New Mexico State University

Information and Communication Technologies FY04 Progress Report, Strategies and Goals

http://ict.nmsu.edu

July 1, 2003 – June 30, 2004

Comments, questions and other feedback regarding this report are welcome at any time.
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Summary

Information technology services at NMSU are provided through a combination of the centralized, campus-level, college-level and departmental staff. The majority of the information technology goals at NMSU reflect strong collaboration between the central IT organization, Information and Communication Technologies (ICT) and the numerous IT groups throughout NMSU, as well as the NMSU user community. The ICT department at NMSU provides information and communication technology resources and services to support the educational, research, and public service missions of the university.

In October 2003, NMSU began implementing SunGard SCT Banner and several supplemental and 3rd party products to replace the administrative information systems at NMSU. This three-year project is creating a stable and adaptable platform for future information systems growth in Human Resources, Student Services, Financial Aid, Finance, Advancement, workflow, imaging, content management, portal and data warehousing. The official project website is http://uno-project.nmsu.edu, and has been named "Unifying NMSU Online" (the UNO project). The goal of the UNO project is to condense and unify backend systems and databases for administrative information to support web-based access and self-service to meet the needs of NMSU's centralized/decentralized administrative and academic structure. The project is on schedule and on budget and involves hundreds of employees throughout NMSU.

NMSU took the first step toward being a key contributor to the National LambdaRail (NLR) nationwide 10Gbit/s network. Working with UNM and state legislators, first-year funding was obtained to add the state of New Mexico to NLR. Las Cruces is at the interaction of two major fiber segments of NLR (I-25 and I-10).   As such, NLR will become and integral part of research and economic development in southern New Mexico. Through CHECS, NMSU will develop a strategy for using NLR to provide of high-bandwidth connectivity for NMSU and for New Mexico higher education in general.

Several groups within ICT were reorganized to support the transition to Banner. For example, ICT Training Services and the ICT Helpdesk were restructured to provide enhanced training, help desk services and web-based self-support in information technology for students, faculty and staff. These changes have been instrumental in supporting the transition to Banner.

ICT focuses on the needs of all constituents at NMSU, including students, faculty and staff. Among the many FY04 projects, ICT continues to work with faculty throughout NMSU to provide increased support for faculty researchers, especially those using high performance computing. ICT provided cost sharing for a new research computing cluster for the College of Engineering, and NMSU has benefited from improvements to the network provided through bioinformatics funding through the College of Arts and Sciences.

Besides describing ICT's annual accomplishments, this report demonstrates ICT's commitment to integrate our strategies and goals with the NMSU university-wide planning, for example the NMSU Dean's "Living the Vision" document. ICT will continue to work with NMSU Outcomes Assessment Committee and the NMSU auditors to insure that our departmental objectives are clearly articulated and evaluated on a regular basis.

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1.   ICT Strategies and Objectives

Purpose of this Document
This document presents the goals for information technology (IT) in the context of the NMSU "Living the Vision" plan for excellence in teaching, research and service. The driving force for the use of information technology at NMSU is to support the mission, vision, goals and objectives of the university. As part of the technology planning and execution, NMSU strives not only to complete IT projects that are relevant to NMSU's mission, but also to benchmark our capabilities to similar land grant institutions.

NMSU's Mission
New Mexico State University is the state's land grant university, serving the educational needs of New Mexico's diverse population through comprehensive programs of education, research, extension education, and public service.

NMSU's Vision
By 2020, New Mexico State University will be recognized as a top tier land grant university as evidenced by demonstrated and quantifiable excellence in teaching, research, and service.

ICT's Vision
Information and Communication Technologies supports *access* and *success* at NMSU. Through our projects and daily activities, ICT provides resources and services to support the educational, research, and public service missions of the university. These resources and services are available to any NMSU student or employee to help them be successful at NMSU. ICT develops and implements policies and procedures necessary to insure the effective, secure, and appropriate use of university information resources and services.

NMSU's Common Information Technology Goals
Although individual information technology needs vary throughout NMSU's campuses and departments, there are common objectives across the university. These objectives are generic in nature, but provide the impetus for specific goals and projects at NMSU.

1. Use technology to enhance, expand and expedite the services utilized by students, faculty, and staff.
2. Provide appropriate and adequate technology to all faculty and staff to support academic program objectives.
3. Use information technology to facilitate communication among NMSU employees and students.
4. Identify and allocate fiscal resources for acquisition and support of information technology at NMSU.
5. Create and support ongoing opportunities for technology-related professional development and training.
6. Establish a schedule for routine maintenance and updates of current information technology resources.
7. Provide technology access to students throughout New Mexico.
8. Provide technology to support economic development in New Mexico.
9. Condense and unify backend systems and databases for administrative information to support a strong foundation for web-based access and self-service.

10. Promote collaboration to support university data and information technologies to satisfy the needs of NMSU's centralized/decentralized administrative and academic structure.
11. Provide enhanced help desk services and web-based self-support in information technology for students, faculty and staff.
12. Provide increased support for faculty researchers, especially those using high performance computing.
13. Develop and implement of high-bandwidth connectivity for NMSU and for New Mexico higher education in general.

Specific Strategic Directions

Administrative Information Systems
NMSU is currently in the midst of a university-wide effort to convert out information systems to Sungard SCT Banner. This project provides the foundation for our information systems direction for the next 10-20 years. Technically, the core SCT Banner system utilizes web-based forms to interact with a shared Oracle database running on Sun Microsystems servers. NMSU also has additional Sungard SCT components supplement the capability of Banner by adding integration for workflow, imaging, data warehousing and portal access.

SCT Banner is a good fit for NMSU, and will provide NMSU with the basis to be a leader among other Banner schools. Banner was chosen because our processes are similar to other Banner schools, most other higher education institutions in New Mexico use Banner, and there are approximate 1000 other Banner institutions worldwide. Once all of the Banner and 3rd party components are installed, configured and rolled out, NMSU will be in a position to respond more rapidly to the changing information systems needs of the students, faculty and staff. All information technology staff at NMSU will contribute to the success of Banner over the next decade.

Statewide High-speed Networking
NMSU will participate in the design, construction and maintenance of a K-20 statewide network. This network takes advantage the success of the CHECS-Net higher education network, which is a self-supporting ATM network connecting educational institutions throughout New Mexico. The statewide network will target the rural areas of New Mexico and provide high-speed IP transport through the I-25 corridor. NMSU will work with CHECS, the CIO of New Mexico, Homeland Security, NM Department of Transportation, K-12 information technology leaders, local community leaders and the New Mexico legislature to create a single network that benefits the citizens of New Mexico.

Academic Information Systems
NMSU supports technology-enabled education. At all of our campuses, NMSU needs to increase the number of teaching facilities fully equipped with technology. Additionally, our learning management system (WebCT) must be upgraded to the latest version (Vista) and NMSU will provide hosting for all of our campus as well as other higher education institutions.

Response to Auditor's Concerns
As part of our migration to Banner, ICT will redefine and document many of our internal procedures. Specifically, ICT will correct deficiencies in short and long-term system strategies and in application development and maintenance. ICT has completed substantial progress in the development of a formal Business Continuity and Disaster Recovery Plan for systems and

processes managed by ICT, however an approach to testing will be developed and implemented. ICT is in the process of establishing and filling the position of ICT Security Director. Finally, an Administrative Control and Migration policy will be developed, documented and implemented.

Relationship to State Information Technology Strategic Plan
NMSU's information technology plan follows the same guiding principle as the State's IT Strategic Plan (FY04), that is, "Deliver the best public services to the citizens of New Mexico at the lowest possible cost".

NMSU's IT plan follows precisely the guidance of the State's FY06 Strategic IT Road Map. It addresses all of the following key points in the Road Map:

- Facilitate sharing of systems, processes and data
- Improve delivery of enterprise IT services
- Improve management of IT human resources
- Implement consolidated IT services
- Improve IT performance
- Improve purchasing performance
- Identify communities of interest to build a service delivery plan
- Establish an electronic service delivery plan
- Improve availability, use and support of IT in K-PhD education
- Enhance bandwidth available to NM communities
- Support NM tech sector and make NM more attractive to business

Information Technology Goals Relevant to NMSU's "Living the Vision"
The following goals are part of a work-in-progress document at NMSU to define our path to excellence in teaching, research, and service by 2020.

Be the "University of Choice" for undergraduate education in New Mexico.
   Objectives:
- Design and maintain systems to achieve monitor quantity and quality of Merit Scholars, transfer students, graduate students and other specific categories of recruited students.
- Design and maintain systems to easily adapt to articulation agreements that work with all New Mexico colleges and universities.
- Design and maintain systems for evaluating learning outcomes and/or other measures of success of graduates, such as 15 year follow up surveys or job choices upon graduation.
- Provide computing capability, network infrastructure and information systems that exceed the expectations of our students.

By the year 2020, New Mexico State University's graduate programs will be ranked in the top twenty of graduate programs typically associated with Land Grant Universities.
   Objectives:
- Design and maintain systems to meet recruiting targets, with some consideration of mix of graduate enrollment between our own graduates, graduates of U.S. universities, and foreign graduates.

- Provide computing resources and network resources required for state-of-the-art graduate research

To provide a high quality, diverse faculty and staff, in sufficient numbers, to insure that the University excels in teaching, research, and service.
    Objectives:
- Provide technology-enabled classrooms for campus-based and distance education.
- Provide systems and services that meet or exceed the expectations of our faculty and staff.
- Provide computing and network resources required to meet the needs of a decentralized workforce.

To be nationally recognized in research, creative activity, and knowledge creation in the University defined interdisciplinary Centers of Excellence.
    Objectives:
- Provide communications and computing infrastructure to support Centers such as Water Resources, Bioinformatics, Nano Technology, Health Disparities.
- Provide collaboration infrastructure

To enhance the quality of life of all New Mexicans by serving as an engine for economic, social, educational and community development in New Mexico.
    Objectives:
- Provide connectivity to all of New Mexico
- Provide connectivity between all NMSU campuses and related offices throughout New Mexico
- Provide state-of-the-art capabilities for Arrowhead Research Park

To be regionally and nationally recognized for the development and stewardship of all financial resources dedicated to achieving the vision of the University.
    Objectives:
- Quantify how information technology increases efficiency and/or enhances satisfaction
- Demonstrate the need for philanthropic support for information technology

2.   ICT Organizational Structure

Information technology services at New Mexico State University are provided through a combination of the centralized, campus-level, college-level and departmental staff. The majority of the information technology goals at NMSU reflect strong collaboration between the central IT organization, Information and Communication Technologies (ICT) and the numerous IT groups throughout NMSU, as well as the NMSU user community.

ICT's creates an environment where the university community can use information technology efficiently and effectively to support NMSU's strategic direction as a leading teaching and research university. ICT consists of 119 staff members working in administrative and academic applications, telecommunication and networking, at-the-desktop support for faculty and staff, help desk services, Windows, Unix and mainframe server support, administrative production control, student computing laboratories, electronic course management, web services, technology-enabled classrooms, email, directory services and information security.

There are five administrative units that report to the Vice Provost for ICT, namely Business Operations, Computer Operations, Telecommunications and Networking Services, Instructional Support Services and Enterprise Application Services. Following are descriptions, budgets and staffing levels for each of the ICT administrative units.

ICT Business Operations: 13 staff members, $873,849 annual budget.
Business Operations manages the financial services of ICT. All budgeting is approved by Business Operations, and the hiring process for ICT is maintained through this administrative unit. The Customer Service Center, cellular phone programs, NMSU operators, purchasing, inventory and financial reporting is through Business Operations

Table 1 – ICT Business Operations Staff

Department	Regular staff	Student staff
Director	1	0
ICT Business Operations	12	5

ICT Computer Operations: 27 staff members, $2,318,553 annual budget.
Computer Operations is responsible for the operation of the core IT services of NMSU including the operation of the data center, email, IT security, database administration, along with administration of servers and desktop computers with various operating systems.

ICT Computer Operations manages the NMSU data center. UCC is responsible for the regular operations of central computers and university processing of data. UCC is the focal point of NMSU's administrative computing.

Table 2 – ICT Computer Operations Staff

Department	Regular staff	Student staff
Director	1	0
University Computer Center	12	6
Unix Systems Administration	8	3
PC Server Administration	6	3

Telecommunications and Networking Services: 24 staff members, $4,540,800 annual budget. Telecommunication and Networking Services (TNS) has two main functions: design and maintain the fundamental telecommunication infrastructure and manage the one-stop Customer Service Center (helpdesk) for ICT.   The infrastructure includes but is not limited to the information to Campus Police, Alarm Services (Fire and Security), Networking Services (Internet, Local Area, Wide Area, Wired and Wireless), Video Conferencing Infrastructure, and Voice Services (Wired and Wireless).

Table 3 – ICT Telecommunications and Networking Services Staff

Department	Regular staff	Student staff
Director	2	6
Data and Video Services	14	9
Voice and Alarm Services	8	6

Instructional Support Services: 20 staff members, $2,364,251annual budget. Instructional Support Services is responsible for providing end-user services to students, faculty and staff primarily related to web-based technologies and special focus on the academic mission of the university.

Instructional Support Services provides application administration, documentation, training, and support for http://www.nmsu.edu. NMSU's web-based instructional delivery systems (WebCT and Centra), the general student computing labs, multimedia classroom technology, and campus-wide software licensing programs. Instructional Support Services also develops presentations, brochures, e-newsletters and web sites for many of ICT's services.

Table 4 – ICT Instructional Support Services Staff

Department	Regular staff	Student staff
Director	2	6
PC Support Services	4	4
Training Services	8	2
Student Computing Services	3	66
Enterprise Web Services	3	0

Enterprise Application Services: 32 staff members, $2,468,521 annual budget. Enterprise Application Services (EAS) provides technical and programming support for the design, deployment, and maintenance of institutional systems associated with business and finance, human resources, student information and financial aid, as well as several departmental systems. EAS consults and evaluates systems and services to support the business needs of NMSU's staff, faculty and students through administrative applications. The primary method of deployment of applications is through the Internet.

Table 5 – ICT Enterprise Application Services Staff

Department	Regular staff	Student staff

Director	2	0
Student Information Services	7	0
Financial Information Services	6	0
Web Application Services	7	0
Database Administration Services	7	0
Reporting Services	3	0

ICT Committees

There are many information technology committees throughout the university; however the primary committees that shape IT policy at through ICT at NMSU are as follows. These committees are used to monitor progress, set priorities and plan for the future.

Table 6 – ICT Primary Information Technology Committees

Committee	Role	Example responsibilities
ICT Advisory Committee	Executive oversight	ERP final decision
SIS Committee	Student information systems and services	Policy, planning and enhancement priorities
Administrative Matters Committee	Financial and human resources systems and services	FRS and HRS system replacement
Faculty Senate Technology Committee	Faculty technology issues	Technology-enabled classrooms, web-based instruction
Student Technology Advisory Committee	Student technology issues	Student computer labs, portal

Broadbanding

On January 1, 2004, ICT, along with PSL and Carlsbad Environmental converted to "broadbanding". This compensation program focuses on performance rather than specific job duties and responsibilities. It has allowed ICT to be more competitive in attracting and retaining quality staff. The system has streamlined the approval process for compensation transactions, thereby affording the managers more flexibility to determine salaries for the employees in their supervisory group. This system has allowed supervisors, within departmental budget constraints, to reward standout employees. The impact on the classified staff has been a welcome change. Previously, there was not a mechanism to reward a classified staff member for the job they were doing. Now we are able to reward the classified personnel, which means we can reward and keep the high performers.

ICT Personnel Evaluation

A new evaluation form was adopted in the spring. The form provides a framework for planning, discussing and reviewing each employee's performance on an ongoing basis. This form gives each supervisor and employee the opportunity to discuss with each other what is expected and to set goals for the upcoming year. It gives them the opportunity to discuss any strengths the employee has and strategies to strengthen any weaknesses. It also gives the employee the opportunity to express any concerns to the supervisor about problems he/she may have about the supervisor. The evaluation covers Core Skill Sets (generic in nature, described but not evaluated), Specific Skill Sets (details skills, knowledge, etc. needed for the job, described but not evaluated), Job Responsibilities and Accountabilities (areas in which the employee is expected to produce results, rated annually), and Performance Objectives (describe work elements and goals to be evaluated during the appraisal period, rated annually)

3.   Progress in Enterprise Application Services

This section details progress supporting NMSU's administrative computing systems and services by ICT Enterprise Application Services.

ICT's Enterprise Application Services provides technical and programming support for the design, deployment, and maintenance of institutional systems associated with business and finance, human resources, student information, financial aid as well as several departmental systems, primarily using the Internet for delivery. Enterprise Application Services consults and evaluates systems and services to support the business needs of NMSU's staff, faculty and students through administrative applications.

DB2 Database Migration
All of the legacy and production data was migration successfully from Cincom Mantis/SUPRA to CICS/Cobol/DB2 for the of VISTAS/SAR. This project spanned several years and yielded savings of $150k annually in license fees and approximately four hours of daily batch processing time.

Updated Tuition Calculation
TRA 1098 was moved to production proving actual calculations for tuition and related expenses and scholarships.

DARS Degree Audit System
Degree audit implementation for a large number of programs including a web interface for students was completed and is waiting for college approval to release for student access.

Automated Billing for Distance Education Courses
VISTAS was modified to provide automated billing for distance education courses.

Web-based Credit Card Purchasing
An additional module of Cashnet was purchased and installed to support a web interface for collecting credit card payments for other university business.

International/Exchange Student Data System Implementation
An interface to exchange student data with the national SEVIS database using the fsaAtlas software was completed.

Additional VISTAS Upgrades
VISTAS enhancements in progress due to be implemented soon that were pending completion of the DB2 project and were unable to be developed in the SUPRA database due to environmental constraints including:
- Checking of selective pre-requisites
- Checking of student overloads based on academic standing
- Prevention of undergraduates from enrolling in graduate level courses
- Addition of email addresses within VISTAS for use of colleges and other university departments

Implementation of InfoEd
ICT provided support for the implementation of the InfoEd proposal-tracking module for Grants and Contracts. ICT currently houses the server in the data center and provides hardware/OS support while Info Ed supports the application, which was recently upgraded to Version 10 in August 2004.   Researchers can use the Info Ed system to search for funding sources. G&C plans to start working on allowing faculty to use the proposal-writing tool and submit proposals electronically. Info Ed is an SCT Banner partner.

4. Progress in Computing Operations, Maintenance and Production Control

This section details progress supporting NMSU's Computing Operations, Maintenance and Production Control by ICT's Computer Systems.

ICT's Computer Systems is responsible for the operation of the core IT services of NMSU including the operation of the data center, email, IT security, database administration, along with administration of servers and desktop computers with various operating systems.

Reformatted email System
With no additional capital investment, ICT staff reengineered the main email system for NMSU. This change effectively extended the life cycle of the email system as well as improved performance. The change utilized a more modern method of email storage which, in effect, reduced I/O by a factor of 20 and memory utilization by a factor of 10. The results the end user experienced was an email system that no longer stalled under higher email loading.

Installation of SPAM filters
Over 60% of email destined to NMSU users is junk email. ICT installed a SPAM email filter that redirected email identified as SPAM. This filter had no expense to the university and has saved the user community from managing these messages. Thus, resulting in a savings in time of about $150K per year.

GLOBAL ID
As part of an institutional wide effort to reduce the number of login IDs, ICT embarked on an effort to formalize a single-login effort.   In July of 2003, ICT deployed a system in which users could select their own ID and the ID would be used in every system that ICT manages. This effort is a precursor to the banner/UNO initiative and has given NMSU an advantage in deploying a single sign on strategy. The cost of this system was under $20K in capital outlay.

Reorganization of the Computer Systems Division
As part of the response to supporting the Banner/UNO initiative at NMSU, the Computer Systems division reorganized, eliminating the mainframe systems administration group and redeploying the staff into new departments. Much of the existing work on the mainframe still exists and the staff members who were reassigned have taken on the responsibility of learning new technologies while maintaining their old assignments. John Roberts was assigned as Interim Director of Computer Systems.

Reorganization of other ICT divisions
As part of the Banner/UNO direction, the DBA group was reassigned to the Enterprise Application Services unit. The desktop support group was reassigned to the Instructional Support Services unit.

DB2 Version 5 to Version 7 Upgrade
As part of our regular upgrade steps, DB2 on the mainframe was upgraded from Version 5 to Version 7, primarily because IBM no longer supports Version 5. The upgrade cost the university an additional $50K in one-time expense. The annual expense for Version 7 is the same as Version 5.

5.   Progress in Telecommunication and Networking Services

This section details progress supporting NMSU's Voice, Data, Video, Alarm and Telephone Services by ICT Telecommunication and Networking Services..

ICT Telecommunication and Networking Services has two main functions: design and maintain the fundamental telecommunication infrastructure and manage the one-stop Customer Service Center (helpdesk) for ICT.   The infrastructure includes but is not limited to the information to Campus Police, Alarm Services (Fire and Security), Networking Services (Internet, Local Area, Wide Area, Wired and Wireless), Video Conferencing Infrastructure, and Voice Services (Wired and Wireless).

A Mountain Wireless
A Mountain Wireless was implemented in October 2004 as way to provide broadband access to NMSU faculty and staff that otherwise had no other method of receiving high-speed connectivity. It is also used to connect remote offices such as Fabien Garcia Horticulture Center and Leyendecker Plant Science Research Center.

NMSU uses the Motorola Canopy system to provide the service. The system provides a 10-mile radius of coverage in a point to multipoint environment. The system includes interfaces that enable it to easily integrate with standard network management tools and with diagnostic capabilities you'll needed to remotely monitor the network. Since the initial installation in October the subscriber base has grown steadily and now supports 40 users. Unfortunately 23 subscribers were turned away for technical reasons.

NMSU Central Modem Pool
New Mexico State University's central modem pool service (the "free" modem pool) has been in existence since 1988.   In 1992, the modem pool was upgraded from a bank 32 modems running 1200 bits per second to 192 modems at 14400 bits per second. The modems were discrete analog modems connected to a Qwest Channel bank of Centrex phone lines.   The upgrade was completed in 1993.

In 1998 a study of the NMSU modem pool was conducted, which showed that for a typical month there were between 2500 and 5500 people using the modem pool. As result of continued complaints, the free modem pool was upgraded and a two-hour use limit was implemented. In June 2000, the NMSU modem pool was upgraded to 192 digital 56 kbps modems. The terminal server and modems were in one integrated unit, a Cisco AS5300. Instead of discrete line feeding analog modems, 8 T1s connected directly into the terminal server.

In September 2002, the modem pool was once again upgraded from 192 to 368 lines in September of 2002. A new Cisco AS5400 chassis was installed to support the new lines. The average number of modem pool users in 2002 was 3387 unique user per month, in 2003 the average rose to 3702, and the average through May of 2004 is 4023.

The service is highly used despite newer broadband services. The average number of unique users on any given day is 1858 with number rising to over 2200 during the semester. The following Figure from April 2004 show the current usage of the modem pool.
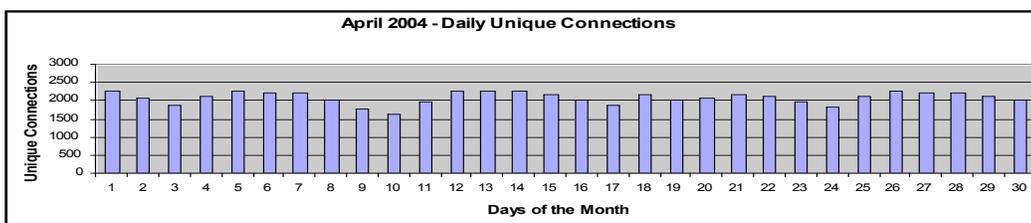
The central modem services are used by a wide variety of users. The vast majority (66%) are main campus students, Main campus faculty and staff (18%), DABCC students (7%), Retirees (7%) and DABCC faculty and staff 2%.

CHECS-Net Update
New Mexico State University manages the state-wide education network known as CHECS-Net under the direction of the CHECS organization. TNS is responsible for all aspects of the management of CHECS-Net, including technical and financial aspects. The network consists of a core ATM network with various types of connections. The network provides Internet and Internet2 connectivity as well as specialized circuits for applications such as H.323 (IP) video conferencing and voice over IP. The CHECS website, http://checs.net, shows the sites currently connect via CHECS-Net and the second map shows the geographical diversity.

6. Progress in Instructional Technology Services

This section details progress supporting teaching, learning and Web-based systems by ICT Instructional Support Services.

ICT Instructional Support Services is responsible for providing end-user services to students, faculty and staff primarily related to web-based technologies and special focus on the academic mission of the university.

Student Orientation Functions and Student Government Relations
ICT is represented at all new student orientations, graduate student orientations, and orientation of special student groups (i.e. Black Programs, American Indian Programs, etc.) This past year, new promotional material was developed jointly with the Business Operations area. The material included a booklet to represent ICT Student Services in one consolidated product. Additionally new marketing was implemented including a consolidated logo and labeling.

Involvement with ASNMSU and the students of NMSU, the Student Technology Advisory Committee (STAC) has continued to grow and continues to have representation from student government and student professional organizations. STAC has continued to learn and make recommendations on student technology issues at NMSU. STAC was instrumental in partial implementation of a student technology fee this last year. In FY05, STAC will take on its biggest role to date by advising on the implementation of the currently funded projects, and helping to plan the future projects based on full implementation of the originally proposed student technology fee. A project list with budget information has been created as a working document with this group.

Faculty Relations
The ICT/ISS Director serves as a non-voting member of the Faculty Senate Technology Committee (FSTC) and provides a support role. This role includes working with the chair to establish the agendas, maintain the membership roster, and gather information as required.

Each summer a campus-wide assessment of instructional technology is performed. FSTC utilized this and other information to help draft a Faculty Senate memorial supporting the systematic improvement of classroom technology. FSTC formed two work groups to address the issues. One group included technical support personnel from each college to develop common baseline(s) of classroom technology. The other group included a variety of individuals representing different stakeholder viewpoints about classroom technology improvements. The issues examined included funding sources, upgrade priorities, access control, scheduling control, ongoing support, and other related issues.

Campus-wide Software Licensing Service
This service involved implementing and maintaining large-scale software site licenses so that colleges, departments, faculty, staff and students can save money on key computer software and reduce their administrative costs. These negotiated site licenses include virus software, standard office software, and special use software. It is estimated that ICT saves NMSU at

least one million dollars in software costs annually. A coordinator of this service facilitates orders, billings, record keeping, and software media checkout.

TYPICAL ANNUAL SOFTWARE SAVINGS THROUGH CONSOLIDATION			
Software Title	NMSU Software Program	Lowest Priced Alternative	Savings
Adobe CLP (2/04 through 7/04)	$20,541.41	$34,694.00	$14,152.59
ESRI (ArcInfo)	$264.96/computer (50 computers)	$1,590.00/computer (50 computers)	$66,252.00
McAfee	$43,200.00	$96,504.00	$53,304.00
Microsoft	**Campus Agreement**	**Academic Select**	
Windows, Office, CORE CALS	$49.00/FTE (College Level)	$144.45/per computer	$333,502.30
SQL CAL	$5.00/FTE	27.03/per computer	$6,609.00
Visual Studio	$2.00/FTE	$47.87/per computer	$26,421.12
FrontPage	$5.00/FTE	35.11/per computer	$22,311.51
Visio	$5.00/FTE	$36.75/per computer	$10,445.75
Project	$5.00/FTE	$63.91/per computer	$31,340.12
Encarta	$5.00/FTE	$35.23/per computer	$6,680.83
SAS	$50.00/per computer	$562.00/per computer	$153,600.00
SPSS	$228.00/per computer	$3,792.00/per computer	$356,400.00
Symantec	$10,402.50	$16,174.00	$5,771.50
Total Annual Savings:			**$1,086,790.72**

Note: Savings are for a one year period. All figures are based on current NMSU license counts. Lowest price alternatives are
educational/academic pricing and, when available, are from the State of New Mexico Academic Software Contract.

A support site for this service has been developed (http://ict.nmsu.edu/software/) and will continue to be improved. This site allows all NMSU entities to view the license options, pricing, and what software they are currently licensing. It also allows them to purchase various licenses online. This past year Adobe CLP was also added to the software list.

Other Activities
The ICT/ISS Director participated in the development of various plans and proposals including the student technology fee proposal, USDA Rural Utilities grant, and various state IT funding proposals. He also served on various other committees during FY04 including, Distance Education Advisory Board, Teaching Academy Advisory Committee, Centra Partners Committee.

Provide Ongoing Support for the Campus Web Page (www.nmsu.edu)
ICT/EWS works with University Communications to maintain the existing NMSU website (www.nmsu.edu). This includes administering access accounts for all web masters and/or authors that have space on this account. For web sites not included on the site, it involves setting up links to those alternative services. This service involves providing significant one-on-one support working with a variety of people on web design, university web guidelines, content currency, ADA requirements, form and database processing, etc.

Homepage Hits (www.nmsu.edu)

Legend: —— Year 2003-04 —— Year 2002-03
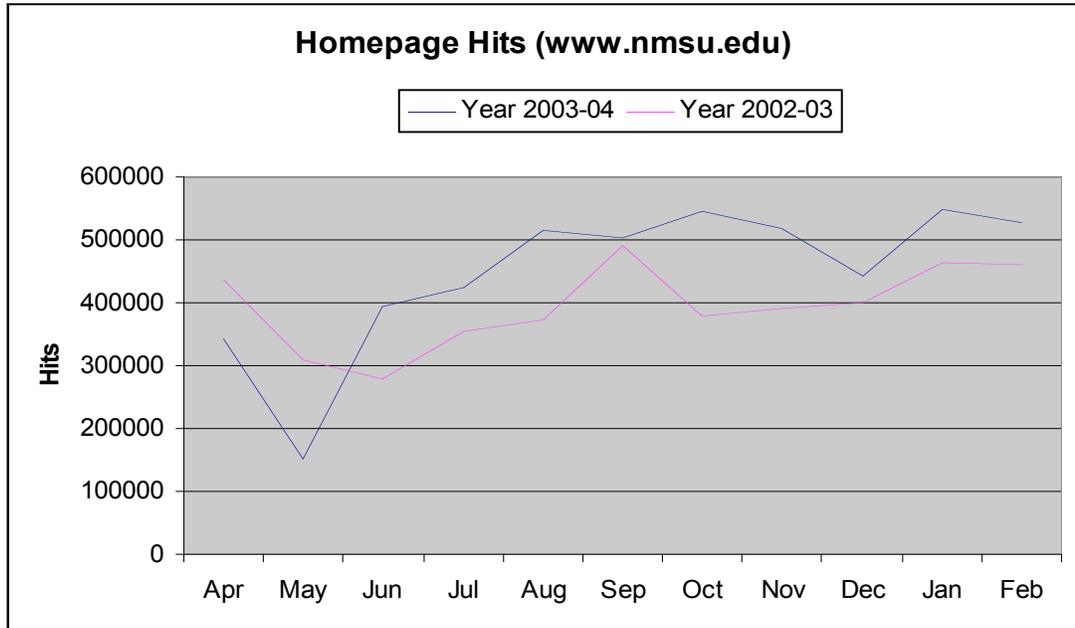
Note: Statistics for the month of May were not available

Portal Implementation
ICT/EWS organized and is lead in the Content Administration training for Portal in February of the FY04. The Portal Advisory Committee was started to help study and make recommendations concerning the implementation of the portal and to aid in the smooth transition to the new system. ICT/EWS will continue to schedule and organize the Portal Advisory Committee meetings in the upcoming year.

ICT/EWS also organized a Content System Advisory Committee to work with when the CMS project unfolds. The following is the membership of that committee. Also a table identifies the current webmasters for the top levels of www.nmsu.edu, including noting which run their own server.

Membership of the Content Management System Advisory Committee
- Stan McCann (Alamogordo Branch)
- Jean Strader (Alamogordo Branch)
- Jennifer Villa (College of Education)
- CC Chamberlin (College of Ag & Home Ec)
- Holly Reynolds (Library)
- David Braddi (College of Arts & Sciences)
- Phillip Johnson (College of Education)
- Ronnie Garver (University Communications)
- Lorraine Silva (Business Office)
- Christina Brumm (College of Education)

Top-Level Webmasters and Homepage Location

Unit	Contact	Server
College of Agriculture & Home Economics	CC Chamberlin	www.cahe.nmsu.edu
College of Arts & Sciences	David Braddi	www.nmsu.edu
College of Business Administration & Economics	Sadiq Al-Husseini	cbae.nmsu.edu
College of Education	Jennifer Villa	education.nmsu.edu
College of Engineering	Christina Brumm	www.nmsu.edu
College of Health & Social Services	Rex Suba	www.nmsu.edu
Graduate School	Jimi Ickes	www.nmsu.edu
Advancement	Jim McKinney	www.nmsu.edu
Business Office	Lorraine Silva	www.nmsu.edu
Distance Education	Phillip Johnson	distance.nmsu.edu
Human and Physical Resources	Grace la Torra	www.ppp.nmsu.edu
Library	Holly Reynolds	lib.nmsu.edu
Personnel	Angela Velasco	www.nmsu.edu
Research	Sue Bonar	www.nmsu.edu
University Communications	Ronnie Garver	www.nmsu.edu
Alamogordo Branch	Stan McCann	alamo.nmsu.edu
Carlsbad Branch	Koni Hjeltness	cavern.nmsu.edu
Dona Ana Branch	Marco Hernandez	www.dabcc.nmsu.edu

Other Accomplishments

ICT/EWS developed and continue to maintain the CHECS website (http://www.checs.net.). It also redesigned and continues to maintain the Student Services page in collaboration with Student Services of NMSU. ICT/EWS does account administration on both www.nmsu.edu and www2.nmsu.edu. The second website is a server running MS Windows OS to provide services to those developers which want the extended functionality provided by MS products.

Redesign of ICT Webpage

In February of FY04, a redesign of the ICT webpage was done to better communicate the various services that ICT has to offer to all entities of NMSU including staff, faculty and students. The interface was changed to be more user friendly and more organized to better serve the customers of ICT. The website will continue to improve finding and meeting the needs of those we serve.

Continuing Maintenance Contracts

PC Support Services also participates in partnership/maintenance contracts with various departments. These agreements are based on special hourly rates determined by average salary rates and amount of time contracted. Currently, we have contracts with VP for Student Services, Placement and Career Services Counseling, Student Health Center, Border Epidemiology, Center for Learning Assistance, Animal and Range Sciences, Institutional Research, and Audit Services.

PC Support Services continues to provide critical computer support to the NMSU administrative and academic communities. The majority of our work is in response to work orders issued by clients requesting an extremely wide range of services from workstation setup to server/domain setup and every possible issue between. Our services consist of 60% work orders and 40% maintenance/service contracts. Each PCSS staff member has passed the required exams for Dell Certified Technicians. Dell paid for these classes and the resulting certification will benefit our staff and clients in a variety of ways.

University Computing Labs

This service continues to be the backbone of support for student computing needs on campus with over 653,479 logins and 11,766 unique individuals logging into the labs during the past year. Along with 12 ICT proctored labs, we also provide some level of support in partnership with other departments on 13 additional labs and have 15 remote locations. In this past year, there were 15 new individual computer stations placed in various locations in Corbett Center.

Logins in the SCS Labs

Comparison of logins for Fiscal Year 2003 and 2004
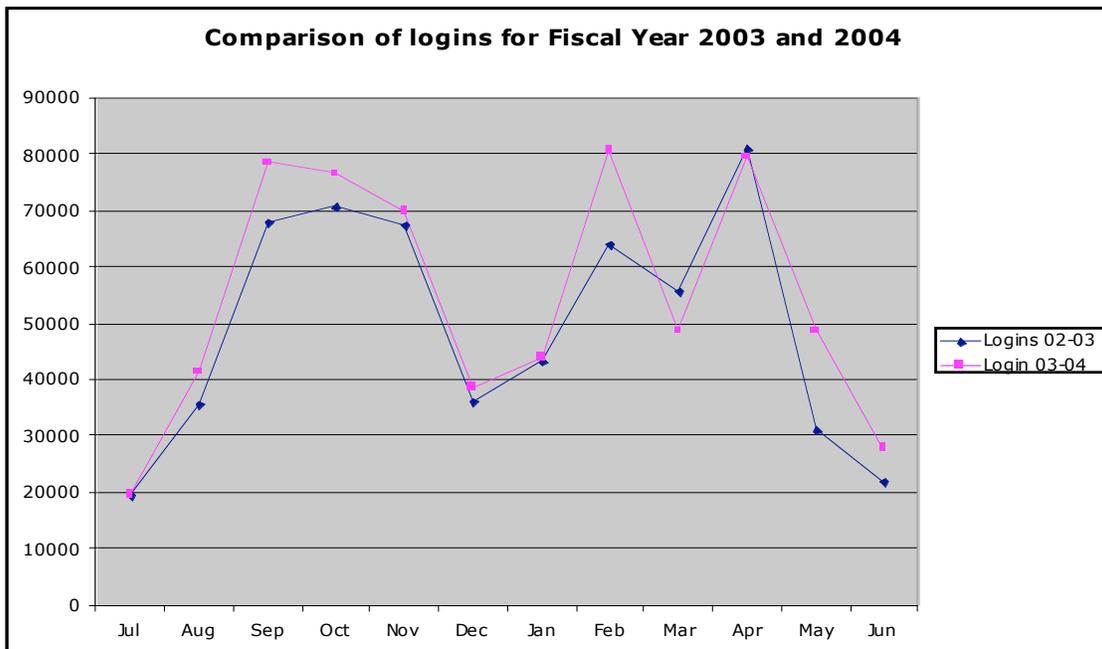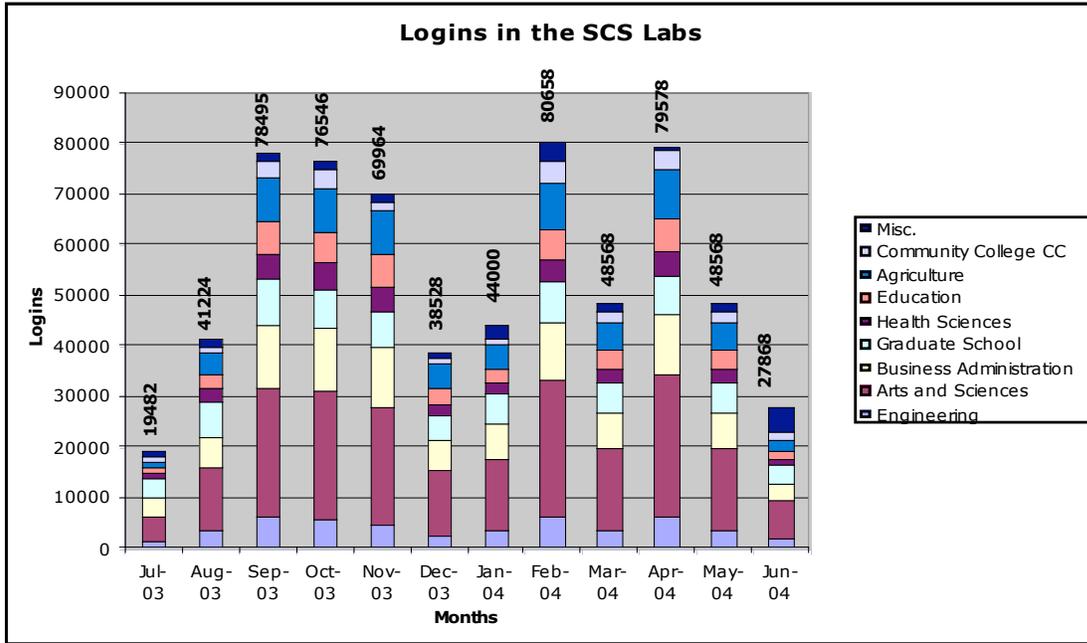
Recently, a new relationship was established with Athletics for a lab in the Fulton Center and an additional facility in Hardman Hall in partnership with the Center for Learning Assistance.

During FY04, ICT/SCS setup and configured 148 new computers, handled over 900 trouble tickets, and maintained an average downtime on lab workstations of less than 5 hours.

ICT/SCS restructured the lab student configuration recently, implementing levels of supervision within the students now creating shift supervisors to assist in managing duties of the labs and lab assistants within ICT/SCS. The creation of this position has aided in a more timely response to various problems in the many campus-wide labs run by ICT/SCS thus allowing for quicker classroom and lab support. The new reorganization has also created a more proficient lab structure and the ability for ICT/SCS to process help requests quickly and efficiently, resulting in less downtime of printers, individual computers, and lab workstations.

Student Revitalization Projects

In the past year, ICT/ISS has worked with ASNMSU, Corbett Center, Housing, and the Business Office to help develop new student computing spaces that provide students additional hours of availability, effective group work spaces, and a variety in food choices. Working with Housing, we have completed computer pods and labs in VDM, Monagle Hall, and Garcia Hall. In partnership with ASNMSU, we have expanded computing in the Conroy Computer Cluster by 15 computers and have installed 11 individual computer stations in the Crossroads eating area.

Web-based Course Management Tools

The demand for use of NMSU's Learning Management Systems (WebCT) has continued to remain high. ICT/TS has upgraded hardware and software, continued direct training, web support sites, documentation, and ongoing one-on-one support for faculty and GA's. In order to make these tools effective campus wide, ICT/TS provided 105 days of training for NMSU faculty, graduate assistants, and other college support. These workshops included WebCT basics, materials conversion, and ITAL. Also, ad-hoc support services are provided on a call, email or walk-in basis.

ICT Training Services – WebCT

WebCT Courses

* Effort to remove inactive accounts and courses resulted in a slight decrease
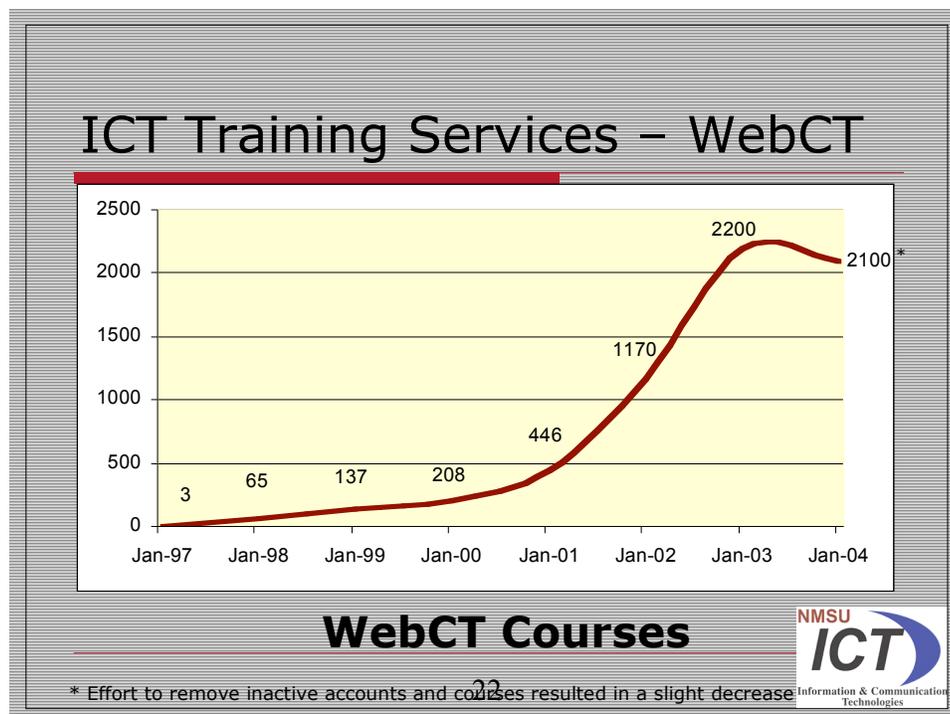
Continued partnership in institute for Technology Assisted Learning (ITAL)
ICT/TS is proud to provide technical leadership in the continued success of the summer
laptop institute for faculty, ITAL. This is a partnership between ICT, the Office of Distance
Education, the Teaching Academy, and the Library. This institute provides faculty members
with both training and equipment. ICT/TS used ITAL funding to purchase and configure ultra
portable laptops for the faculty who are selected to participate in ITAL. Ongoing support
helps faculty feel more confident to continue their use of their newly acquired technology and
skills. After this year's sessions, over 180 faculty members will have received training and
support through ITAL since it's inception in the summer of 1997.

Centra
Centra, a set of operational procedures, training, documentation, and support website has
continued to grow in the past year. It is a web-based tool to create live web-based meetings,
classes, or conferences. It also works effectively over modem connections. This past year,
there were a total of 234 events.

7.   Progress in Business Operations and Financial Services

This section details progress achieved for FY 03-04 for Information and Communication Technologies in the areas of financial and business operations as well as customer service and support.

The primary function of the Business Operations and Financial Services area is to provide effective and efficient management of financial operations, cost management and customer support services through the ICT work order desk, Customer Service Center and the ICT Business Operations area.

ICT Business Operations and Financial Services Established

The ICT Business Operations and Customer Service (ICTBOFS) area, under Telecommunication and Networking Services, and Business Services under the Office of the Vice Provost, were combined into a single unit, with the exception of the technical component of the Customer Service Center in February of 2004. The new unit is now ICT Business Operations and Financial Services. The new division currently has 12 employees that support all of the ICT divisions.

Standardization to Single Billing System for all ICT Areas

In July of 2003 ICT migrated to the PaeTec Pinnacle system for all ICT billing transactions both internal and external to NMSU. On average, ICT bills $570,000 per month with $523,000 being internal transactions and the remaining $47,000 being external transactions. Telecommunication and Networking Services average billing is $485,000 per month while the other areas in ICT average $38,000 per month. Student and contractor transactions account for $47,000 per month on average. FY 03-04 billings totaled $6,833,057.

ICT Average Monthly Billing FY 03-04
Internal vs. External
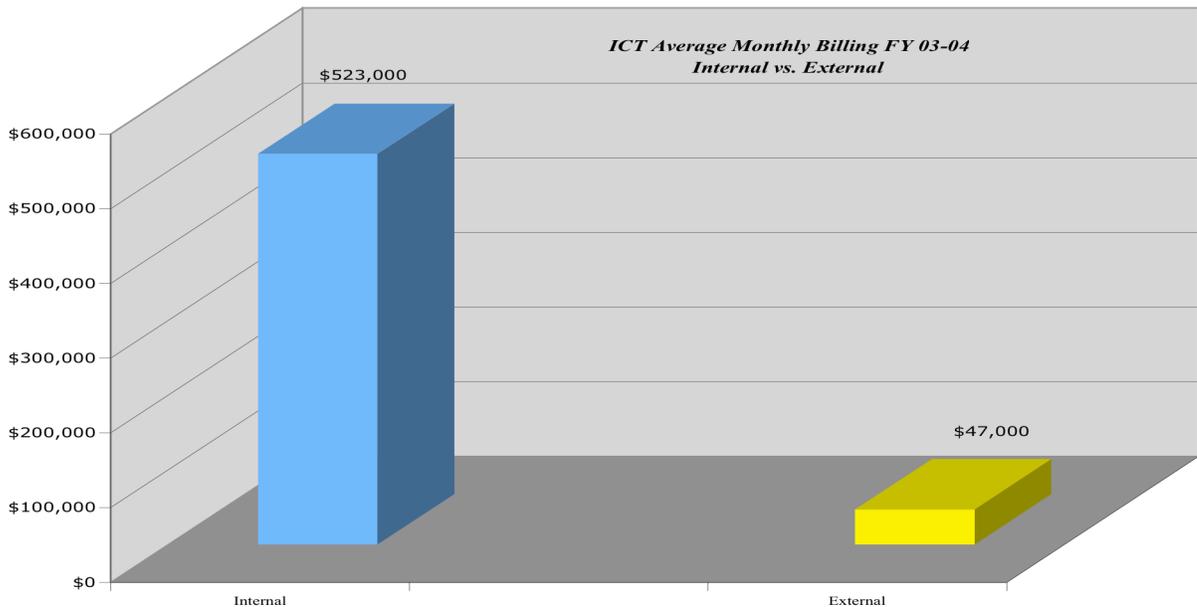
ICT FY 03-04 Average Monthly Billing
by Service Type

$485,000

- ICT Telecom & Networking Services
- ICT Services
- Student & Contractor Services

$47,000

$38,000
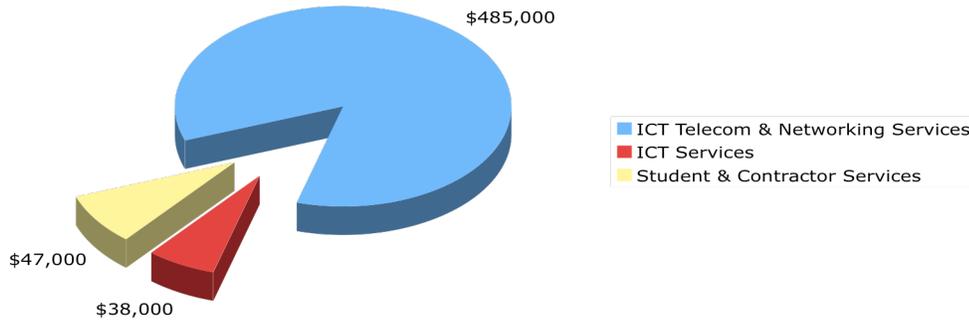
ICT FY 03-04 Annual Billing
by Area

$502,108

- ICT Telecom & Networking Services
- ICT Services

$6,330,949
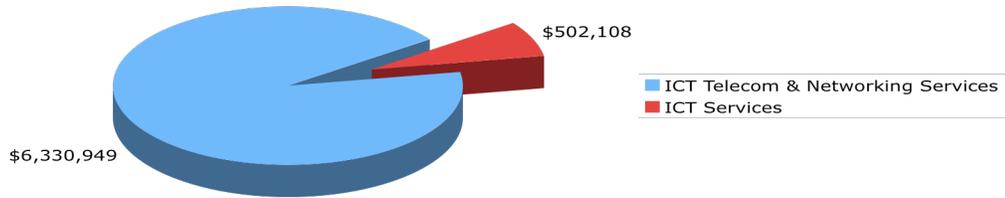
Telephone System Maintenance Contract Renegotiated and Signed.
In July 2003, ICTBOFS renegotiated the annual maintenance contract for NMSU's Ericsson PBX. ICTBOFS was successful in the renegotiation of the contract at a minimal increase of 6.5% per year for a three-year period. Year one NMSU will pay $2.016 per port per month, which included a 4% discount for a single annual payment. NMSU currently maintains 10,078 active ports on the

Ericsson system. Industry average per port maintenance is $3.75 per port per month. Savings to NMSU in year one as compared to industry standard will be $211,000. Similar savings are expected for years 2 and 3 of the contract as well.

Maintenance for the NMSU Voice Mail system and the NMSU E-911 system were also negotiated for a three-year term at a nominal increase of 6.5%. Annual maintenance cost for voice mail is $18,500 and for E-911 is $4,000. The 4% discount will also be applied to Voice Mail and E-911 for single annual payments. The contracts will be renegotiated in June of 2006.

Student Cellular Program Established
In August of 2003 ICTBOFS entered into a partnership with Alltel to offer cellular service for personal use to NMSU students, faculty and staff.   The plan details eliminate the need for NMSU students, faculty and staff to enter into a long-term agreement with cellular providers as long as they are associated with NMSU. Cellular equipment is purchased up-front and calling plans are competitive with plans offered in the public sector. ICT has grown the program to over 100 lines of service in less than one year. Special promotions and quarterly phone fairs will continue as a popular and productive draw to the new service.

Inventory Management
ICT TNS inventory management continued to be effectively and efficiently maintained for FY 03-04. One million one hundred thousand dollars of inventory was processed through the system in FY 03-04 with .07% of variation for the year.

Local PRI Trunk Pricing Renegotiated with QWEST
ICT has renegotiated the pricing with QWEST for local telephone dial tone. The renegotiation has secured NMSU a thirty percent reduction in cost per circuit with a projected savings annually to NMSU in excess of $35,000.

Equipment Repair and Renewal Funding
$492,000 of Equipment Repair and renewal funds were utilized by ICT to support NMSU centrally. $200,000 identified as Student equipment fees were used for computer, furniture, and lab server replacement on main campus. Of the remainder, $100,000 was utilized for new WEBCT hardware, an additional $58,000 was used for student computer lab equipment replacements, $45,000 for central server replacements, $58,000 for staff computer replacement, $8,000 for a new test scanner and $23,000 for a new back-up generator for central computing equipment.

Equipment Repair & Renewal Funding

- Student Equipment
- WEB CT Hardware
- Student Lab Replacements
- Central Server Replacements
- ICT Staff Computer Replacements
- Back up Generator
- Test Scanner

$100,000
$58,000
$45,000
$200,000
$58,000
$8,000
$23,000
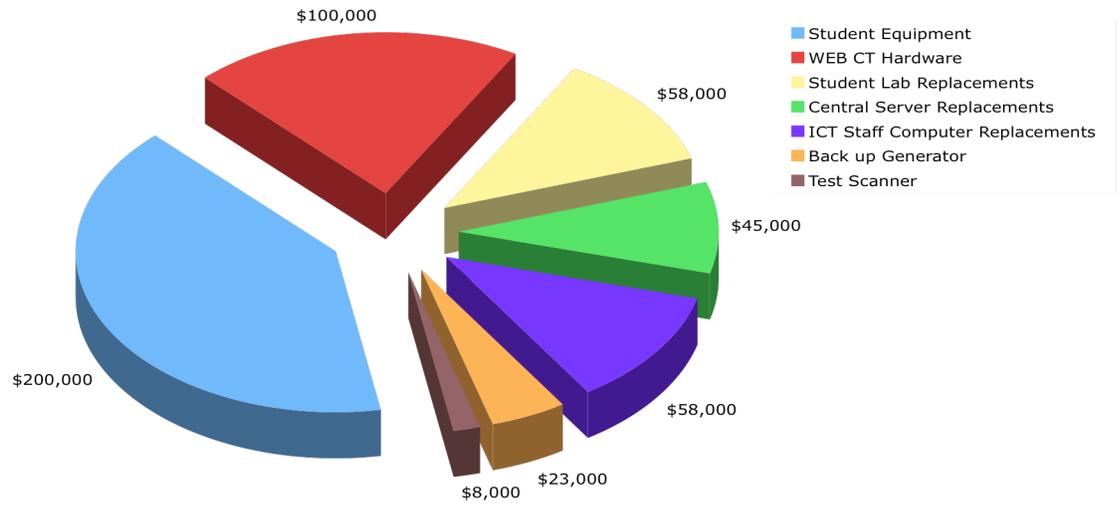
8.   ICT FY 2005 Goals and Projects

Following is the list of projects identified by ICT and the various technology partners throughout NMSU. Discussion between ICT leadership, the NMSU community and information technology committees will establish the priorities, budget and timelines each. The budget and timeline are compiled and maintained by the individual project leaders for each assigned task. The details are not included in this document.

Italics: signifies FY04 completed tasks. These tasks will be removed from the FY06 goals.
Bold: signifies tasked rolled into UNO Project

1.   **Implement Luminis, Banner Admissions, Banner HR and Banner Finance and EDW.**

2.   **Renovate www.nmsu.edu website.**

3.   **Create "quick enrollment" form for non-degree seeking students.**

4.   Complete response to auditor concerns.

5.   Convert ICT newsletter to Content Management System (CMS) environment

6.   Participate in Qwest AFOR case.

7.   Produce a technology survey focused on systems management, production control and PC maintenance.

8.   Purchase fiber for collaborative effort between NMSU, NLR, CHECS Acequianet and Wire New Mexico.

9.   Implement new, consolidated procedure for scanning forms and tabulating results, particularly for testing and course evaluations

10.   Select web-based time entry software.

11.   Select room scheduling software.

12.   Investigate student portfolio management software.

13.   Support and receive funding for CHE proposals.

14.   Present SCT Matrix/Banner integration at SCT Summit.

15.   Investigate web-based course evaluation software.

16.   Create assessment tools and procedures for ICT services

17. Complete installation of technology in Hardman Hall classroom.

18. Create information security office.

19. Enhance support for research faculty.

20. *Create Service Level Agreements for key ICT services*

21. Create a university definition set for key information commonly used in internal and external reports.

22. *Create a unified work order, trouble ticket and billing system for all of ICT.*

23. **Define the roles of the departments and central administration for data entry, information storage and data reporting.**

24. **Expand self-service web-accessible administrative applications for students, faculty, and staff.**

25. Work with student technology committee to insure continued support through the student technology fee.

26. Remodel Jacobs Hall room 128 computer laboratory.

27. Hire Student Relations Coordinator to manage student technology fee and plan

28. Complete Pete's Place 24 hour computer laboratory in Corbett Center

29. *Assist in implementation of the CashNet electronic cashiering system upgrade scheduled for August 1, 2003 to allow groups and departments to conduct e-commerce more easily by clearing credit cards securely and efficiently.*

30. *Support the Vice Provost for Research office in the production implementation of the Info Ed International electronic research administration system. The proposal tracking module is scheduled for a pilot project in August 2003.*

31. *Select an enterprise web reporting system to provide better access to enterprise information on the financial, human resources and student information systems.*

32. **Implement a production portal system for NMSU students to access and organize web-based services.**

33. **Plan and implement at least one new document management/imaging (Feith) and workflow (Accelio) project to transition manual paper based systems.**

34. Implement DARSweb to allow advisors to code degree requirement exceptions and run audits and students to run audits for themselves. Because NMSU previously performed degree checks manually, DARwin and DARSweb streamline the degree

audit process, ensure consistency of audit results, and provide students with a convenient and easy way in which to monitor their progress and perform degree program "what-if" scenarios.

35. Implement transfer articulation module of the Degree Audit Reporting System (DARS).

36. Implement a production-ready solution for generating batch audits and audit purge with DARS.

37. Identify and implement replacement(s) for current administrative Lotus Notes and FoxPro applications.

38. Enhance cost recovery for PC maintenance and at-the-desktop services.

39. Obtain training for web technologies, object oriented programming, change management and project management for ICT staff.

40. Enhance student employment services system (SES Ventana)
    - Evaluate possibilities of incorporating work study and branch campus student employment
    - Write 7 ad-hoc query reports
    - As per Business Office suggestion, incorporate email notifications in EAF upon SES student requisition disapproval
    - Write SES Purge process (data is to be retained for 3 years so first run won't occur for some time)
    - Test Employment Eligibility Verification Step 2 for January 2004 use (can't run until waivers are in place for one year)
    - When Vistas is live on DB2, incorporate the generation of activity records for unofficial transcripts during the waiver process
    - When electronic signatures available, incorporate signature if required

41. ~~Provide quality technology training, support, and documentation for administrative applications, office productivity software (MS Office), enterprise reporting tools (Crystal Reports), Web content management, and other technologies that are of strategic value to staff and faculty at NMSU.~~

42. Replace Corridor "screen-scrape" applications for Vistas and SAM CICS applications in order to provide web registration and financial aid award acceptance capabilities. Corridor is no longer under maintenance.

43. *Examine and refine ICT organizational structure.*

44. *Create a new, more comprehensive annual evaluation form for ICT.*

45. Obtain state funding for wireless and course management projects for NMSU and other higher education institutions in New Mexico.

46.   Enable a high-speed wireless network for both NMSU and Las Cruces.

47.   **Enable laser check printing of vendor/disbursement checks.**

48.   *Evaluate and select vendor for FRS and HRS.*

49.   *Install and train users for SEVIS system.*

50.   **Implement SIS priorities established by the SIS committee.**

51.   Implement pay-for-print in computer laboratories

52.   *Increase number of technology-enabled classroom at NMSU.*

53.   Enhance faculty support for WebCT

54.   Provide training for Cognos and Luminis CMS.

55.   **Implement priorities for recruitment and retention efforts especially through web based access to admissions data for prospective undergraduate and graduate students as defined by Noel Levitz and NMSU.**

56.   *Development of automated billing and additional electronic services to support distance education.*

57.   Implement job scheduler for SAM and VISTAS/SAR.

58.   *Implement Oracle 9 and Banner 6 releases for Admissions*

59.   **Complete a secondary site for disaster recovery in Milton Hall by installing fire suppression equipment, a UPS system to protect the existing phone and computing infrastructure, purchasing a remote backup disk subsystem attached to the mainframe. This second disk drive will provide NMSU with realtime copies of administrative transactions.**

60.   **Install water fire suppression at the offsite storage facility. Even though the facility is considered fire proof, having water based fire suppression will help control any high temperature fires.**

61.   **Define and publish architecture for a single login to e-services at NMSU.**

62.   **Continue working to move all services to a single login and password using the NMSU Global ID and Password.**

63.   Work with the state of New Mexico to enable high bandwidth connectivity for education and commerce throughout rural New Mexico.

64. *Assist in implementation of the strategic plan of CHECS regarding network connectivity and shared services.*

65. Develop and appropriate pricing structure for computer laboratory printing and the central printing facility for high-speed printer.

66. Provide assistance in IT leadership for the NMSU colleges.

67. *Continue to support the Adventures in Supercomputing Challenge. This activity allows NMSU to be represented in a statewide arena with the potential to recruit well-qualified New Mexico high school students.*

68. *Provide network setup and configuration to support NMSU early registration at remote locations.*

69. Hire a full-time IT security professional.

70. *Complete installation of student web-based time clock program for ICT to improve and centralize the management of ICT student employee payroll information. Evaluate applicability of the timeclock software for other large units at NMSU.*

71. Upgrade aging servers.

72. *Enhance electronic security by requiring all systems that take login/password/ssn/pin over the Internet to use SSL.*

73. *Upgrade electrical power to the Milton Hall infrastructure area to support a secondary site. Evaluate a diesel-powered generator for Milton Hall.*

74. *Upgrade mainframe database DB2 to version 7 and install performance tools*

75. Upgrade CICS upgrade to support legacy applications for financial aid and registration on the web.

76. Install a remote disk subsystem at Milton hall to instantaneously mirror to the administrative data on the mainframe.

77. Install PGP encryption software for transmitting payroll information to the institution's banking partner.

78. Publish data security standards and guidelines for NMSU.

79. ~~Migrate some of the academic and institutional servers to Linux/Redhat on the Mainframe~~

80. *Maintain NMSU lighted sign on University Avenue*

81.   *Maintain Center for International Programs (SEVIS), Grants and Contract accounting server in the Vice-Provost for Research office, Housing and Bookstore servers, new Health and Social Services college server*

82.   *Move VISTAS from SUPRA to DB2 in September 2003.   This change will reduce ongoing direct costs to the SUPRA vendor as well as eliminate the need to have staff supporting SUPRA (indirect savings). The move to DB2 will also allow NMSU to use existing ODBC compliant software tools to extract data from the database without having to learn any special programming skills.*

83.   Provide more information via the web and post of frequently asked questions through the ICT Customer Service Center.

84.   *Redesign ICT website http://ict.nmsu.edu*

85.   *Work with Housing Office to establish new computing options for students living in the residence halls and Aggie Express store.*

86.   Continue to work with colleges to develop a classroom technology strategy and implement the strategy.

87.   Expand ICT support contracts to help colleges and departments provide support to their instructors and students.

88.   *Seek external funding to support instructional technology at NMSU.*

89.   *Upgrade course management system to WebCT Campus Edition (v3.8) early in FY04 using the NMSU Global ID for authentication. Improve online testing tools, better communication tools, and an easier to use interface.   ICT will seek state funding for the WebCT upgrade.*

90.   Review AutoCad licensing and of Adobe software licensing.

91.   Develop and implement a longitudinal study of NMSU student ownership and use of technology and satisfaction with technology services at NMSU

92.   *Update the campus-wide "Assessment of Educational Technology" for review by the Faculty Senate Technology Committee (FSTC) and others.*

93.   *Evaluate existing and proposed software licenses with the goal of making key software available at reduced costs and where appropriate look at reduction of administrative costs.*

94.   *Continue to look for areas of collaboration with other institutions in the state, in particular for course management systems*

95.   *Fully implement WebCT Campus Edition v3.8*

96. *Determine the desirability and impact of upgrading to WebCT CE v4.x*

97. *Work with ASNMSU, Corbett Center, and the Business Office to help develop new student computing spaces that provide students more hours of availability, effective group work spaces, and a mix of entertainment, food and computing resources.*

98. *Evaluate the advantages of a Web Content Management System (W-CMS) for NMSU. A white paper outlining advantages and costs will be developed for review of the NMSU leadership.*

99. *Provide additional scientific computing expertise in ICT, coordination of distributed, training for faculty and graduate students hardware and software, and shared software licenses for high performance research computing.*

100. Develop information and guidelines for file sharing and copyright at NMSU.

101. Communicate information technology policies and their impact to NMSU departments.

102. Investigate and propose an online testing and evaluation policy.

103. *Foster the use of shared web servers and database server for department ad hoc applications.*

104. Develop a funding and support model for shared technology-enabled classrooms.

105. Develop guidelines for departmental responsibilities in web content management.

106. Establish a library of resources and tools for web publishing.

107. Complete the NMSU information privacy policy and guidelines.

108. Develop standards for video and web-based collaboration

109. Develop standards for remote data acquisition and data transmission.

110. *Detail campus infrastructure available for use by tenants of Arrowhead Research Park*

111. Work with Internet service providers in Las Cruces to create a shared wireless frequency plan.

112. ~~Evaluate room scheduling software for technology classrooms on all campuses.~~

113. Create a map of fiber and copper infrastructure and server/service infrastructure for all campuses.

114. Test voice over IP.

115. Investigate an agreement with New Horizons, or other vendor, for application and technical training.

116. **Create long term plan for email services at NMSU.**

117. Propose to CHE unified wireless systems for for Carlsbad, Alamogordo, Grants and Las Cruces.

118. *Propose to CHE unified WebCT for Carlsbad, Alamogordo, Grants and Las Cruces*

119. *Promote use of new videoconference bridge and video streaming equipment.*

120. Provide training for technology-enhanced classrooms at all campuses.

121. Describe why Internet2 is important to NMSU.

122. *Select and enterprise calendaring system.*

123. Provide email forwarding for alumni.

124. **Work with advancement to redesign www.nmsu.edu.**

125. Install more webcams around NMSU campuses.

126. Webcast NMSU sporting events.

127. Investigate BOF groups for instructional technology.

128. Standardize PC replacement policy for NMSU.

129. Survey colleges to determine distribution of centralized and departmental IT support.

130. *Investigate multimedia support for Hardman Hall.*

131. **Increase access to SIS data and reduce printing**

132. **Increase access and standard reports to provide budget and account information to departments.**

133. Install a commercial virus scanner for NMSU email.

134. Coordinate ICT activities with college technology committees

135. **Determine a new non-SSN, lifetime ID number for students**

136. Specify a VPN and proxy solution for central applications

137. **Eliminate need to come to campus for PIN reset**

138. *Work with Library to design wireless areas for students.*

139. **Work with Business and Finance to detail faculty issues with grant accounting, salary encumbrances and procurement.**

140. Detail ICT standard services and cost recovered services.

141. **Provide additional access to HRMS system for departments.**

142. *Investigate the JAMIS system for faculty grants and compare to SCT and InfoEd software.*

143. Pilot card access for computer laboratories.

144. *Work with ASNMSU to evaluate a student technology fee that benefits both students and ICT.*

145. *Work with Health and Social Services to create standard and replicable wireless areas, technology teaching rooms and computer labs for new construction and renovations at NMSU.*

146. **Reduce the dependency on departmental shadow systems for FRS.**

147. **Insure that NMSU has a single authoritative data source for identification and demographic information.**

148. *Create standards for purchasing personal computers.*

149. Develop procedure for IT contract review and software purchase including negotiation, payment, schedule, warranty, scope and acceptance testing

150. *Address Word v. WordPerfect issues when collaborating on documents (Word is standard for NMSU administration).*

151. Create infrastructure for online distance education counseling

152. Provide training on FERPA, GLB, HIPAA, data access and data security issues.

153. Investigate online evaluations for NMSU courses.

154. *Investigate off-campus bandwidth issues for faculty members required to teach an online course (Comcast, Qwest and NMSU wireless).*

155. *Enhance www.nmsu.edu search page (joined with Google).*

156. *Create more shared technology rooms (Hardman Hall completed).*

157. *Determine policy for having and publishing email addresses at NMSU. (All NMSU employees must have a published email address)*

158. Create better tools for sending mass email.

159. Work with branch campus to determine which electronic services can be provided at Main Campus versus at the branch campus.

160. Work with AN-MSI where applicable.

161. Put in place standards for automatic vacation email and voicemail messages.

162. *Complete the implementation of the both funded CHE network infrastructure projects*

163. *Upgrade all buildings to a minimum of a 100 Mbit/s connections*

164. *Upgrade the distribution points to provide both 1000Mbit/s and 100 Mbit/s connections*

165. *Provide specific network bandwidth for video service using Quality of Service (QOS).*