

New NeXT Lab at 611 Church Site

By Carolyn Newman

a new NeXT lab is available for use by University students, staff, and faculty. Twenty machines are installed at the 611 Church Street 4th floor Campus Computing Site—twelve NeXT cubes, which include an optical disk drive and 350MB hard disks, and eight NeXTstations, which have floppy drives and 200MB hard disks. All machines are equipped with the NeXTSTEP UNIX-compatible operating system and basic applications software. The lab also features one of the only NeXT printers accessible to everyone on campus.

What's at the Lab? The easy-to-use, UNIX-compatible NeXT machines have already attracted several students and professors who want to run multi-tasking UNIX software, access Internet services, or develop their own applications. Available applications include WriteNow; Mathematica; the Digital Librarian, an index for large documents that allows keyword searches; and Interface Builder, an object-oriented development environment for writing applications quickly in the Objective-C language. Online reference materials include Webster's Dictionary and Thesaurus, the Oxford quotations, and Shakespeare's works. The machines also offer multimedia applications with sound and animation, and integrated voice mail and fax services.

During winter term, Mary Simoni, supervisor of the ResComp computing sites and adjunct faculty of the School of Music, taught the new *Sound Synthesis II* course in the lab to students majoring in performing arts and technology. Direct digital sound synthesis used to be done on mainframes equipped with digital-to-analog converters. Only a handful of such installations exist in the world. "It is really exciting that the power of direct digital synthesis is readily available to musicians through NeXT's easy-to-use interface," Simoni said.

Simoni's class used the Csound direct digital synthesis application developed at the Massachusetts Institute of Technology Experimental Music Studio. Csound runs from two basic files: an orchestra file and a score file. The orchestra file specifies characteristics of traditional and imaginary instruments, and tells how to synthesize sound. The score file defines the piece of music to be played. Csound does not produce audio directly, but generates data that represents the sound numerically. The data is written into a file and later converted to sound by another program. Students in Simoni's class were enthusiastic about synthesizing original compositions at the lab, and some have returned to use the lab's other resources.

How Can I Use the Site?

The NeXT lab is open during regular 611 Church Street site hours: 9:00 A.M.—5:00 P.M. weekdays during the spring term. To use the NeXT lab, you need to request a free Institutional File System account in one of these ways:

- Ask the ITD Accounts Office to send you a "Request for an IFS userID" form, and return the completed form through campus mail. The Accounts Office is at 535 West William. The phone number is 764-8000.
- Send your name, social security number, campus mail address, campus phone number, and kind of computer you use (Macintosh, NeXT, or other platform) to umich-userid@umich.edu or call 764-4800.

How Do I Find Out More

About the Lab? For more information about using lab services, either stop by the lab or contact the ITD Campus Computing Sites, Sales, and Service group at 747-4295. To learn more about using the UNIX operating system, sign up for one of several non-credit ITD workshops. The workshop series *Introduction to the UNIX Operating System, Parts 1-4* is offered from 9:00 A.M. to noon on July 27 and 29 and Aug. 3 and 5 during the summer term. To register for these sessions or to obtain information about other UNIX workshops, call ITD Workshop Registration at 763-3700. Watch the *Digest* for information about NeXT user group meetings in the fall.



Mary Simoni (center) with her students. Photo by Carolyn Newman.