
1999-2000 Annual Report of the Emory University Information Technology Division

EXECUTIVE SUMMARY

Rapid growth in services and new initiatives characterized the Information Technology Division's fiscal year 1999-2000. Work with schools and academic support units increased, major administrative projects were completed, and demand for services that depend on ITD infrastructure continued to grow. The division also successfully worked through Year 2000 issues.

ACADEMIC

Working in collaboration with the schools, ITD helped design and implement multimedia computer technology in classrooms, auditoriums, and labs. Faculty were guided in designing World Wide Web-based materials for courses and supported in using technology on-line and in the classroom.

The university's Internet presence was advanced by the addition and redesign of Web sites, while the deployment of Internet2 provided high-speed video connections to universities around the world. Special projects extended Emory's technological tools by offering innovative ways to teach language studies, by opening access to electronic resources for indexing and full-searches, and through the medium of audio and video streaming. And consistently the division supported students' use of network and information resources in labs, the library, campus residences, and remote locations.

ADMINISTRATIVE

The PeopleSoft Student modules for Admissions (Emory and Oxford Colleges), Student Financials, and Student Records were successfully implemented this year. Other major project achievements include partnering

with Facilities Management to support implementation of their new information management system, working with the Purchasing Department to complete their on-line requisition system, collaborating with the Office of Governmental and Community Affairs in support of Web-based event calendaring applications, and upgrading and applying new features for production systems, with an emphasis on the PeopleSoft Human Resources system.

INFRASTRUCTURE

Services that depend on IT infrastructure demonstrated another year of impressive growth. Disk space to support audio and video streaming increased 600%. Use of the World Wide Web increased 35% and disk space utilization increased 47%. To keep pace with the ever increasing volume of electronic mail traffic – e-mail now averages 5.2 million messages per month – investments were made to increase disk space and provide a faster, more reliable mail server.

The growth in the number of calls for assistance placed to the Customer Support Center averaged 13.4% in each of the past three years. Software distribution increased by 52% with over

11,600 licenses and 6,300 Emory On-line CD's distributed. The Data Center's support for the Healthcare environment continued to grow as well.

LOOKING AHEAD

ITD has identified a number of goals for next year. Among these are: replacement of the university e-mail system, amplification of resources that support the academic community, implementation of security projects, further development of a campus-wide IT architecture, broad stabilization of administrative production systems, implementation of the PeopleSoft Student Financial Aid module, and the strengthening of partnerships with University Libraries and the Network Communications Division. Additionally, a proposal will be submitted for a major upgrade of PeopleSoft systems with implementation proceeding if the plan is funded.

While making progress in these areas, ITD will continue to improve the quality of core services. With demand for these services growing at a far faster pace than the resource base, the division faces the challenge of making difficult decisions about service priorities to ensure adequate resources for high demand and mission-critical areas.

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INTRODUCTION

Information technology (IT) resources provide vital tools for achieving Emory University's goals. They provide a virtual public commons for the exchange of ideas and for collaborative interchange among faculty, students, university administration, and staff. They undergird basic administrative functions – management of student records, facilities, finances, intellectual resources – and much more. Technologies such as video streaming, multimedia classrooms, and tools for on-line learning challenge traditional approaches to teaching and learning.

The use of Emory University's IT resources is increasing at an exponential rate. Where once only a few faculty employed these resources, we now see IT as pervasive and accompanied by the demand for more technical resources. As the technical environment becomes more complex so does the need for more professional assistance, while new systems require staff with strong technical skills, not an easy thing to obtain in a competitive marketplace.

Supporting a variety of IT efforts in a decentralized environment is increasingly difficult, particularly when the expense of integrating systems is often not accounted for in project budgets. Yet inherent in the challenges of managing the university's IT growth and change lies a positive theme: we are only beginning to comprehend the ways that IT can and will advance education and research. Where in the past we focused on doing things cheaper or faster, we now think of ways to do things differently. Technology is opening up vast new approaches to teaching, learning, and conducting scholarly research.

This report is designed as a review and celebration of ITD's role in providing IT for the university community in 1999-2000. We believe this year's accomplishments will serve as the building blocks in the years ahead for forwarding the university's mission through technology.



Student Support

To support Emory students and enable learning, ITD provided classroom media services, media equipment, Emory Television, RealAudio, RESNET support, and satellite services in academic classrooms, computing labs, kiosks, and training classrooms. Highlights of the year's service activities include:

✓ **Classroom Support.** Learning Technologies staff continued to provide support for upgrading technology in classrooms across campus:

- Designing and implementing an on-line inventory system for managing computing resources used in classrooms.
- Adding SMART podium technology to lecture theatres and classrooms to integrate computer, multimedia, and network resources.
- Replacing computers in all classrooms that were equipped with SMART podiums.
- Equipping selected classrooms with electronic white boards that function to digitally capture class notes.
- Providing computer test stations in White Hall, Candler Library Media Services, and the Technology Center, where faculty and students can test their upcoming presentations on the kinds of presentation equipment they plan to use.

✓ **EmoryConnect 2004.** Members of the new freshman class were provided with user ids and passwords prior to their arrival on campus and given a virtual space to conduct electronic discussions, receive announcements, exchange electronic mail, and participate in real-time chats with fellow classmates. This initiative, which functions in collaboration with the Admissions Department, is designed to be ongoing.

✓ **Freshmen Arrival Week.** Almost all freshmen own their own computers, bringing them when they arrive on campus or purchasing them shortly thereafter. During the weekend of 25-27 August 2000, more than 50 staff, student employees, and volunteers provided software and installation assistance for the arriving freshmen to ensure that their computers would be connected and on-line with the Emory network before the first day of classes.

✓ **The Multimedia Center.** Customer use of the center moved further into academic and related projects this year. In addition to assisting faculty and staff with multimedia projects, the center offered six workshops on developing World Wide Web content in the Emory environment using Macromedia Dreamweaver.

✓ **Residence Hall Computing Labs.** By installing security, residence hall labs were converted into unstaffed facilities which increased the

ACADEMIC SERVICES

Faculty demand for classroom computer data display increased by 50%.

Media Services filled 7,500 requests for audiovisual support (e.g. document cameras, video, film, slides). Compared to the 5,461 requests last year, this represents an increase of over 37%.

There were 94,654 visitors to Cox Hall Computer Center; 257,905 log-ins from InfoCommons computers; and 62,440 log-ins from computer workstations in residence hall labs. Other performance measures for services supporting students use of IT services can be viewed at: www.emory.edu/ITD/LT/lmeasures.9900.html

During Freshman Arrival Week, there were 609 requests filled for assistance in setting up and configuring residence hall computers.

available hours the labs are open for student use from 20 to 24 hours a day, seven days a week.

Faculty Support

ITD provided local and secondary academic support for teaching and research through local network administration, desktop system maintenance, and technical assistance, as well as consulting, LearnLink, and partnering with the General Libraries to maintain EUCLID server hardware and software. Center and service highlights include:

✓ **Emory Center for Interactive Teaching (ECIT).** Emory's Center for Interactive Teaching celebrated its second year by being selected as an EDUCAUSE National Best Practice Site for training faculty. In recognizing ECIT, EDUCAUSE focused on the strength of the communication processes that tie the faculty to the Teaching and Research team in ITD.

ECIT assisted faculty in incorporating interactive technologies into their classes. The center offered classes during both the fall and spring semesters in French, English, visual studies, and other subjects. In addition, ECIT staff worked with faculty participants in the Emory Online 2000 Seminar for Teaching and Technology. Jointly sponsored by the Charles E. Culpeper Foundation and Emory College's Center for Teaching and Curriculum, Emory Online is a program that assists educators in developing technological resources for the classroom. During the summer of 2000, two sessions of six teams of professors and graduate students participated in three weeks of project development training conducted by ECIT.

✓ **Emory College Local Support.** The second year of a four-year replacement cycle was completed for all Emory College faculty computers. Over 250 departmental machines and 150 instructional computers were replaced. An on-line inventory system was designed and implemented for managing Emory College computing resources.

✓ **Emory College Language Center (ECLC).** ITD worked in collaboration with Emory College to design and develop the Language Center and new Woodruff Library language classrooms. The classrooms feature SMART Board technology, audio and video streaming, and access to international television and radio programming.

✓ **World Wide Web Services.** This year, 20 departmental World Wide Web sites were redesigned, including sites for the Emory School of Medicine Dean's Office, Emory School of Medicine Office of Research, Michael C. Carlos Museum, and Emory College.

The division collaborated with the General Libraries' Beck Center to create new electronic text resources for the Emory community that feature full search ability as well as academic indexing. Initiatives included: "The Martyred President: Sermons Given on the Occasion of the Assassination of Abraham Lincoln," "The Electronic

More than 8,000 service-related calls from Emory College faculty were handled by ITD.

Throughout the year, ITD coordinated Emory's multiple networks and supported training for their use.

Poetry Project,” and “The Emory Women Writers’ Resource Project.” Dr. Harry Rusche’s internationally recognized resource for Shakespeare scholars was redesigned and reprogrammed as a Web-driven database).

✓ **Blackboard.** Blackboard CourseInfo v4.0, a course management tool for on-line teaching, was installed and evaluated. Six weeks of training was provided for Emory College faculty and graduate students and twelve Blackboard courses were designed and implemented on the World Wide Web for fall 2000 teaching. Blackboard on-line learning models were hosted for Emory College, Candler School of Theology, Goizueta Business School, Emory School of Medicine, and the General Libraries.

✓ **LearnLink.** Thousands of messages are delivered daily, over 650 courses across the university use LearnLink as their on-line learning environment each semester, and **40% of the university’s classes are on line** and actively used. Learnlink is now the default mail client for the students in the College, Medical School, and Candler School of Theology.

✓ **EUCLID.** Services were upgraded to provide better World Wide Web and cataloging capabilities to users of Emory’s on-line library system.

✓ **On-line Emory Access.** Throughout the year, work progressed for bringing virtual private networking (VPN) capability, which renders the network secure, to Emory School of Medicine researchers at the Veteran’s Administration Hospital in Atlanta.

✓ **Videoconferencing.** Internet2 connections were finalized and activated for the School of Public Health, Goizueta Business School, Emory College Department of Chemistry, Emory College Department of Math and Computer Sciences, and the Graduate Division of Biological and Biomedical Sciences’ Biochemistry Department.

Internet2 videoconferencing capabilities were installed and implemented in Woodruff Library and two pilot video-streaming sessions were conducted over Internet2: 1.) between Indiana University and Emory; and 2.) between Yerkes Primate Center and Ohio State University.

Videoconferenced lectures, interviews, and conference meetings were established with universities across the United States and in Germany, China, and Japan. Videoconferenced classes for English and Environmental Studies were offered at Emory and Oxford Colleges and for the Chinese language class at Emory and Agnes Scott Colleges.

Blackboard, a course-management tool, and Internet2 videoconferencing capabilities expanded technological resources for teaching and research for Emory faculty and students.

LearnLink service now accommodates over 700 simultaneous student users, triple the volume of a year ago.

ADMINISTRATIVE SERVICES

OPUS offers Web functionality for bidding and registering for courses; adding and dropping classes; viewing student grades, records, and accounts; and viewing and changing demographic information.

Early reports on OPUS usage indicate average hits per day at 103,601 with the average number of user sessions per day at 2,046. (Statistics represent the 60 day period of 1 August –30 September 2000.)

ITD continued to provide production support for university administration including: twelve monthly payrolls and supplemental payrolls, 81 biweekly on-cycle payrolls, 52 biweekly off-cycle payrolls, four cash-in payrolls for hospitals, plus support for daily on-demand check processing.

PeopleSoft (PS)

PS Student Administration Project Team (ATLAS Project). Led by the Provost's Office, ITD staff provided support for administration, training, technical development, and infrastructure. Highlights are:

✓ **Implementation of Student Financials and Student Records systems.** This implementation included a major conversion of up to 10 years of data from student records; training and manuals for over 600 users across campus; development and roll-out of OPUS, the World Wide Web application for students, faculty, and staff; development of new student bills using a software product, Jetforms; development and implementation of an efficient tuition calculation process; and setting up security using Lightweight Directory Access Protocol (LDAP), an emerging standard for accessing directories.

✓ **Assessment of the infrastructure in conjunction with IBM.** The assessment indicated the need to upgrade hardware to handle the additional traffic created by students accessing PS Student Administration via the World Wide Web. A major upgrade of the PS infrastructure was planned and implemented that included a new IBM SP2 frame with 7 nodes, an S80, and NT Web servers connected by a high-speed switch.

✓ **Implementation of Admissions system.** By September 1999, all applicants to Emory and Oxford Colleges had been entered into the new system.

PS Human Resources Management System (HRMS). Led by ITD, this team provided production support for HR. Highlights are:

✓ **Benefits.** Benefits administration projects encompassed preparation for 1999 benefits open enrollment; improvement of COBRA processing; addition of Emory-specific functionality with the Benefits Administration System (BAS) Activity Panel; preparation of annual benefits statements and benefit eligibility feeds; providing an on-demand event maintenance and savings panel; and improvement of the benefits billing process.

✓ **Employee Records.** ITD staff provided assistance with Personics Recruitment System implementation and creation of feeds to the PeopleSoft HRMS; non-resident alien reporting; initiation and continued support for the university DDI project (time and attendance); and refinement of the non-discrimination testing for retirement processing.

✓ **Payroll.** Payroll administration projects included Web time-entry implementation for departments; year-end 1999 processing of W2s, 1042s, and 1099s; year-end non-resident alien assistance for the Tax Office; and processing of all the FY2000 and FY2001 salary increases.

✓ **Work Study.** Student Work Study specific panels and reports were developed and implemented.

Other Applications Support and Services

ITD continued to invest significant time and effort in supporting Legacy and non-PeopleSoft administrative systems of the university. Selected highlights of the year's projects include:

✓ **Desktop/Network Support.** The ITD Desktop/Network Support team provided local support for ITD and a secondary level of support for administrative departments across campus. The team participated in Windows 2000 training, the e-mail upgrade project, network upgrade initiatives, and transition of the campus Post Office to Pitney Bowes.

✓ **Document Management.** Document Management services began functioning as a self-supporting service center on 1 September 2000. Document management is currently used to archive files for administration departments and schools/divisions across campus. Use of the service continues to expand: Accounts Payable's invoice storage space grew from 18 GB to 118 GB; storage space for Facilities Management construction contracts grew from 5 GB to 13 GB; while the total document management disk storage usage quadrupled over the year.

✓ **Electronic Research Administration (ERA).** Work began in collaboration with the Office of Sponsored Programs to provide a project liaison for ERA.

✓ **Financial Aid.** Vendor fixes and updates were implemented to the Financial Aid Management (FAM) system; a program was written to automate the changing of student awards, and the batch schedule was rewritten to make it more efficient and to reduce processing time. This Legacy system will be replaced by a PeopleSoft module this year.

✓ **Purchasing.** The On-line Requisition purchasing system was implemented across campus and approximately 500 customers were trained to use the software.

✓ **Resource 25.** This event and resource-tracking application is currently serving 18 units across the university. The R25 World Wide Web Event Calendar was successfully deployed in the Theology School and is being configured for the Medical, Business, and Law Schools.

✓ **Wesley Woods.** Work began with Emory Healthcare and Wesley Woods to incorporate Wesley Woods into the FAS general ledger system.

By 31 August 2000, volume for on-line purchasing transactions increased to over 1,400 per month. Less than 10% of the requisitions are now submitted on paper.

INFRASTRUCTURE

For the past three years, demand for customer support from the Customer Support Center has increased consistently by an average of 13.4% per year.

Including LISTSERV, there were an average of 5.2 million individual e-mail messages per month sent/delivered last year.

The highest usage day of the year for LISTSERV was 4 May 2000, when there were 93,915 message deliveries.

Accesses to streaming video averaged 900 occurrences per week in June 2000, with 17 weeks over 1,000 since January 2000. To deal with demand, disk space was increased from 3.5 GB in June 1999 to 21 GB in June 2000, an increase in disk space of 600%.

Traffic on the Web increased 35% during the academic year. Disk space utilization increased 47% (from 8 GB to just under 12 GB).

Customer Support

Customer Support Center (CSC). This year 53,000 calls were logged in on a wide range of issues from network connection problems, to desk-top setup issues, to software application questions. **Software distribution increased 52% overall** with 11,600 licenses and 6,300 Emory On-line CD's distributed, and the center continued to provide short courses, special courses, computer-based training, and tutorials for Emory faculty, staff, and students covering both Macintosh and PC software applications. Customer training costs were reduced by 28% (59% over the past two years) and some services were moved to self-supporting systems. (<http://www.wph1.cc.emory.edu:80/ITD/training.html>)

Enterprise Systems Support

✓ **E-Mail.** Dooley/Eagle accounts were created or maintained for all employees. E-mail disk storage space for in-boxes on campus grew from 30 GB in March 2000 to 57.5 GB in early August, **an increase of almost 100% in 5 months.** This indicates more e-mail usage in general, more use of attachments, of Rich Text Format e-mail (HTML and text), and e-mail for electronic business (mass mailings, etc.) This volume exceeded the capacity and architecture of the system, and as a result e-mail was unreliable on several occasions. Short-term steps were taken to fix problems as they arose, including adding hardware and moving e-mail to its own system. Replacement of the system is needed in the coming year.

✓ **LISTSERV.** There were **200 new e-mail lists added** to Emory's LISTSERV this year. LISTSERV statistics for the past two years are archived on the web at: www.listserv.emory.edu/LISTSERV/Stats.

✓ **RealAudio/Video Streaming.** ITD installed and evaluated a QuickTime streaming server that offers on-line audio and video content over Emory's network. The use of streaming video has accelerated rapidly on campus. Major users this year included the Law School, the School of Medicine, Emory College Language Department, and Yerkes. There are currently 35 developers on campus. Two of the eighteen live broadcasts between January and June 2000 were Emory's 155th Commencement Ceremony on 15 May 2000 and the MacMillan Law Library's presentation on 13 June 2000 of "Philip Morris Exec Says Little Left for Punitive Fees – by Michael Connor MIAMI (Reuters)."

✓ **World Wide Web.** With funding from the President's Office, the division installed and implemented a new search engine for the Web, Infoseek Ultraseek, that provides indexes for central and individual school World Wide Web sites, including Emory College, the Goizueta Business School, and the Carter Center. This has increased the operating speed of Emory's Web sites.

✓ **Year 2000 (Y2K).** Preparing systems for the Y2K rollover was a critical activity for ITD in 1999. The successful outcome was the

result of hundreds of hours of effort spent changing codes in university administrative and UNIX systems and six months of testing for the rollover. All of the infrastructure hardware and software, including the network, e-mail, Web and NT systems, had to be checked and upgraded, with every test and vendor response documented. A better organized and documented Data Center was gained as a result, but the effort diverted resources from other tasks.

The university's use of the Data Warehouse continues to grow with 190 users generating 50,369 queries in the first 8 months of the year, compared to 32,541 queries by 156 users in 1999.

Information Resource Management

✓ **Security.** Security breaches and unauthorized accesses (“hacks”) of the security environment continue to rise, with 21 security incidents in the first eight months of the year compared with 23 for all of 1999. This translates to an average of **2.625 incidents per month, an increase of 20%**. Currently, **the average tangible cost to the university for each incident is \$14,000**. Because of the speedy response and actions taken to trap the Love Bug Virus, Emory was not burdened with this costly disruption that plagued other organizations and universities during the year.

General security requests including access to resources, account/password administration, and e-mail aliases increased 25% to 1,450. In anticipation of employees maintaining their own HR profile, every employee at Emory was given a security account, which has increased the number of new accounts on the system by 2,200.

As part of the EmoryConnect 2004 program, approximately 450 new accounts for “early decision” applicants were created during January/February 2000, and during the summer an additional 3,800 accounts were created for applicants who were in the “accepted” or “paid” status at that time.

✓ **Information Management.** ITD continued to enhance the Data Warehouse, providing a user-friendly environment where customers are provided access to a growing bank of information for data analysis and report generation. As a result of PeopleSoft implementations, additional Human Resources and student information was incorporated into this environment, **increasing storage utilization by 325%**. Data warehouse security access requests increased from 173 for all of 1999 to 199 processed in the first 8 months of the year.

Operational Support Services

✓ **Business Impact Analysis.** ITD worked with IBM Professional Services and customers to determine how long various services could go without data processing services. Based on the results, phase two of a business impact study was conducted to determine recovery alternatives and costs. A decision was made to install a fire suppression system and additional security measures in the data center.

✓ **Control-M.** Work with University Administrative Services was performed to implement Control-M scheduling software for

applications in Financial Aid, Accounts Payable, Financial Accounting System, and some parts of the PeopleSoft application.

✓ **Data Center Printing.** With PeopleSoft available on the network, campus units may now print reports from their offices. Even with this ability, central printing continues to grow. **Average growth for printing in the data center between the years 1997 and 2000 was 72.5%.**

✓ **EMC Fiber Switch.** A new fiber switch was purchased and installed to provide faster and less expensive connectivity to the disk farm. PeopleSoft and Document Management systems have been converted to the fiber switch and work began to move the Healthcare systems to the new technology.

✓ **Healthcare Network Architecture (HNA) Lab.** ITD assumed responsibility for managing the operations of the HNA Lab (Pharmacy, Lab and Nursing) on 1 September 1999. In April 2000, the operations staff of HNA became employees of ITD and work progressed to integrate HNA Systems into the enterprise infrastructure. Reorganization yielded a reduction in staff of 3 hospital FTEs.

✓ **TRMS.** ITD Operational Support Services worked with PeopleSoft staff to add functionality for printing reports on the enterprise printer and to convert to TRMS, which gives the ability to reprint without rerunning programs.

Network Operations and Telecommunications

The Network Operations (NetOps) and Telecommunications services of ITD became Network Communications (NetCom) officially in June 2000. (<http://www.emory.edu/netcom/index.html>) Highlights of activities include:

✓ **Firestop Project.** Network Operations, the director of Fire Safety, and other divisions of the university embarked on a firestopping project in December 1999. The goal of this project is to promote awareness and address firestopping and related problems.

✓ **Modem Pool.** The shared modem pool resource serves approximately 30,000 eligible faculty, staff, and students, who wish to access Emory resources from off-campus locations. Over the past three years the number of modems in the pool was increased from 427 to 696. Additionally 46 new lines were added to the university's telephone switch and trunk system. However, even with this increase the pool was saturated during evening hours and measures to limit connection time to 3 hours per active session were implemented on 16 August 2000.

General Libraries

In our continuing collaboration with the General Libraries, we have established a joint Technology Innovation Fund. This fund solicits annual contributions from our vendors to support projects of interest to both ITD and the General Libraries. First year pledges totaled \$20,000, which will be used to expand wireless connectivity in Woodruff Library and around the Quadrangle.

Network Communications

After a year of preparation, the transfer of Network Operations and Telecommunications department from ITD to the new Network Communications Division (NCD) took effect in June. NCD now has responsibility for voice and data services across Emory. ITD is working with NCD in many ways: in understanding user needs, in planning the expansion and upgrade of the network, in the triage and solution of technical problems, in developing Emory's security environment, etc.

Healthcare Information Systems

ITD continued to collaborate with the Healthcare Systems on a range of issues including data center operations, security, and support for the faculty and researchers in the Health Sciences.

IT Governance and Planning Structure

The new governance structure for IT established last year resulted in the effective work of a number of committees:

- **Council on Information Resources and Technology (CIRT).** Chartered to provide policy and planning guidance for the use of information resources and technology at the university, the committee met quarterly to discuss a range of topics, including policies for the use of Internet2, for remote access to campus, and for IT security. CIRT also recommended three e-mail policies (naming conventions, file attachment standards, and retention of deleted e-mail files) that were adopted by the President's Cabinet. The council discussed and approved the first document produced by the IT Architecture Committee (see below).
- **Information Technology Architecture Committee.** A subcommittee of CIRT chartered to lead the process of creating an IT architecture for Emory, the committee created its first public document, "Emory Priorities and Architectural Requirements." This was widely distributed and discussed on campus and was approved by the Council of Deans and the President's Cabinet. A successor document, "Designing Emory's IT Architecture" is now being circulated for discussion. In the next phase of the process, two task forces have been launched to design the specific technical architecture for Security and Directory Services.
- **Web Governance Committee.** Another subcommittee of CIRT, this group focuses on the university's World Wide Web presence.

CAMPUS PARTNERSHIPS

ITD works jointly with other units on campus to ensure that our strategic directions and services are compatible and to take advantage of available synergies and economies.

EXTERNAL PARTNERSHIPS

Four working groups examined the objectives of the Emory Web, legal issues, structure and design, and technical issues. The committee submitted a report on these topics to CIRT for discussion this fall.

- **Seminar on the Digital Future.** The seminar, a small group of scholars and administrators, spent the year examining the daunting array of challenges posed by the digital age. Meeting monthly, usually with a visiting speaker and sometimes with demonstrations, the group discussed distance education, intellectual property, the future role of the university, Internet2, and technology-enabled pedagogy. A report condensing their conclusions is being prepared.

- **IT Advisory Committee (formerly ITD Advisory Committee).** This committee was chartered to provide advice to the vice provost for IT on overall IT policies and priorities. Consisting primarily of the unit IT managers, the committee met monthly to consider the implementation of security policies, CIRT's new e-mail policies, the list of ITD services, the associated proposed costing model, and the two documents produced by the Architecture Committee. Subcommittees considered the directory services, the deployment of Windows 2000, and security technologies.

Southeastern Universities Research Association (SURA)

Over the past year, Emory has been an active member of the Southeastern Universities Research Association. The university is one of a group of SURA members who decided to aggregate their Internet2 traffic through Georgia Tech. This has yielded a significant cost savings (approximately \$60,000 per year). We now use this as our connection to Internet2, replacing the vBNS network with the Abilene network.

Emory also hosted a SURA workshop on applications in the Health Sciences that use high-speed networking. This brought a number of leading-edge researchers to Emory, demonstrating ways in which Internet2 makes possible new types of research and clinical practice.

Although ITD has a series of operational objectives for each of its service groups, the following programmatic goals have been identified for the 2000-01 academic year:

- **Replace the university e-mail system with a stable vendor supported product.*** Size new system, seek funding, conduct test project, implement project.
- **Further develop IT resources to serve the academic community of the university.** Train and support faculty in use of technology for creating on-line course materials, design and install technology for classrooms and labs.
- **Begin implementation of an IT security project for the institution.*** Propose firewalls, virus-checking software, Web authorization, account administration, with implementation of funded projects.
- **Lead in creation and implementation of a campus-wide IT architecture.** Develop standards and framework for decisions concerning technology, systems, and applications.
- **Provide stable production environment for administrative systems.** Analyze infrastructure supporting PeopleSoft HR and Student systems with modifications to systems environment; support Electronic Research Administration* and Institutional Advancement* projects.
- **Further develop the strategic partnership between ITD and University Libraries.** Work together on the Language Center lab, availability of electronic resources, integration of electronic resources into the on-line learning environment, transition of analog media into digital source, and wireless project.

During the fiscal year 2000-2001, ITD will also have to deal with the themes identified in the introduction to this report. With the increased growth and complexity of our environment without corresponding budget increases, the division will need to take serious appraisal of how it will continue to provide for core IT services. This will certainly lead to increased emphasis on prioritizing work and resources and cutting back or eliminating lower priority services.

The division may also have to reorganize to move professional staff (or personnel lines and funding) to areas where they are needed most. All this is to say that in a growing and complex environment change is certain, and it will not come without some pain. Yet we hope too that we will realize some of the excitement of the last theme identified in the introduction to this document, that of seeing new ways that IT can enhance the work of the university. If we are able to do that in a meaningful way, then the division will accomplish its ultimate goal, to strengthen the university's mission of teaching, research, and public service through the use of technology.



* Completion of these goals is dependent upon approval of additional funding.

LOOKING AHEAD