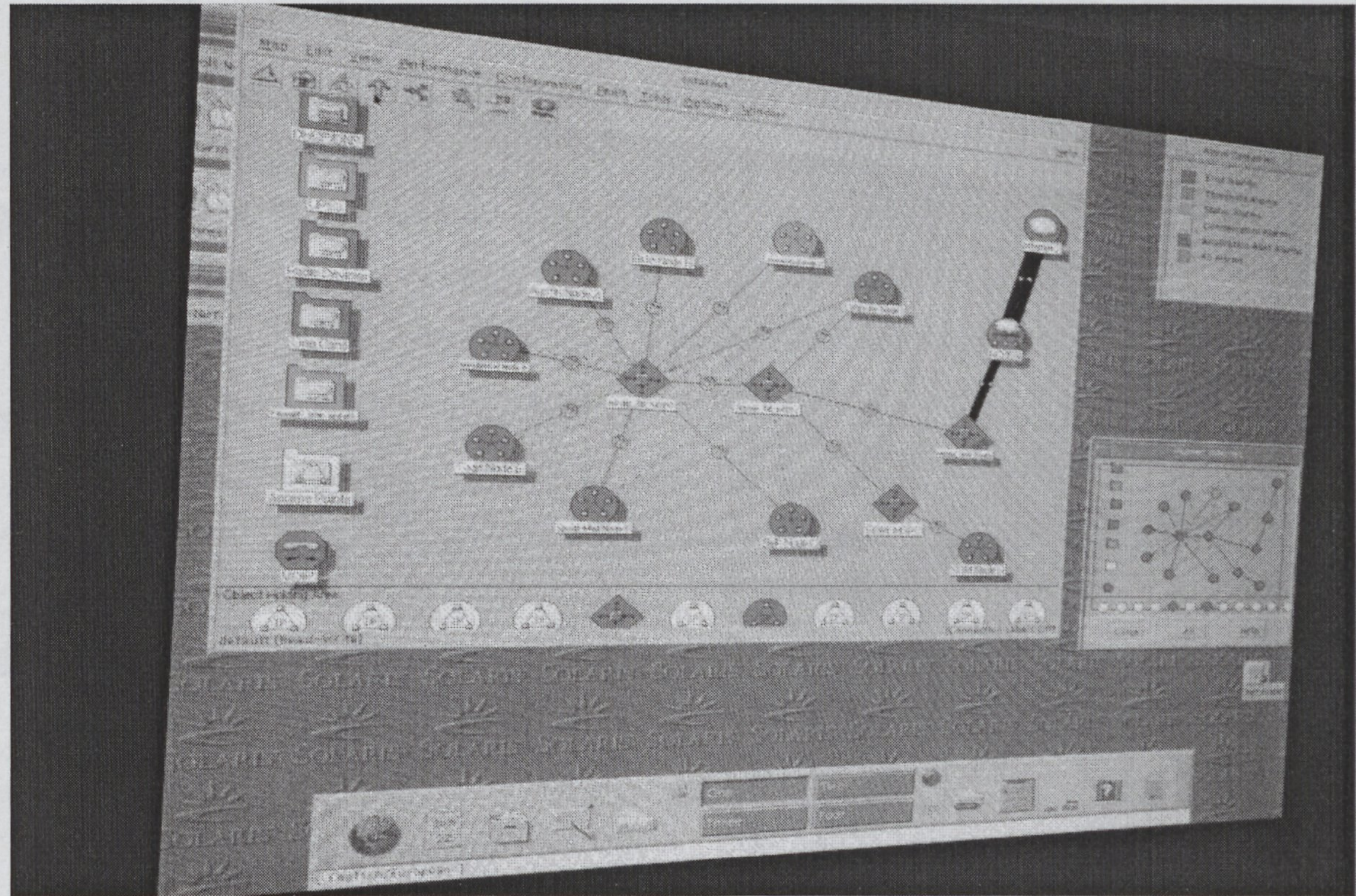# Year In Review
Information Technology Initiatives
2004-05

Office of the Chief Information Officer
East Carolina University

TABLE OF CONTENTS

INTRODUCTION

The staff and management of Information Technology and Computing Services (ITCS) are pleased to present their annual report of accomplishments and activities for the 2004-05 academic year. This report is required by the Information Technology Management Flexibility Plan approved by the Board of Trustees in 2002. You will find this year's report a bit different from those of past years; instead of providing the reader with a comprehensive and detailed list of activities and projects, we have elected instead to provide the highlights of our efforts while emphasizing the operational changes that have been implemented.

Some highlights include:
- ITCS has undergone significant changes since our last report. First and foremost, the office of the Chief Information Officer now reports the Vice Chancellor for Administration and Finance, Mr. Kevin Seitz, an arrangement that we have found to be appropriate and productive.

- Internally, we are most pleased with the changes in ITCS' business processes, represented by a new, three person team, Finance and Planning, that manages the department's budgets, contracts, accounting and financial reporting. The efforts of this team have improved the working efficiency of all of the Direct Reports and the Managers. Further work efficiencies have been attained in Administrative Support Services with its new Director.

- Improving communication with management and clients, from the Chancellor's Cabinet and Deans on to the end users has been a major effort this year. New channels have been extended to the Deans and Directors, the research community, the faculty, Brody School of Medicine and Pitt County Memorial Hospital. This effort reflects the philosophy that ITCS is a service provider whose functions and success depend on dialogue with our clients.

- Service is an area in which ITCS must and does excel. As an organization, ITCS is thoroughly imbued with a service mentality, which is reflected in the services provided and the client feedback that we receive. Our surveys are overwhelmingly positive (80% "excellent" or "very good") and we have seen a significant improvement in client satisfaction in the Brody School of Medicine clinics.

- The potential for identity theft and compliance with HIPAA regulations are among the issues that make security a driving factor in the day-to-day mind-set of ITCS. To improve ECU's IT security posture, we have implemented a significantly stronger technical infrastructure. External security assessments have also indicated that the overall status of our security status is quite advanced and unusual for an institution such as ours.

- Our two major projects, the Banner ERP and Voice over IP telephony implementations have continued to progress alongside other shorter-term initiatives, including an upgrade to the email system, major network

infrastructural improvements at the Brody School of Medicine, the rollout of 2000 new desktop computers and implemented or upgraded 52 smart classrooms.

It should be noted here that Jack McCoy, Director of IT Security and ECU's IT Security Officer, completed all requirements for his Doctorate in Education at the close of the Spring Semester. Joe Norris, Director of IT Support Services has been accepted in the Graduate School to pursue a master's degree

In summary, this year has been a very busy and productive one that reflects the expertise and professionalism inherent in the ITCS team.

OVERVIEW OF ITCS

In reviewing past reports, it was noted that the reader had no opportunity to learn about or understand the ITCS organization; therefore, it seemed appropriate that the organizational highlights of the department be presented.

MISSION STATEMENT

ITCS is first and foremost committed to providing excellent information technology infrastructure and service for faculty, staff, alumni, and students. ITCS partners with campus departments, other universities, and industry to make strategic investments in information technology infrastructure that will maintain ECU in a state-of-the-market posture with respect to administrative applications, faculty research, student learning and training and outreach to the state and nation. This will be achieved this through increasing the efficiency and effectiveness of its operation, applying appropriate technologies to the university's core functions, and facilitating deployment of new technology throughout the university.

EMPLOYEES

ITCS employs approximately 190 persons who reside in five locations, the Cotanche Building, Austin Building, Brody Medical Sciences Building, Joyner Library and the Thomas Professional Building. The Cotanche Building is the location of ITCS management, the server "farm" and the server, network and most of the programming support staff. The other four locations house various support staff for academic computing, desktop support, outlying network support and application-specific programming.

SALARY COSTS

Salary support for ITCS totals approximately $8,882,000 plus benefits. Approximately 79% of those funds are from the East Campus and 21% are derived from a combination of Medical Faculty Practice Plan and West Campus State funds.

ITCS Salary Distrubution
East Campus/West Campus

East, $7,017,557, 79%

West MFPP, $1,601,450, 18%

West State, $263,010, 3%

Total = $8,882,000

ORGANIZATION

The department is organized with eight direct reports (DR) under the Interim CIO, with each DR being responsible for specific functional areas. Additional details of these functional areas will be presented separately.

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                    ┌─────────────────────┐
                    │     Interim CIO     │
                    │     Jack Brinn      │
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      ┌───────────────┐      ┌───────────────┐
      │ Administrative│      │IT Support Services│
      │Support Services│     │   Joe Norris  │
      │Marlene Anderson│     │   92 reports  │
      │   8 reports   │      └───────────────┘
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      │Finance & Planning│   │   Software    │
      │  Patsy Mills  │      │  Development  │
      │   2 reports   │      │   Don Sweet   │
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      │  IT Security  │      │Network Support│
      │  Jack McCoy   │      │  Rob Hudson   │
      │   6 reports   │      │   23 reports  │
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      │IT Infrastructure│    │  Research &   │
      │ Woody Bolton  │      │Extramural Funding│
      └───────────────┘      │ Ernie Marshburn│
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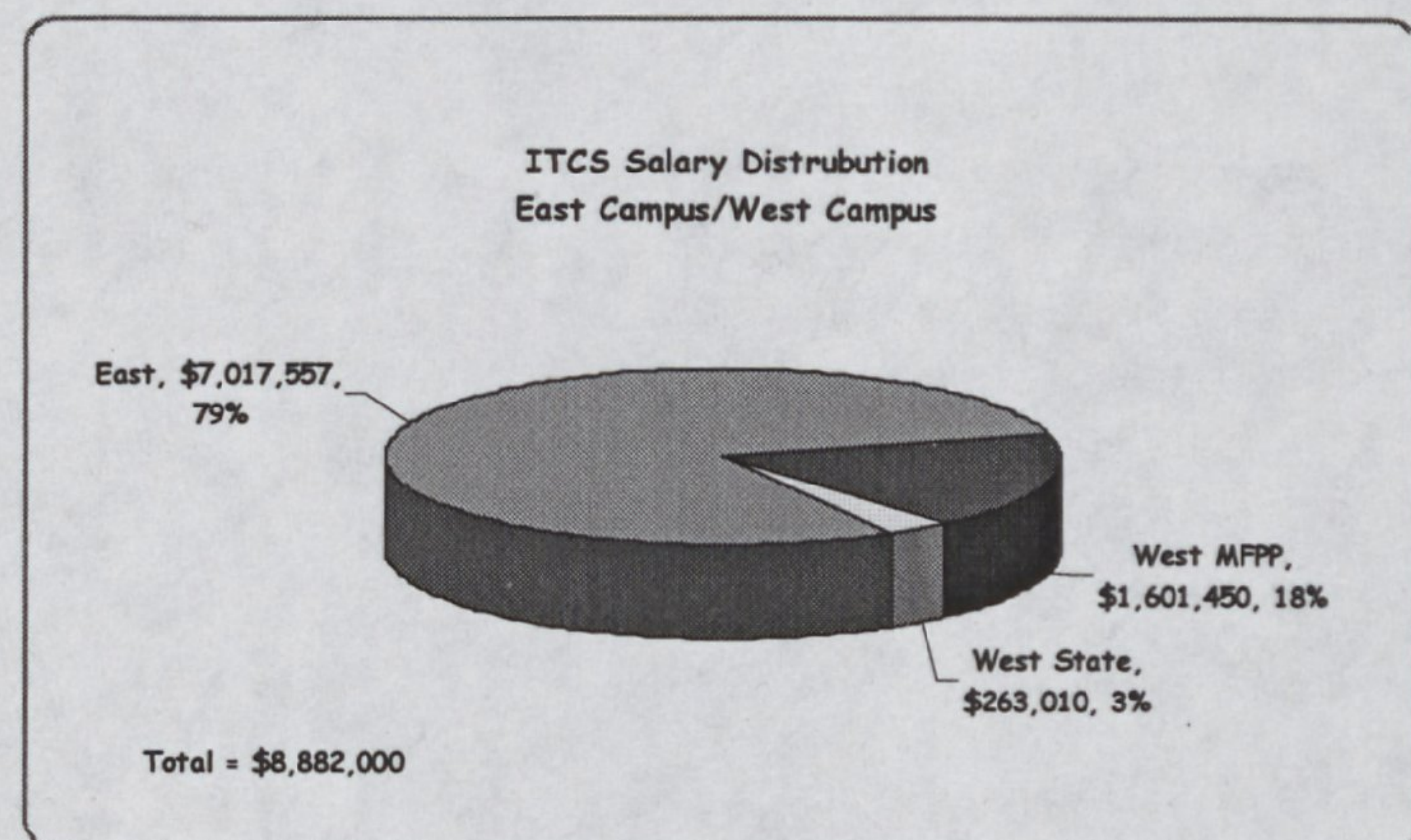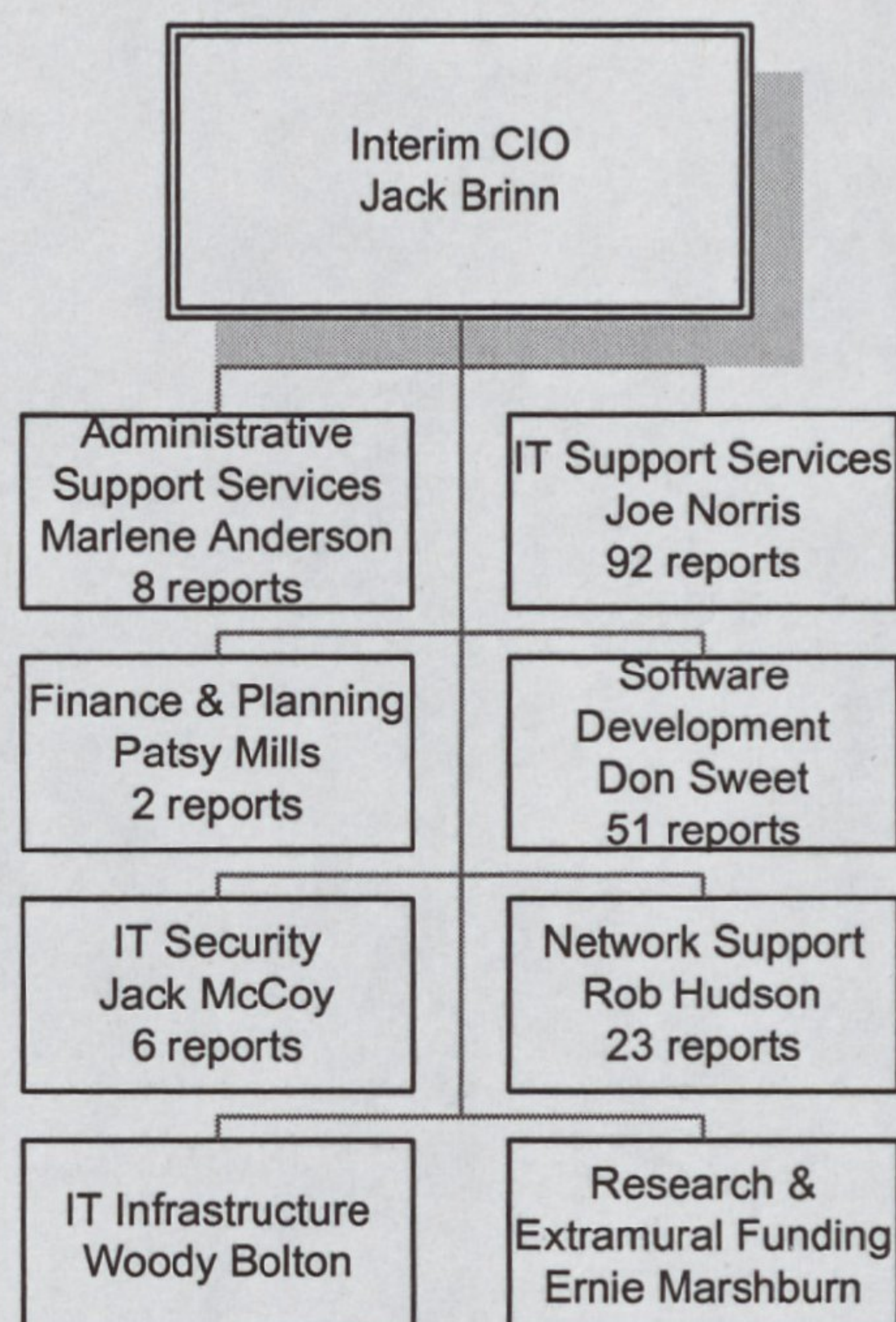
The eight Direct Reports are located on the same floor of the Cotanche Building as the CIO's office, and in addition to weekly group meetings there are daily personal exchanges among all members of the group. The result is a highly effective team effort for project management and supporting the IT infrastructural needs of ECU.

FUNCTIONAL HIGHLIGHTS
- Support 8000+ desktop computers
- Maintain ~165 servers including
  - Critical machines - Email, electronic medical record, One Stop, network, physicians' billing and scheduling, etc.
  - Departmental servers w/service level agreements
  - Pirate Drive providing 3.4 terabytes of storage
  - Mainframe – HR, Financial, Payroll, Student Systems
  - Sun Solaris Machines – Banner (Blackboard in the future)
  - SGI 350 research computer
- Maintain campus-wide network with ~13,500 jacks
- Legacy telephone system – East Campus
- Operate University switchboard
- Develop security and management policies for HIPAA, network and servers.
- Implement smart classroom planning and support
- Manage student laptop program (ACE)
- Provide academic support – software training, statistics support
- Negotiate licensing costs, bids, grants – Microsoft, SAS, IDX, Dell
- Construction planning

- Provide faculty/staff Help Desk, Student Help Desk
- Support 73 Student laboratories
- Manage purchase and installation of new desktops, university-wide
- Web development, support
- Custom Software Development – One Stop, Custom reporting
- Plan and manage critical data disaster recovery
- Manage major IT implementation projects
  - Banner Implementation Project $18.7 million
  - VoIP Telephony Project ($4.4 million) telephony installed in

SECTIONAL REPORTS

1. FINANCE AND PLANNING

The most significant organizational change in ITCS has been the new Finance and Planning team implemented under the direction of Patsy Mills. The other team members include Jona Maynard, accountant, and a new employee, Heather Godley, contract manager.

The overall financial management system was changed from a centrally managed one in the CIO's office to a project-based system with projects and the associated funds assigned to the DRs. Finance and Planning supported the projects with requisition processing, invoice processing, accounting and financial reporting. The groundwork included the development of new accounts, new internal pre-and post-order routing processes and up-to-the minute status reports for the DRs and their Managers.

Patsy Mills, Director of Finance & Planning

One result of this effort has been the exceptionally smooth processing of approximately $18 million from various accounts. In order to process that amount of funds, it goes without saying that the Finance and Planning Team had excellent working relationships with Materials Management and Systems Accounting.

Another benefit to these changes has been the provision of accurate reports to the Brody School of Medicine detailing the expenditure of Medical Faculty Practice Plan funds for their projects and service contracts. This reporting capability combined with a new ITCS-driven budgeting process in the BSOM enabled Dean Cynda Johnson and her staff to better understand the true costs of their IT needs. The new budgeting process was broken into two segments, clinical and non-clinical and for the first time, attempts were made to apportion BSOM IT costs to State and MFFP lines accordingly. This would not have been possible without the accounting procedures implemented by Finance and Planning.

2.   ADMINISTRATIVE SUPPORT SERVICES

Marlene Anderson, a longtime veteran of ITCS, assumed the directorship of the former Administrative Services section and insisted that the term "support" be added to their name.

TELEPHONE DIRECTORIES SHAREPOINT SITE
ITCS Administrative Support Services, with the assistance of ITCS' Academic Computing group, implemented SharePoint™ as an efficiency tool for updating the campus Sprint and Talking telephone book directories. Updates made on the SharePoint™ site by departmental administrators are reflected immediately. Information is also provided for updating each directory, order deadlines and directory delivery dates.

Marlene Anderson, Director of Administrative Support Services

SWITCHBOARD MAGIC
The University Switchboard is now using the new Switchboard Magic application for forwarding calls to all University faculty, staff and departments. The application was developed through ITCS' Software Development Services and with enhancements that include departmental fax numbers as well as secondary numbers for departments and departmental addresses. University faculty and staff are searchable by last name, job title or department name which makes the process accurate and faster for anxious callers. This system can be updated each night through Human Resources Systems to ensure accuracy.

SHIPPING AND RECEIVING SERVICE
Administrative Support Services' established a new service – Shipping and Receiving – in response to the large quantity of computer equipment received and shipped from ITCS.

ADMINISTRATIVE SUPPORT SERVICES PAPERLESS INITIATIVE
Administrative Support Services streamlined their paper process by utilizing SharePoint™ for managing the sections business activities. This new system has significantly reduced the use of paper and increased work efficiencies for the Administrative Support staff.

Pam Gragg, the Voice of ECU, operating the University's switchboard where approximately 400 calls are processed daily.

3.   NETWORK SUPPORT SERVICES

Maintaining a state-of-the-market data network combined with the addition of new construction sites with network growth, the Voice over IP telephony project and an occasional security challenge all make for a complex work environment. The Network Support Services team has more than met the challenge this year.

Rob Hudson, Director of Network Support Services

The initial wireless implementation plan called for a 95% coverage of the campus based on building square footage. We achieved approximately 62% coverage a year ago; however, a new driver, the student laptop program, has led us to shift from a building square footage metric to one born out of the ACE student computer program and measured by laptop/area density. While we may ultimately achieve a 95% wireless coverage of the campus, we will do so by first ensuring that laptop and portable device users have adequate access to wireless resources.

The wireless network has expanded to approximately 360 access points on both campuses. A network operating system upgrade is complete and approximately 30% of the access points have been upgraded to provide the newer "g" standard of 54 megabits/second of bandwidth in addition to the older "b" standard of 11 megabits/second.

The following facilities were added to the network infrastructure this year:
East Campus   Self Help Building
                                New Central Receiving Warehouse
                                Clark-Leclair Stadium

West Campus   ECU Women's Clinic

East Campus renovations resulted in a network equipment upgrade in Flanagan and Human Resources.

Network equipment upgrades have been implemented in the following buildings:
East Campus   Mendenhall
                                Jenkins Art
                                Ragsdale
                                Health Services
                                Graham
                                ROTC Wright Annex

East Campus   Fire Tower Medical Office

VoIP Project Status Report

Phase I of Voice over IP telephony business plan is approximately 60% complete. Two new positions have been added to the implementation and support team.

Buildings added to the current VoIP implementation during this past fiscal year include Flanagan, Central Stores and Receiving, Self Help, Human Resources, and the new Clark-LeClair Stadium.

The current VoIP deployment is comprised of 1024 VoIP Devices, which includes phones, gateways, and voicemail ports.

4. Information Technology Support Services

ITCS Service Call Volumes

The IT Help Desk resolved more than **85,830+** service calls for FY05 which correlates to a **28% increase** over the previous fiscal year. The peak for IT service call-related issues continues to be the beginning of Fall and Spring semesters with more than 6,000 calls logged in the first three weeks of the year. The average service call resolution time, for 85% of service calls received, was less than one business day.

Joe Norris, Director of IT Support Services

Desktop Procurement/Upgrade

ITCS, Materials Management, Dell, Apple and a large number of campus departments worked collaboratively to provide ECU faculty, staff and student labs with a standardized state-of-the-art desktop workstation. Through this collaboration, approximately 2,000 desktop systems were acquired, installed, and configured for use at an overall cost savings of **$500,910** to the University.

	East Campus Faculty	East Campus Administration	BSOM Faculty & Staff	BSOM Clinics	Student Labs
Desktops (Dell/Macintosh)	371	151	500	163	622
Laptops (Dell/Macintosh)	36	22	64	33	
Total	407	173	564	196	622

Smart Classroom Upgrades

The Academic Computing section purchased and/or installed upgraded or new equipment for 52 classrooms with various Smart Classroom technologies. The projects involved various levels of complexity, including projector installation, podiums, laptop / PC hookups, sound control systems, video/audio switching, and touch panel control systems. The SCET (SMART Classrooms and Emerging Technologies Team) also provided consultative support for new departmental technology installations in the Rawl Annex, Bate, Minges, Brewster, and Rivers buildings.

Building	No. of Classrooms
Jenkins	Auditorium + 4 classrooms
Brewster	12
Rivers	1
Flanagan	13
Belk	9
Bate	3
Speight	4
Rawl	2
Ward	3

New High Performance Computer System Installed
As part of a National Science Foundation Major Research Instrumentation (MRI) grant awarded to ECU, an SGI Origin 350 with 32 CPU's was purchased. This system vastly increases our high-end computing resources. It will mainly be used in long running calculations for chemistry and physics applications, primarily running Gaussian and Accelerys software.

Banner Hardware
Four Sun 6900 servers were installed to run the Banner ERP application. This system will also serve as the platform for Blackboard when that application is returned to local control next year.

"Pirate IT Essentials" Student Newspaper
ITCS published ECU's first-ever student computing newspaper that focuses on student computing resources, ACE computers, software available for purchase, IT policies and procedure to follow, wireless access points on campus, among other valuable information. The first publication was distributed to 10,000 students in print.

Faculty and Staff Technology Surveys
ITCS administered their first-ever technology surveys to all faculty and staff, more than 4,000 total. The survey was divided into three sections with each focusing on a specific topic area: (1) faculty usage of technology/software and training needs; (2) rating ITCS information technology services; and (3) communications methods. Additionally, faculty and staff were asked to submit their "most pressing need" through a separate Web-based survey. By taking advantage of various assessment measures and acting on client feedback, ITCS

can provide the best possible information technology service to support the education, teaching, research and administrative needs of the ECU community.

ECU Technology Digest
ECU Technology Digest is an electronic publication sent to all university faculty and staff. The Digest informs the campus of new technologies implemented on campus, upcoming training opportunities and provides a compilation of important service announcements about scheduled e-mail, network and scheduled administrative computing interruptions and downtime. New topics of interest to faculty and staff may be added to the Digest in future issues.

Training Coordination
We provided a mechanism for units to get individualized staff/faculty training to meet specific departmental needs through Spot Light Training for software such as Outlook, Excel, File Maker Pro, OSX for Macintosh, SPSS, SAS, Access, and CommonSpot. We also provided online Web access training via our Online Anytime Training software, which was utilized by more than 725 users.

Licensed Software
ITCS, in conjunction with Apple Computers, negotiated a contract to provide a site license for the Macintosh operating system for faculty, staff, and student labs. This agreement will save the university $25,000 over the next three years.

SPSS Student Version
Academic Computing negotiated a new contract for the SPSS Student version for 700 PC and 300 MAC home versions of SPSS. The release includes SPSS Base, SPSS Regression and SPSS Advanced stats.

ACE Student Computer Support Center
As part of the ACE initiative, a center was established to provide on campus technology support for student-owned computers. Located in Austin 101, the center was staffed with two fulltime employees and 12 part-time students, and open seven days a week during the school year. Nearly **3000 service calls** were completed by the center as part of the program.

Barcode Inventory Management System
The Wasp Mobile Inventory system was implemented to facilitate an electronic method for managing Smart Classroom consumables items. The immediate benefit of an electronic inventory system is the convenience of being able to point and scan frequently used items into inventory as they arrive. Additionally, the system is capable of providing useful reports that will be used to make tactical and strategic decisions pertaining to Smart Classroom inventory.

OPSCAN Relocation
Relocated from Cotanche building the two OPSCAN machines to the Technology Resource Center located in Austin 103 to accommodate quick drop off and pick up service for faculty. More than **180,000 surveys, tests,** etc. were scanned

in FY04-05. Faculty input into the decision to move the OPSCAN services back to main campus has paid huge dividends in the overall operation.

Dedicated Smart Classroom On-call Service

To meet the ongoing needs of our clients, a decision was made to implement a dedicated on-call service for Smart Classrooms. In the past, when faculty would call the IT Help Desk with an issue related to Smart Classroom Technology, the Help Desk would issue a service ticket which delayed the process. With the new system, the helpdesk will forward the call immediately where clients can expect a 10-minute response time.

Services to the Brody School of Medicine

- Replaced 448 staff and faculty workstations, 40 laptops, 24 laptops with docking stations at Brody School of Medicine
- Developed, piloted and implemented Phase I Clinic Workstation Security initiative; deployed secure workstations in ECU Physicians clinic exam rooms
- Deployed PDAs, trained users and installed software supporting IQMax patient records dictation application
- Setup clinic workstation spare parts inventory
- Implemented IDX Analyzer, installed software for select business users

Microsoft Software Update Server

This new service allows ITCS to preview and approve critical Microsoft Operating System updates and security patches for campus computers thus allowing for compatibility verification of campus applications prior to campus wide distribution. Since campus desktops access these updates via ECU's primary Systems Update Server the new service alleviates a significant amount of internet traffic.

5. IT SECURITY

### Computer and Network Infrastructure Enhancements

The protection of our information data resources is an ongoing process. As cyber attacks become more sophisticated, our level of protection must continue to evolve to thwart such attacks. The following measures were implemented to enhance computer and network infrastructure security to reduce the likelihood of service failure caused by cyber attacks or other disruptive activities.

1. **Symantec Antivirus Servers and Managed Mode for Clients**
   Centrally-managed antivirus application that provides:
   - Automatic antivirus definitions updates on clients' computers
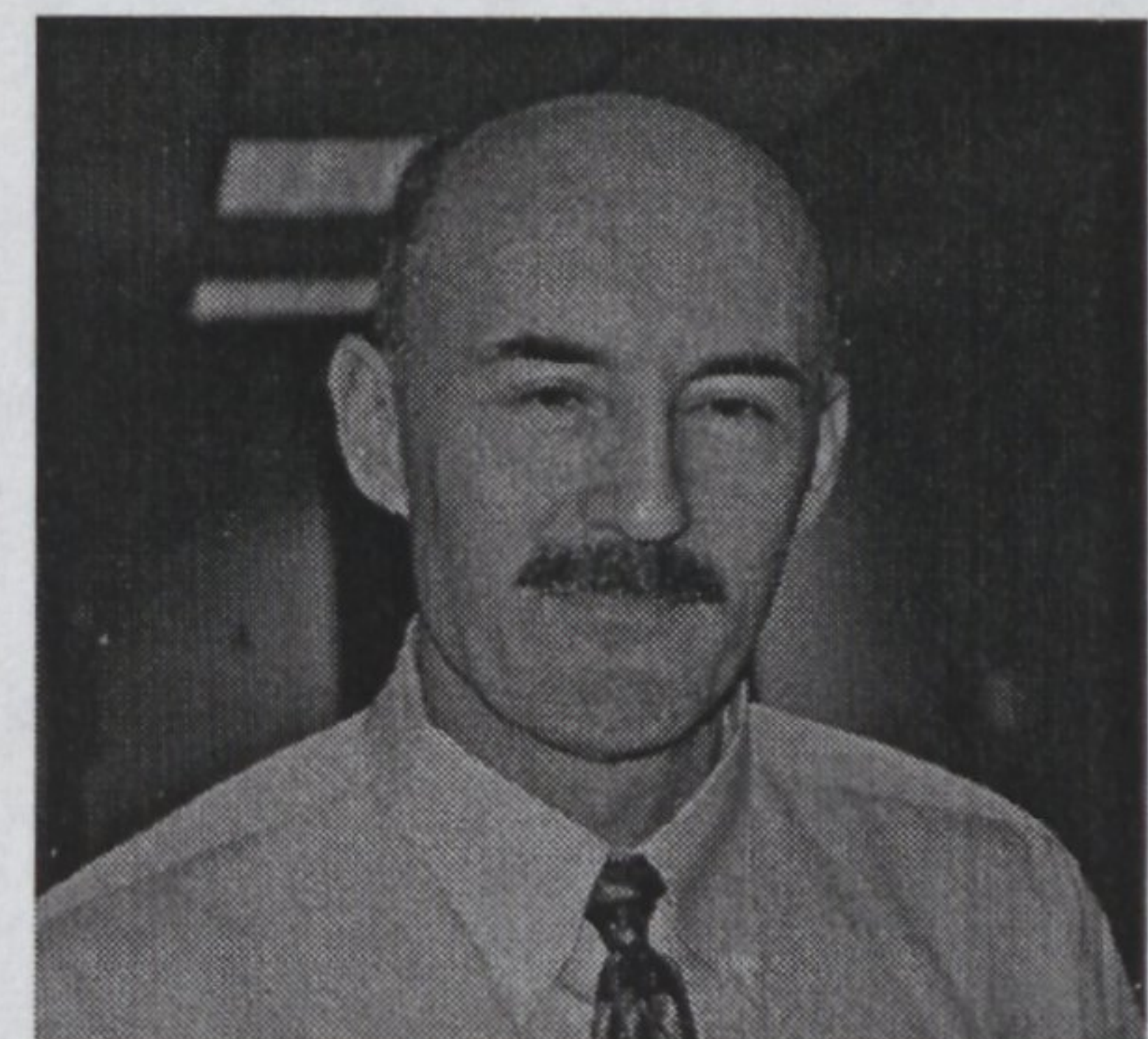
Dr. Jack McCoy, Director of IT Security.

- Anti-malware and –spyware capabilities
- Centralized reporting of latest malware detections
- Centrally-managed upgrades of the antivirus application

2. **Intrusion Prevention System**
   Protects central systems and campus clients against cyber attacks such as viruses, worms, illegal access and denial of service attacks.

3. **Windows XP SP2 Firewall**
   Improves security for campus clients' computers.

4. **Microsoft Systems Update Server**
   Provides automated security patch management for Windows computers.

5. **POP3 Access to Exchange Servers Disabled**
   Protects the Exchange Email Servers from infected client computers.

6. **Perfigo Wireless Access Control**
   The security of the wireless network was increased this year by the addition of the Perfigo™ solution which requires that the users of wireless devices sign onto the network. The system will only authenticate users with valid ECU email accounts. Perfigo has thus far been implemented only on the East Campus; the West Campus will receive this protection in the 2005-06 fiscal year.

7. **External Security Assessment**
   External security assessment of selected enterprise systems was conducted by Secure Enterprise Computing of Morrisville, NC. The assessment included reviews of physical security, network security, application security, system documentation, and policies/procedures. ECU's security status was ranked as ADVANCED. Notable ECU security practices included:
   - Server farm management allowing only authorized persons to have access to servers via a badge authentication system
   - Wireless access control
   - Desktops and laptops are imaged with preconfigured builds shipped from the manufacturer
   - Isolated test environment physically isolated from the production network
   - Established maintenance windows that allow for users to plan for maintenance downtime
   - Change management committee that oversees changes to systems
   - Network policy orientation for students

   Results of the assessment will be used to govern future security improvements.

8. **UNC Net-study Security Assessment**
   The University of North Carolina commissioned a Net-study Security group to conduct security assessments for the 16 campuses. The assessments documented how our security posture measures against the Net-study security baseline standards. ECU ranked in the upper tier of the UNC system. Results of the assessments will provide input into future security improvements.

Information Security Awareness

The University cannot protect the integrity, confidentiality, and availability (CIA) of information in today's highly networked systems environment without ensuring that each person involved understands their security roles and responsibilities and is adequately trained to perform them. The human factor is so critical in protecting CIA. IT Security has implemented several initiatives this year to increase users' information security awareness.

1. **Minimum Passphrase Standard**

   We implemented minimum requirements for user passwords to ensure that all users select strong passphrases that are difficult to guess, crack or otherwise compromise. IT Security conducted an awareness campaign to inform the campus community of the new standard.

2. **IT Security Web Presence**

   An IT Security website was developed that featured information security articles, tips, training and links to external security sites to increase security awareness.

3. **IT Security Training**

   - HIPAA Security Rule Training for healthcare workers was incorporated into the annual HIPAA Privacy training.
   - HIPAA Security Rule Training for System Administrators was developed in Blackboard and completed by 149 participants.
   - Information Security Awareness Quarterly classes were developed and will be offered to the campus in the Fall of this year.

ITCS Disaster Recovery

IT Security assumed the responsibility for disaster recovery (DR) for the ITCS department. The DR coordinator has provided training to the ITCS department as well as a SharePoint™ data site to access DR information. ITCS Disaster Recovery testing was successfully completed in June 2005.

HIPAA Security Rule Compliance

The University's compliance process began in early 2003 with a survey to identify campus computing systems that stored, processed, or transmitted EPHI. Based upon this survey approximately 50 computing systems were eventually identified as being subject to the HIPAA Security rule. These computing systems underwent a preliminary assessment to determine the "gaps" between the security controls already in place and those required by the federal regulation. The amount of resources and effort needed to bring all 50 computing systems into strict compliance was considered to exceed that which was available to the University. Although this situation was quite common across the industry, it was found to be especially troublesome in developing a compliance plan.

The resulting compliance plan focused first on those computing systems deemed to be "critical" to the University's clinical operations. The intent was to bring these 11 critical systems into compliance by the HIPAA April 21, 2005 compliance date. A great deal of effort and many resources have gone into the HIPAA compliance process. As a result, our healthcare computing systems are much more secure. Most of the critical systems have met the major

requirements of the HIPAA Security rule. Plans are in place to bring the remainder of the systems into compliance. A HIPAA Security Compliance reporting detailing those plans is forthcoming.

6. SOFTWARE DEVELOPMENT SERVICES
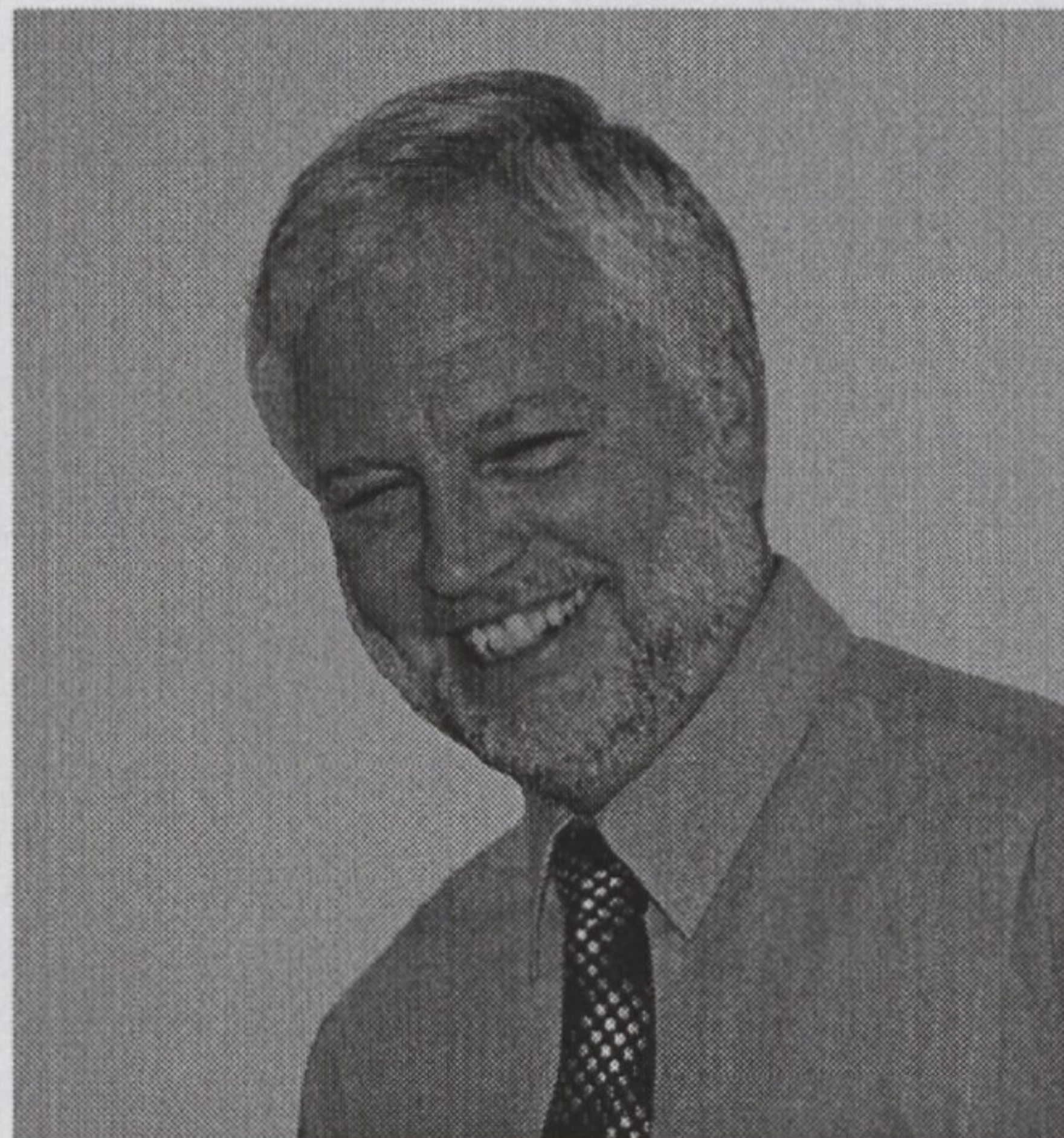
Don Sweet, Director of Software Development Services

Banner Project

Software Development Services has seen most of its efforts directed at the Banner ERP project which consists of four modules, Finance, Human Resources, Student and Development. The Finance module was slated to come on line July 1; however, a combination of an aggressive implementation schedule, external issues beyond our control and an assessment by the University Auditor suggested that a delay in that implementation would be appropriate. The Finance and Human Resource modules are now both scheduled for implementation in January of 2006. The Banner project is still within its budget forecasts.

Web Development

The SDS team has also been engaged in updating the ITCS web site with two goals in mind: (1) bringing the site into compliance with the new CommonSpot format and (2) making the site the University's resource for IT support and information. The new format may be seen at www.ecu.edu/itcs.

e-Print Implementation

The e-print solution was implemented to provide electronic reports to clients in lieu of paper reports. Thus far, the project has reduced our monthly report printing by approximately 225,000 pages per month.

IDX Flowcast Version 3.0 Upgrade

IDX applications were upgraded to IDX Flowcast version 3.0 on July 24, 2004. This upgrade focused on the revenue cycle, fewer denials, faster payments, and decreased cost of collections.

IDX Analyzer

IDX Analyzer is a business intelligence application that transforms the transactional IDX data into meaningful graphical information for decision makers.   Drill down capability allows access to the details stored within the relational database. Analyzer is designed to promote user independence in analyzing data without programmer assistance. The system was delivered with a set of standard reports for billing and scheduling data to the BSOM clinical departments.

Common Patient Registration System – Mini Registration

In January, another phase of Common Registration Project was completed, the MPI Link interface that creates a unique enrollee number that is stored in the IDX database. This phase of the project was critical for the development of the real-time interfaces between the Brody School of Medicine and Pitt County Memorial Hospital. Currently, the project team is working on the final stage of this project, implementation of real-time interfaces to and from the hospital.

IDX Web Framework

IDX Web Framework provides the BSOM users the ability to integrate multiple desktop applications into a single desktop presentation via a web browser. The BSOM utilized the web framework to merge IDX applications and links to various insurance web sites into a single, seamless environment.

IDX Enterprise Wide Scheduling –Pilot Site Leo Jenkins Cancer Center

The IDX current appointment scheduling system was upgraded to Enterprise Wide Scheduling (EWS) in the Leo Jenkins Cancer Center. EWS allows the users to make appropriate appointments based on rules that are defined by a provider, department, or appointment type.

EWS provides one "place" to manage and schedule a single patient's appointments with streamlined workflow for improved/quicker scheduling. The roll-out plan to other departments will begin in August 2005.

IDX Channel Health e-commerce HIPAA Compliance

IDX Channel Health e-commerce is a HIPAA-compliant internet-based solution that has the ability to deliver medical content, including patient-sensitive data, via web browsers. The BSOM now has a single destination via Channel Health to process claims, remittance, and eligibility. Government claims (Medicare, Medicaid, Champus) and commercial claims are submitted via e-commerce, enhancing claim accuracy, tracking and accountability of claim submission. Lastly, the BSOM receives electronic remittance information for Medicare and Medicaid via Channel Health, allowing for faster receipt posting.
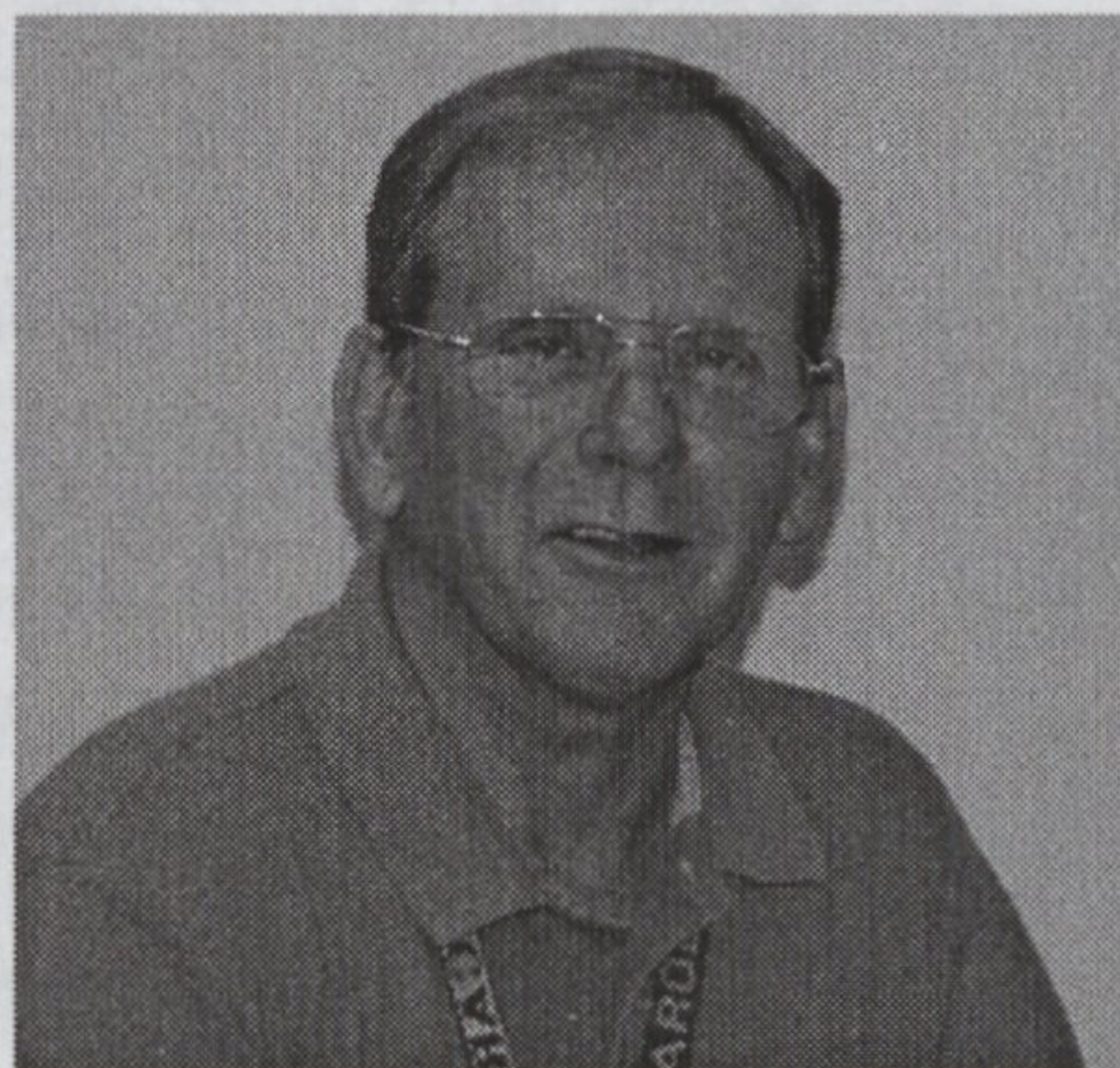
Woody Bolton, Director of IT Infrastructure

7. IT Infrastructure

IT Infrastructure was involved in the design and/or construction of forty-three (43) campus planned construction projects during this past year. Most notable of these projects were the new ECU Women's Clinic, the renovation of the Flanagan Building, a new addition to the Rivers Building, the new West End Dining Hall, and the new Clark LeClair Baseball Stadium.

There were another six (6) projects that were designed and managed by ITCS outside of the construction projects but were funded by the construction projects. These initiatives were the result of new building

footprints on the university network infrastructure, building renovations that affected a major network node or properties acquired by the university that were remote to the campus network infrastructure. The most notable of these was the re-design and construction of an alternate fiber feed between the main campus and the west campus to allow the relocation of the primary feed that had to be relocated for the start of construction of the new west campus Learning Village/Allied Health, Nursing and Health Sciences Library buildings.

8. Research and Extramural Funding Development

Research Computing
Significant strides have been made in developing a sustainable model for research and high performance computing. Research computing is an expensive venture, the support for which is not entirely within the scope of ITCS' service role for the University, particularly the purchase of research software licenses. The new Research IT Committee has been a productive interface between the academic and research communities and ITCS, enabling us to make a business case for supporting research computing.
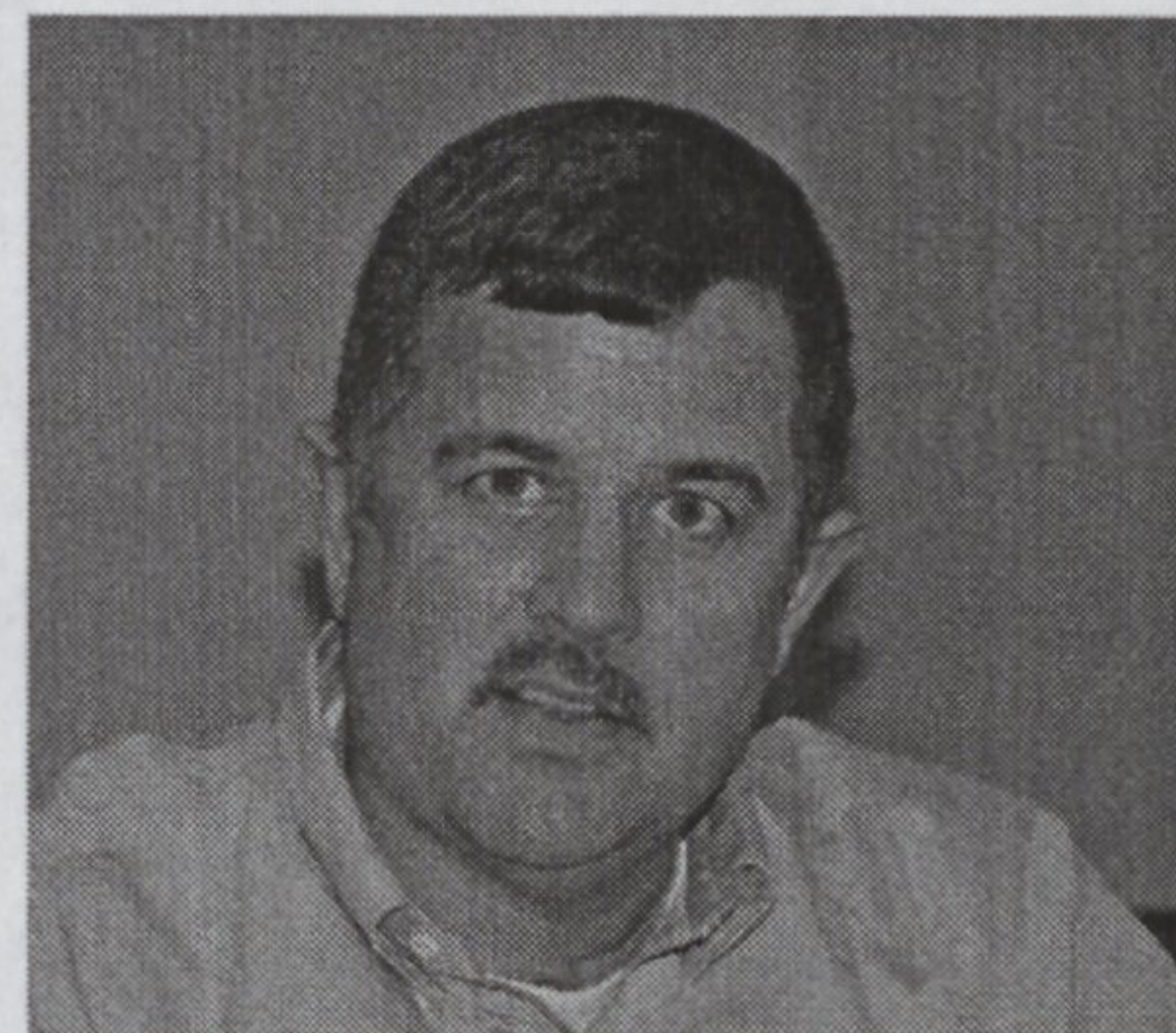
Ernie Marshburn, Research and Extramural Funding

Grant Proposals
Two National Science Foundation (NSF) proposals were submitted for a total of $2,005,487 in requested federal funding.

1. NSF Instructional Technology Experiences for Students and Teachers Program, "Web Math Toolkit (WebMT)," $1,199,837, ECU, 2005.

    This proposal was not funded; however, the investigators were given strong recommendations to reapply in the Fall. The Web Math Toolkit (WebMT) project was designed to assist teachers to position their high school students competitively for diverse STEM (science, technology, engineering, and math) careers. The project would have focused on 96 teachers and 192 underserved students during after-school or summer sessions in eight rural northeastern North Carolina counties. An additional 6000 students would have participated through associated classroom activities during the 3-year term of this project.

2. NSF Major Research Instrumentation Program award, "Acquisition of High Performance Computing Resources Supporting the Partnership for Computational Quantum Chemistry of Molecules and Solids," $805,650, ECU and UNCG, 2005.

    ECU and the University of North Carolina at Greensboro (UNCG) requested funding for the acquisition of a shared memory high performance computing (HPC) system and visualization server to

advance original research at the forefront of molecular and solid state computational quantum chemistry and to pursue research training across campuses. The proposal targets a 32-processor Silicon Graphics Inc. (SGI) Altix 3700, two SGI Fuel Workstations, and a Silicon Graphics Prism visualization server. This proposal is pending.

Super Computing 2004 Support by ITCS Personnel
Ernie Marshburn served as Vice Chair for SC2004 Special Initiatives including the InfoStar and StorCloud projects.

InfoStar, was designed to provide conference attendees with real-time e-information through a new conference portal containing specialized conference information feeds to both laptop and PDA users via a new real-time wireless medium.

StorCloud focused on working collaboratively with leading technology vendors, government labs, and academic institutions to showcase the next generation in high performance storage technologies coupled with high bandwidth applications available at the conference.

SUMMARY

The ITCS Directors, Managers and staff are busy and committed members of the University community, providing essential services to the administrative and academic arenas. Service is a constant theme of our activities, and IT security is a new driver of infrastructure development. Nearly all of the items included in this report are recurring, at least for the next few years; however, information technology is a field of constant change and this report is but a snapshot of that change. The coming reporting period promises to be as exciting as this one was.