"*Studying Online Collaborative Learning at the Math Forum*"
Facilities, Equipment and Other Resources

Math Forum

The Math Forum website (mathforum.org) is hosted using a suite of Penguin Pentium III servers. Penguin Computing is the foremost hardware provider for the Linux community. Networking and internet connectivity are supported by Drexel University's Information Resources and Technology Department. Drexel has been ranked as one of the most wired colleges in the country by Yahoo Internet Life. The infrastructure is monitored by system administrators to ensure 24/7 availability.

The Math Forum website is served using Apache web server software running under the Red Hat Linux operating system. Dynamic web pages are created using a combination of open-source and commercial tools. Apache/Mod-perl and related toolsets are used to embed in web pages the functionality to access databases. SQL compliant database engines, including Sybase's Adaptive Server Enterprise product and MySQL support eighty percent of Math Forum applications. Two of our eleven servers support a development environment which exactly duplicates our production applications and production database servers, promoting a process for implementing well vetted software by technical staff and user audience.

The Math Forum is located in its own spacious building on Drexel's campus, with adequate private offices, a roomy conference space, its server room, T-1 access, copy machine, fax machine, and printer.

College of Information Science & Technology

IST has recently set up a Knowledge Management Collaboratory, designed by the PI for use by small workgroups. This facility includes tables and computers for four small workgroups to meet simultaneously and to interact within and between groups, both online and face-to-face. The room is equipped with a video conferencing system built around two automated video cameras and a high-bandwidth connection with the Internet and other collaboration sites on campus. It also has a SmartTech smart board rear projection unit with and an InSight controller.

The IST building also includes a Usability Laboratory that contains 6 PC computers, a Panasonic front projection unit, and a one-way mirror for observation of participants in experiments. The Alfred P. Sloan Center for Asynchronous Learning Laboratory contains computing and other equipment that supports research on and delivery of IST's extensive online MSIS program over the IST Asynchronous Learning Network.

Each faculty member in IST is equipped with at least one workstation of his or her choice, providing a network of approximately 30 PC, 20 Macintosh, and 2 Sun SPARCs. One Silicon Graphics O2 workstation is dedicated to the design and building of virtual worlds for education. All workstations are networked via Ethernet and interconnected with the Drexel University wired network. The workstations share 2 high-end servers running Windows NT 4.0 Server for print and file services. Drexel also has a campus-wide wireless network that can be accessed by users with a wireless card. Faculty and student researchers have access to Microsoft Office XP, Visual Studio 6.0, MS Developer Network, Front Page 2000, Outlook, Visio 2000, SPSS 10 for Windows, Adobe Acrobat 4.0, Rational Rose, and Oracle software.

IST maintains a Computing Resource Center for student use. This facility houses PC, Macintosh, and HP9000 workstations. An Ethernet Network connects Macintosh, PC, and UNIX workstations, laser printers and color scanners. A special lab for graduate research assistants is equipped with high power PCs and is located near the PI's office; this will be used by the GRAs in the Project.

School of Education

The School of Education's TEL (Technology Enhanced Learning) site is a highly customizable space with a wireless, lap-top environment (12 PowerBooks, 20 iBooks, and 13 Gateways); a high-speed network that provides fast access to web resources and sharing of large data files; and a single-camera video production, nonlinear video editing, and graphics production set-up to produce multimedia materials for web-based learning and for stand-alone multimedia applications. The TEL also is equipped with a VTEL video-conferencing unit and furniture that can easily be arranged in different layouts for group work.