developed pictures with a scanner or having the negatives developed to PhotoCD, a CD-ROM format for saving digital photographs.

A program from the Authoring Tools Suite is then used to "stitch" the photographs into a single, seamless 360-degree PICT file. Once the file is compressed, a standard resolution (320 by 240 pixels per inch) scene is about 540K in size.

There's a similar process for creating object movies; it requires a motorized camera rig to capture frames of the object from all angles.

More Information

The best way to get more information on QuickTime VR is to visit Apple's Web site at the URL given above. The site also has links to assorted sample files and a section for developers. ☺

MIT Gets a Site License for the Eudora E-Mail Program

Phyllis Galt, *Publication Services*
Carol Elder, *Training Services*

As this issue goes to press, MIT is preparing to sign a site license for the Eudora electronic mail program for Macintosh and Windows. It will be made available to the MIT community in early February.

Eudora, from QualComm Inc., has several features that improve upon the current e-mail options at MIT. It also offers the basic functions and features found in your current e-mail program. As a Eudora user, you will still be able to send, receive, forward, and reply to e-mail, print to your local printer, use an address book, refile messages, insert text, and attach files.

Why Switch?

Eudora offers several features that will benefit e-mail users at MIT:

- *Sending formatted files.* One of Eudora's big advantages is that it lets you exchange formatted files, such as word processing documents, spreadsheets, and graphics files, to other users on either a Macintosh or a PC. You can even exchange formatted files with colleagues who use some other commercial e-mail packages, such as CCmail.
- *Signatures.* As with paper mail, you may want to include personal information – such as your title, phone number, fax number, location, and so on – in your outgoing e-mail. Eudora's signature feature lets you create both a standard and an alternate signature and easily attach whichever you choose to outgoing mail messages.
- *Sorting.* If you receive a lot of e-mail daily or face a flood of messages whenever you've been away, you have probably longed for sorting options to get a handle on your incoming mail. Eudora lets you sort messages by priority, sender, date, or subject.
- *Filters.* With Eudora, you can set up a series of filters that automatically transfer incoming messages to designated mailboxes. For example, if you belong to a mailing list called

"films," you can set up a filter that moves that mail to a mailbox called "films" (or whatever name you assign it), rather than adding it to your In box. This leaves your In box with a more manageable set of messages to read.

Getting Eudora and Documentation

IS has created a Eudora home page on the Web where members of the MIT community can get the Eudora software, as well as Eudora documentation and answers to frequently asked questions. The URL is

<http://web.mit.edu/tps/www/Eudora/eudorahome.html>

The documentation contains important details about installing Eudora and converting mailboxes and addresses from TechMail. To request a paper copy, call x3-5150 or send e-mail to <sendpubs@mit.edu>.

You can learn more about Eudora at the "See It, Try It, Get It Day," which will be held on February 14 from 10am to 4pm in E40-302. Watch for posters around campus or check the Eudora home page for a list of demo times.

Converting from TechMail

Two conversion programs for TechMail users are available for the Macintosh and are being developed for Windows. The first converts TechMail mailboxes (where messages are stored) into Eudora mailboxes. The second program converts your TechMail addresses – which can include mailing lists – into Eudora nicknames. The conversion programs for the Macintosh are available on the Eudora home page (see the URL above); the Windows conversion programs should be available soon at the same URL.

Support Issues

While IS will continue to support TechMail for the near future, Eudora will eventually replace it as the supported e-mail program for Macintosh and Windows-based computers.

If you have questions about Eudora, contact the Network Help Desk at x3-4101 or <net-help@mit.edu>. If your whole department is planning to switch to Eudora, talk to your network administrator, who should coordinate the effort for your group and act as liaison with the Network Help Desk. ☐



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

Q Is there a way to get programs I use frequently, such as my word processor and e-mail, to start up automatically when I turn on my machine?

A The recent versions of operating systems for both Macintosh and Windows provide a way to do this. On the Macintosh with System 7.0 or later, move the icons (or preferably, aliases) of applications you want to launch automatically into the Startup Items folder in the System Folder.

In Windows 3.x, the Program Manager has a StartUp group. To launch an application each time you start Windows, move its icon from the Main group to the StartUp group.


In Windows 95, a StartUp folder branches off from Programs in the Start menu. Create a Shortcut icon for each application you want to start up automatically and move that icon into the StartUp folder (see pp. 40–41 in *Introducing Microsoft Windows 95*).

Q A colleague in my office bought a Power Macintosh 7500 with version 7.5.2 of the operating system. Should I upgrade my Power Macintosh 7100, which runs System 7.5.1?

A No. System 7.5.2 is only for the newest Power Macs (7200, 7500, 8500, 9500). The current version of the Macintosh operating system for the 7100 (and most other Macs) is 7.5.1.

Apple is working on a system software update for all Power Macs. That version of the Macintosh operating system, 7.5.3, is expected to be released by February. An upcoming *i/s* article will cover System 7.5.3.

Q Where can I get a list of all the keyboard shortcuts for getting around on the Macintosh?

A If you use System 7.x, you're in luck. Look under the Help menu (the one with the  at the top right corner of your screen) and select Shortcuts. This opens an online guide that lists six categories of shortcuts. ☐



Apple Computer Offers Power Payback Promotions

Ginny Williams
MIT Computer Connection

Apple Computer recently introduced its Power Payback promotions. These consist of mail-in rebates for departments, faculty, students, and staff who buy qualifying Apple products between January 6 and March 17, 1996. For details and a rebate form, stop by the MCC in W20-021.

Powerbook + Printer Payback

Buy any PowerBook and qualifying Apple printer and receive a \$150 mail-in rebate. Qualifying printers include:

- *ImageWriter II*
C0090LL/A MIT \$340
- *StyleWriter 1200*
M388 MIT \$250
- *Color StyleWriter 2200*
M3474 MIT \$390
- *Color StyleWriter 2400*
M2888 MIT \$375

- *Personal LaserWriter 300*
M1675 MIT \$545
- *LaserWriter 4/600 PS*
M3898 MIT \$860
- *LaserWriter Select 360*
B1333 MIT \$1220
- *LaserWriter 16/600 PS*
M2471 MIT \$2150
- *Color LW 12/600PS*
B2392 MIT \$6300

Power Macintosh 7200 Payback

This Payback promotion has three variations.

1. Buy a Power Macintosh 7200 and any 17" or 20" Apple display and receive a \$200 mail-in rebate.
2. Buy a Power Macintosh 7200 and an Apple LaserWriter Select 360, LaserWriter 16/600 PS, or Color LaserWriter 12/600 PS printer and receive a \$200 mail-in rebate.
3. Buy a Power Macintosh 7200 and any 17" or 20" Apple display and an Apple LaserWriter Select 360, LaserWriter 16/600 PS, or Color LaserWriter 12/600 PS printer and receive a \$500 mail-in rebate.

Qualifying products for the Power Macintosh 7200 Payback include:

Systems

- *Power Macintosh 7200/75 8/500/CD*
M4303 MIT \$1455
- *Power Macintosh 7200/90 8/500/CD*
M4082 MIT \$1590

Displays

- *Apple Multiple Scan 1705*
M4434 MIT \$740
- *Apple Vision 1710*
M3322 MIT \$935
- *Apple Vision 1710 AV*
M3323 MIT \$1045
- *Apple Multiple Scan 20*
M2612 MIT \$1845

Printers

- *LaserWriter Select 360*
B1333 MIT \$1220
- *LaserWriter 16/600 PS*
M2471 MIT \$2150
- *Color LW 12/600PS*
B2392 MIT \$6300

All purchases must be made by the same customer on the same day. There is no limit to the number of rebates a customer can receive during the promotional period. ☺

RealAudio Plays Sound and Music on the Internet Airwaves

Robyn Fizz
Publication Services

Have you given up on playing sound files over the Internet because you have to wait too long for them to download? RealAudio, from Progressive Networks, offers a real-time solution to the problem of bogged-down audio transfers. As a result, many sites that feature online radio and music clips are adopting RealAudio technology.

What Makes RealAudio Tick?

RealAudio works primarily as a helper application for Web browsers. Like other audio helpers, its job is to download audio files over the Internet and play them. RealAudio's breakthrough is that it plays an audio stream as the transfer is happening, rather than waiting for the entire file to download first.

For end users, the key component of this technology is the free RealAudio Player. Release version 1.0 can be used by any Macintosh or Windows user with a 14.4 Kbps or faster connection. The current beta version, 2.0b2, supports live broadcast, and offers better sound quality for 28.8 Kbps or faster connections. This version runs on Power Macintoshes and Windows machines, as well as UNIX computers running SGI/Irix, Solaris, SunOS, or Linux. A 2.0 version for 68040-based Macintoshes is in the works.

To download either version 1.0 or 2.0 of the RealAudio Player, go to the RealAudio home page at

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

This page also has links to RealAudio sites, a searchable Guide, a RealAudio 2.0 Tour, and product information.

Benefits of RealAudio

RealAudio technology makes several scenarios possible. Here are just a few of the ways this technology is being used today.

- *News Radio.* You can listen to news stories not just when they air on the radio, but at a time you select. National Public Radio, for example, archives *Morning Edition*, *Talk of the Nation*, *Science Friday*, and *All Things Considered* on the Web. You can visit their site at

<http://www.prognet.com/contentp/npr.html>

- *Online Listening Booth.* At World Wide Music, a music store on the Web, you can listen to up to five 30-second tracks from any given recording. With over 40,000 CDs online, this may be the ultimate listening booth. The URL is

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

- *Live Broadcast.* If you're a basketball fan, you can listen to live broadcasts of NBA games five nights a week. This service, offered by ESPN SportsZone, is available at <http://ESPN.SportsZone.com/liveaudio/index.html> ☺



Usability: Good Design + Good Content = Great Site

Janet Daly
Academic Computing Support

The term “usability” – the quality of effectiveness in a device – takes on new meaning when used with regard to publishing. A usable paper document is more than concise text. It also has a consistent graphic design that aids navigation, illustrates concepts, and improves readability.

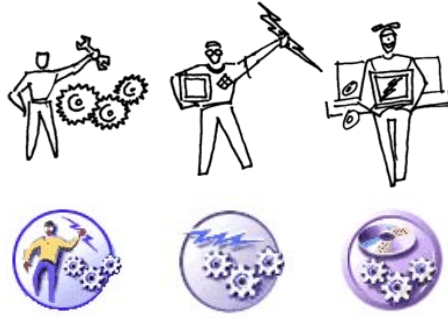
When applying principles of usability to electronic documents that are likely to be viewed on screen, new design issues emerge. Jakob Nielsen, a researcher at Sun Microsystems, addressed some of these issues in a tutorial at the 4th International World Wide Web Conference (see pp. 1–2). His presentation, “Designing and Maintaining a Highly Usable Web Site,” summarized his team’s experience in creating Sun’s family of pages for the Web. This presentation has also been published on the *User Interface Design for Sun’s WWW Site* page at <http://www.sun.com/sun-on-net/uidesign/>

Key Findings

Nielsen’s design team did extensive usability tests on several iterations of Sun’s home page. These tests led to three primary insights.

- A poorly designed Web site discourages users immediately. When users find an abundance of “under construction” signs or faulty links, they often decide not to return. Sites gain credibility when information is easy to find within an appealing layout.
- Most users aren’t interested in scrolling for information. Good design, according to the testers of the Sun pages, occurs when all the material, including relevant links, fits on a single screen.
- Users come to Web pages to browse and search, not to read. They regard non-critical descriptive text as distracting “fluff.”

Given these findings, Nielsen subscribes to a less-is-more approach. “If everything is highlighted, then nothing has prominence.”



Nielsen’s team tested several designs for an icon representing “Technology & Developers.”

Usability Testing

Nielsen’s team did several types of usability testing. To decide on categories for the main home page icons, the team asked a small number of users to do a card sort. The users were given a stack of index cards – with one concept per card – and asked to put cards with similar concepts on the same pile. Once the main categories were determined, the designers went to work on icons to represent them.

Icons were tested both for intuitiveness and for how well they worked in the context of the whole interface. In the intuitiveness tests, users were asked to state their best guess as to what an icon represented.

Initial tests were done with simple sketched icons in black-and-white ink on paper. Once the best concept for an icon was identified, it was rendered as a color image on a computer, and went through several more rounds of iterative design.

The first usability tests on the Sun home page were done using color prototypes on paper. Users were asked to give their general impressions and to point to anything on the page that looked clickable and describe what they thought they would find there. They were also observed browsing the Web pages of competitors.

Based on feedback from these tests, Nielsen’s design team built a working prototype of the Sun home pages. Users tested this prototype, and the design team went back to the drawing board several times. They created at least 15 designs for the home page. (You can see these designs on the *User Interface Design* Web page mentioned earlier.)

Lessons for Web Designers

At his tutorial, Nielsen described what he sees as emerging practices for Web design.

- *The designer of a Web site has editorial responsibilities.* Users prefer well-organized pages with a small set of information options. Five links at the top level can serve better than fifteen. In Nielsen’s words, it’s “the responsibility of the Web editor to prioritize the information space for the user and to point out a very small number of recommended information objects.”
- *Online publishers need to think about designing a “family” of pages.* It’s important to be consistent in the user interface and in the choice and repetition of graphical elements. This consistency provides users with visual cues that help them navigate effectively.
- *Clickable image maps must be designed with care.* Last year’s “laundry list interface” has given way to the clickable image map (a large graphical object with subsections that are linked to additional information; in other words, you can click on a part of the image and be brought to new information.) Users may not understand that an image is clickable unless there are clear visual cues. Also, it is difficult to tell from looking at an image map which links you have already visited. (Text links, by contrast, change color when you select them, leaving “breadcrumbs” to show where you’ve been.) Finally, image maps cannot be viewed by users with non-graphical browsers. If you do decide to use an image map on your page, plan to have a text-based partner page, so that all visitors to your Web site have access to the information there.
- *Usability testing is a critical step in Web page design.* It’s easy to create home pages that suffer from visual overload – with boxes, graphics, and buttons that compete for the viewer’s attention. Only through tests with users can you be sure that your Web pages are effective. Their feedback can help you refine your design so that the information hierarchy is well-defined, navigation aids are easy to use, and icons clearly represent the concepts they stand for. ☺



New Octel Voice-Mail System in Place

Louise Keohane
Telecommunications Systems

A new Octel voice-mail system was installed on January 6, replacing the system that had served MIT since 1988. All existing voice mailboxes, greetings, and messages were transferred intact from the old system.

Both old and new systems are from Octel, and operate with identical user interfaces. There are no changes in how you use system features or access and control your voice mailbox.

Many features of the old voice-mail system have been enhanced. Most of the system's new features are fee-based and offered by subscription. Here is a brief look at some of the new features.

ADA Compliance

The new Octel system offers many features for the disabled, including TTY service, that go beyond current

regulations of the Americans with Disabilities Act. These services are free. For details, contact Telecommunications Help at x3-4357.

Campus Messenger

This service gives individuals who share a telephone – for example, in a dorm room – separate, private voice mailboxes under the same phone number. Each person has a logon ID and password for retrieving messages and using other voice mail features. A typical voice mail message for a shared phone would be, “For Lucy, press 1; for Dora, press 2; for Mort, press 3.”

Mailbox Forms

This is a verbal version of “fill in the blanks.” The caller is prompted for information, for example, “Please speak your first and last name.” The administrator for a mailbox form can then extract the caller's verbal responses and enter them in a database. Mailbox forms are useful for offices that get frequent calls for publications or other items.

Integrated Voice Response

By combining voice recognition with a special version of MIT's online directory, callers to MIT's main number, 253-1000, can ask for a specific person or department, directions, or other information without going through an operator.

Outcalling

With this service, a voice mailbox can be programmed to call a specified number (such as a pager, or cellular or home phone) to notify the subscriber when a new message comes in. Outcalling is geared to emergency and on-call personnel, and offers several options for tailoring notification and responses.

Future Features

In the future, MIT's voice-mail system will offer visual mailboxes on Windows and Macintosh computers and full e-mail and fax integration. These features are slated for testing and should be phased into service by late 1997.

Getting in Touch

For information on voice mail services or help with problems, contact Telecommunications Help at x3-4357 <vmail@mit.edu>. ☎

Search MIT's Subject Listings and Schedule on the Web

Sharon Belville
Publication Services

When Mike Wessler, a graduate student in the AI Lab, got tired of wading through the *MIT Bulletin*, he did something about it. He took the Registrar's Office information on TechInfo and worked to make it accessible via the Web. Once he had a prototype ready, Wessler teamed up with the Registrar's Office to produce a user-friendly, searchable Web site. You can now view MIT subject listings and schedule information at <http://registrar1.mit.edu/catalog/>

In addition to its utility for MIT students, faculty, and administrators, this online resource benefits potential students and cross-registered students from Wellesley and Harvard.

Searching, Symbols, and Sampling

The Registrar's Office Web site lets you customize searches. You can look for classes taught by a given professor

or on a specific topic, and specify the time and day a class meets or a requirement it fulfills (e.g., HASS-D).

[Top](#) [Search](#) [Symbols](#) [Help](#) [Selection](#)

Each class listing is labeled with symbols that indicate when it is offered, the requirements it fulfills, and whether it's a graduate or undergraduate class. These symbols may seem cryptic at first, but they are easy to learn and are listed on the Symbol Definitions page – to get there, click on Symbols on the function bar at the top of any Subject Listings/Schedule page. (Symbols display as text in non-graphical browsers.)

Netscape users can choose Selection from the function bar to build a schedule of courses. This feature doesn't let you register for courses, but it tracks your choices in a colorful grid, so you can see if there are schedule conflicts. For details, go to the Help page, which you can get to from the function bar.

Valuable Links

The Registrar's Office site uses the linking capability of the Web. If a class

has prerequisites, its description includes links to them. The Registrar's Office Web site is also integrated with the *Educational Uses of the Web at MIT* page at

<http://web.mit.edu/acs/www/acaduses2.html>

If a course has a home page listed on the *Educational Uses* page, the Registrar's Office site also points to it. Faculty should work with the Faculty Liaisons (x3-0115 or <f_l@mit.edu>) to create Web pages for courses and get them listed on the *Educational Uses* page.

Now and Later

Right now, the Registrar's Office Web site is set up for browsing class listings and schedules. Eventually, there may be an option to preregister for classes via the Web, and to integrate the listings with the various lotteries, such as the HASS-D lottery.

The Registrar's Office is interested in your comments, including what you would like to see in future versions. To send feedback, fill out the form at

<http://registrar1.mit.edu/catalog/feedback.html> ☎



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 electronic 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 help with...	Dial...	Or send a message to...
Athena Computing Environment	3-4435	olc@mit.edu
Athena hardware repairs	3-1410	hotline@athena.mit.edu
Computer sales	3-7686	mcc@mit.edu
DEC and Sun software	3-6320	help@isis.mit.edu
Disabilities and computing	3-7808	atic@mit.edu
IS mainframes	3-7230	mithelp@mit.edu
Microcomputer and printer repairs	3-0815	pcservice@mit.edu
Microcomputer use	3-0001	micro-help@mit.edu
Networks/MITnet	3-4101	net-help@mit.edu
Telephone repairs	3-4357	5help@mit.edu
Voice mail	3-3677	vmail@mit.edu



Top Ten Publications from Information Systems

The end-of-year inventory has been taken, and IS has tallied its ten most popular publications for 1995. Network-related publications won hands down, claiming nine of the ten top spots.

All of these publications are free. You can pick up copies in the MIT Computer Connection, W20-021, or access them online at

<http://web.mit.edu/tps/www/docs.html>

You can also request IS publications by calling x3-5150 or sending e-mail to sendpubs@mit.edu.

Order No.	Title
NS-31	<i>Macintosh Dialup Access to MITnet Using MacPPP</i>
NS-32	<i>LAN WorkPlace for Windows Dialup Access to MITnet</i>
NS-39	<i>Installing LAN WorkPlace for Ethernet and PPP/SLIP Connections</i>
NS-42	<i>Choosing a Modem</i>
NS-43	<i>Basic FAQs About Tether</i>
NS-44	<i>Basic FAQs About Eudora</i>
QG-4	<i>Microsoft Word for the Macintosh (version 6): Tips and Shortcuts</i>
QG-33	<i>Using FTP (and RapidFiler) with LAN WorkPlace</i>
QG-42	<i>Using FTP to Download Files to Your Macintosh with Fetch</i>
RP-67	<i>World Wide Web Browsers and Helper Applications on net-dist</i>



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