New Mexico State University
2007 Information Technology Plan

New Mexico State University
February 2006
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New Mexico State University

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

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Visit us at http://ict.nmsu.edu

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I. Executive Summary

In 2006, the departments of Information and Communication Technologies and Institutional Research, Planning and Outcomes Assessment were formally combined under the umbrella organization of Planning and Information Technologies, which is lead by the Vice President for Planning and Information Technology. The change in the overarching structure supports the Senior Vice President for Planning, Physical Resources and University Relations who oversees our organization and reports directly to the President. The combined organization is focused on providing the best technology tools to provide accurate information for daily operations and long term planning.

This report lists hundreds of tasks that were completed by the offices of ICT and IRPOA. It reflects the continuous hard work by our employees to provide a high quality information and technology infrastructure to support the mission of NMSU. Among the many accomplishments in 2006 were:

- ❖ Banner Student went live and successful registered our students
- ❖ Core systems disaster recovery plan was completed
- ❖ Cognos and ODS became the official reporting environment for NMSU
- ❖ NMSU students increased the Student Technology Fee to support our shared goals
- ❖ Many student computing and classroom spaces were remodeled

Our work with the State of New Mexico in 2006 led to several important pieces of legislation, which are now funded. Specifically these are the statewide learning management system, IDEAL-NM and the state supercomputing application center, NMCAC. In addition, NMSU made progress working with the State of New Mexico on long haul fiber network projects through the Wire New Mexico initiative.

The 2007 strategies for Planning and Information Technology are both internal to NMSU and statewide. The State initiatives are 1) increasing bandwidth to as many areas in the state as possible, 2) implementing the IDEAL-NM project, and 3) creating new funding streams through the New Mexico higher education funding formula. These projects allow us to support the state goal of access and success in higher education for our citizens.

Within NMSU, we are focusing on each of the planning, information and technology components that make up our name. For planning, we are helping with the process of strategic planning at the university. Additionally, we are working with information reporting groups throughout NMSU to provide robust, accurate and easily accessible tools of data driven decision-making throughout NMSU. Finally, we are seeking the most efficient ways to spend our limited information technology funding to maximize the impact of technology at NMSU.

Activities such as those listed above and FY08 Funding Requests will help NMSU serve the population of New Mexico and fulfill its mission as a Land Grant University. Through our projects and daily activities, ICT provides resources and services to support the educational, research, and public service missions of the university.

FY08 Agency Funding Requests

NMSU Priority	NMSU Projects	Project Budget Request
1	Banner/Luminis Hardware Replacement	$750,000
2	Core SAN Storage Replacement	$500,000
3	NMSU Classroom Technology	$3,500,000
4	University-wide Reporting Services Hardware	$325,000
5	NMSU Core Network Upgrade	$990,000
6	NMSU Wireless Initiative	$1,622,000
7	E-Portfolio	$370,000
8	Web-based Course Evaluation	$300,000
9	Outcomes Assessment	$275,000
10	University Help Desk and FAQ Solution	$200,000
11.	Statewide Networking Partnerships	$5,000,000

IT Plan Contact
Questions or feedback regarding the NMSU IT Plan should be sent to Michael Hites at
hites@nmsu.edu.

II. Agency Overview

A. Purpose of this Document
This document presents the goals for information technology (IT) in the context of the NMSU "Living the Vision" and "One University" plans 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.

B. 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.

C. NMSU's Vision
By 2020, New Mexico State University will be a premier university as evidenced by demonstrated and quantifiable excellence in teaching, research, and service relative to its peer institutions.

D. Planning and Information Technology's Vision
The department of Planning and Information Technology (ICT and IRPOA) produces and maintains an environment where the university community uses information and technology efficiently and effectively to support the mission as a leading teaching, research and service university. ICT and IRPOA provide computing and communication infrastructure to wisely use information. We provide the systems and applications to support the daily operation of the university and its research and its instructional needs.

The primary responsibilities of the department of Planning and Information Technology are:
1. Support the teaching, learning, research, service, and creative efforts of students and employees in all locations and all disciplines.
2. Ensure the integration of the most current information and technology into instructional programs and research to prepare students to compete in a rapidly changing world.
3. Ensure access to high-quality systems, networks, information, and support employees sufficient to meet the critical information needs of students, faculty, and staff throughout the university.
4. Provide student support services that improve student satisfaction and performance.
5. Enable the information culture of collaboration, openness and data-driven decision making.

E. Values
Planning and Information Technology (PIT = ICT + IRPOA) values customer service. This can be seen through our primary awards the Asprey and the Happy Customer. Our work is for the others at NMSU, not us, and this is reflected in the daily performance of our staff.

Planning and Information Technology also values collaboration, respect, trust, excellence, relationships, shared decision-making, integrity (both personal and data), and fun.

F. Leadership
Our leadership structure is based on three main interactions: 1) the capabilities and discretion of our directors, 2) the relationships of the directors with others throughout NMSU and 3) the directors' participation in the Planning and Information Technology Leadership Team, commonly referred to as "LT".

G. Administrative Information Systems
New Mexico State University is a SunGard Higher Education partner. In 2003, NMSU consolidated its enterprise software into a single vendor to improve consistency, and provide better opportunity to adapt to changes in higher education. This does not mean that we exclusively use SunGard products, and we do use third party vendors that are closely associated with SunGard. Our major administrative system is Banner, and our portal is Luminis. For our data warehouse, we use SunGard's ODS and EDW with Cognos' reporting tools, a SunGard partner.

An inventory of our current major administrative software shows that the vast majority of our third party software vendors are SunGard, and Banner, partners. For example, PeopleAdmin, eVisions, Appworx and Cognos are all integral parts of our administrative services, and each vendor has a relationship with both NMSU and SunGard.
Higher education software vendors, including SunGard, are aware of the trends toward university assessment and accountability driven by the federal government, for example the recent Spellings Commission Report. We anticipate that these trends will be reflected in future releases of their software.

Both NMSU and SunGard are moving toward a Service Oriented Architecture (SOA) for software development and deployment.   SOA is framework that uses loosely coupled, independent services that can be accessed without detailed knowledge of their underlying platform. This means that software can be developed locally at NMSU to "plug in" to Banner, or we could purchase a services that is hosted somewhere in cyberspace. The point is that the services become easy-to-use modules that are either integrated by NMSU into our own Banner deployment, or our vendors implement them. In fact, due to the nature of SOA, a third party vendor could be using a third party vendor to supply a software service to us. In general, we don't know the difference, nor should it be of concern to us.

As vendors continue to develop software, they will use SOA principles. In reality, as more software that becomes available as a service, it gives universities an opportunity to redeploy human resources for services such as business process analysis, information reporting, and developing mission-specific software that vendors do no provide. This does make the assumption, however, that the SOA services can be purchased using existing software and hardware maintenance funding, others the short-term financial model does fit well in the university environment. Primarily this is because there is more work to be done at NMSU than there are people to perform the work, therefore, a proposal that would create a net decrease in the number of information technology professionals would be counterproductive. Certainly a change in the type of employee would be expected, but not a net decrease.

As we continue to provide more online services, there is an increased need for project management and data maintenance. These services either do not exist at NMSU or they are spread throughout several departments. It will be critical to address these needs to ensure continued reliability, data integrity, and future system and software installations.

H. Academic Information Systems
The primary concern for academic systems at NMSU is the replacement of our current learning management system, Blackboard/WebCT. In March 2007, the State of New Mexico funded the IDEAL-NM project to create a uniform learning management system for middle school to graduate education and also statewide training. This project is a result of several years of work by university and government employees throughout the State, and it will create the foundation for the next decade of online learning in New Mexico.

Also of concern is classroom technology. NMSU has less wireless availability and less technology-enabled classrooms than our peers, and although we have identified the need and created standards for each, we have not identified the funding to complete these projects.

Both administrative and academic information systems rely heavily on help desk service. It will be important to examine and consolidate our help desk efforts to ensure that the customers, both employees and students, have sufficient support to perform their daily tasks.

I. Institutional Research
As a result of the UNO project, NMSU has a centralized, enterprise data warehouse and reporting tool. Our information culture requires that the data within these tools be available to all managers and planners throughout our university. These two items, the availability of enterprise reporting systems and a change in access policies for information, have created an environment where the demand for information far exceeds the supply. Even with four high-powered reporting groups on campus within the departments of Business and Finance, Student Success, ICT and IRPOA, NMSU decision makers cannot obtain data and information fast enough.

In addition to high demand for information, assessment of student learning outcomes adds additional limits on our university's ability to respond to data needs. Accreditation, the federal government, and college-level needs are driving the increased demand, however, this new demand cannot be met without additional resources.

Through 2007, NMSU will work collaboratively to minimize the redundancy of reporting effort between our reporting groups and maximize the amount of information that is freely available to

university employees. Even with these gains in efficiency, the quantity of information required by our funding agencies, government, and other constituents will require new resources to be allocated or reallocated within NMSU.

J. Planning
Two of most important contributions to realizing our academic mission are planning and information technology. Typically, this report is about technology. This year, the report is about Planning, Information and Technology.

New Mexico State University is beginning its first university-wide strategic planning process in over a decade. This in not to say the strategic planning has not occurred, because it has occurred regularly at many levels throughout the university. Colleges, our two-year campuses and many department have strategic plans; however, the university as a whole does not have a comprehensive strategic plan to complete the Living the Vision planning cycle.

The planning website is available at http://planning.nmsu.edu. This site contains all of the material used by the planning-to-plan committee in the creation of the strategic planning process. This site will also host the strategic planning plan.

Both planning and institutional research rely on a reliable and robust data infrastructure and web presence. The data are required for management and planning and the web is used for data collection and information dissemination. The reporting and web services at NMSU must be enhanced to ensure collaborative and complete planning throughout our university.

K. Personnel
NMSU performs a tremendous quantity of high-quality information technology work each year. Our employees lead statewide initiatives, participate in national initiatives, and have created an environment where excellence is practiced and expected. The downside of NMSU's high level of performance is that stress and anxiety increases as the demand for services increased. This means that we must either stop performing some of the services that we are currently providing, or increase the amount of resources to provide the needed services. In information technology over the past four decades, demand for services has grown and driven the increase in information technology funding. This is not to say that information technology cannot create efficiencies. What it says is that business practices and processes have changed hand-in-hand with technology, so the support needs are almost always increasing.

Our personnel needs grow each year as the demand for information technology services increase. The current needs are in the areas of information security, enterprise reporting, helpdesk services, web development and the training associated with each of these.   Information security needs are driven by government mandate, fear of litigation, internal audit, and current best practices. Enterprise reporting must respond to the needs of data-driven decision making, while web development at NMSU is so backlogged that it will take several years just to complete the projects at hand. Finally, the NMSU helpdesk environment must be both consolidated and expanded to meet the growing needs of the community. Peer comparison shows that NMSU has some of the least availability of helpdesk services.

L. 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 motivation for specific information technology goals and projects at NMSU.

1. Use technology to enhance, expand and expedite the services utilized by students and employees throughout the state of New Mexico.
2. Provide security and identity management for efficient and accurate access to information and for employees and students.
3. Condense and unify backend systems and databases for administrative information to support a strong foundation for web-based access and self-service (ERP).
4. Provide appropriate and adequate technology and training to all faculty and staff to support academic program objectives.
5. Identify and allocate fiscal resources for acquisition and support of information technology at NMSU.
6. Create and support ongoing opportunities for technology-related professional development and training.
7. Provide enhanced help desk services and web-based self-support in information technology for students, faculty and staff.
8. Provide increased support for economic development by providing resources for faculty researchers, especially those using high performance computing and high bandwidth networks.

Information Technology Goals and NMSU's "Living the Vision"
ICT uses university goals as a basis for decision-making. The following outlines some of the IT responses and initiatives relative to the Living the Vision performance plan. As with all goals and objectives, the IT plan continues to evolve to serve the changing needs of the university.

To be nationally and internationally recognized for its academic programs at all levels
    Objectives:
- Provide technology for education at all levels, campuses and distance learning.
- Use electronic recruiting and retention tools to met enrollment objectives
- Provide timely and accurate reporting for programs, enrollment, utilization and other key variables.
- Provide computing capability, network infrastructure and information systems that exceed the expectations of our students.

To have a high quality, diverse faculty, staff and student body
    Objectives:
- Provide information systems that make it easier for faculty, staff and students to work, teach and learn effectively.
- Provide information systems and services equal to or greater than our peer institutions.

To be nationally and internationally recognized in research and creative activity.
    Objectives:
- Provide communications and computing infrastructure to support research centers, research clusters and worldwide research collaboration.
- Provide IT systems and staff support to make NMSU's research and sponsored programs more attractive to funding agencies.

To serve as an engine for economic, social, educational and community development in New Mexico.
    Objectives:
- Provide broadband connectivity to all of New Mexico
- Provide broadband connectivity between all NMSU campuses and related offices throughout New Mexico
- Provide state-of-the-art capabilities for Arrowhead Research Park
- Provide systems that simplify the understanding of degree options, credit transfer and continuing education for all NMSU programs.

To be an excellent steward of all resources dedicated to achieving the vision of the University.
    Objectives:
- Use information technology to create competitive advantage in education and research
- Quantify how information technology increases efficiency and/or enhances satisfaction
- Foster university-wide information technology planning to eliminate inefficient redundancy and maximize support for information technology systems and services.
- Demonstrate the need for philanthropic support for information technology

Information Technology Goals and NMSU's "One University"
Just as with Living the Vision, ICT uses One University as a basis for decision-making. The following outlines some of the IT responses and initiatives relative to the One University. As with all goals and objective, the IT plan continues to evolve to serve the changing needs of the university.

1. *Focus unambiguously on outputs before inputs, substance before form.* ICT's objectives are defined by the needs of the university. We openly discuss goals and outcomes assessment before defining our budgets, creating organizational changes or allocating resources.

2. *Create crosscutting long-term research and outreach initiatives.* ICT supports research at NMSU by providing computing and networking resources for faculty. ICT also has staff members devoted to faculty research, grant partnership and faculty training.

3. *Establish a unified approach to Legislative, Congressional, and agency relations.* ICT works with other higher education, government and corporate entities in the state of New Mexico to present projects that are not only unified for NMSU but for the state as a whole.

4. *Maximize efficiency and effectiveness of all support and administrative functions and services.* ICT continually inventories and assesses the current structure, conduct, and performance of those that support our academic mission and serve our students and faculty. We strive to eliminate inefficient redundancy and pursue economies of size/scale/scope across support and administrative functions.

5. *Fully utilize our statewide system and network.* ICT enables statewide networking, shared computing resources, distance education and communication among institutions through the state of New Mexico.

6. *Build adaptable scientific and educational platforms.* ICT will work with academic units to determine where faculty expertise can best benefit the information technology needs throughout NMSU. For example, just-in-time faculty IT training, web page usability and high-end computing training for graduate students.

7. *Undertake system wide master planning.* ICT encourages the sharing of computing resources and also physical space, for example the computing machine room at the Main Campus. ICT also partners with other government entities to avoid duplication of physical infrastructure.

8. *Adopt zero-based budgeting.* Each year, the ICT budget is assessed to determine the alignment with university objectives and productivity measures. Resources are often reallocated in response to changing growth realities and statewide needs and priorities. ICT has assigned staff for outcomes assessment and we are in the process of assigning productivity measures for every one of our units and comparing these outcomes and resources to our peers.

9. *Implement a compact approach to incremental budget change.* Each year, ICT provides a progress report to examine if we are meeting our stated goals. Our goals are developed through discussions and needs analysis between administrative and academic units throughout the university. ICT will examine the approaches used University of Texas-Austin and the University of Minnesota-TC, and we will adapt our progress report and goals to these models.

M. ICT Efficiency Projects

These projects involve widespread collaboration and the reallocation of funding and personnel to create a more efficient and effective information technology infrastructure at New Mexico State University. Each project has a complete needs assessment and agreement with other departments throughout NMSU. In all cases, FTE totals are new employees, and do not include any ICT staff that have already been reallocated. In all projects, ICT has reallocated staff to meet the need, however, the reallocation has not been able to address the entire need.

Enterprise Reporting Services Management
There are several reporting groups at NMSU, including Information and Communication Technologies (ICT), Business, Finance and Human Resources (BFHR), Student Success (SS) and Institutional Research, Planning and Outcomes Assessment (IRPOA). These groups have individual goals, but all use a single, central reporting system consisting of SunGard Operational Data Store (ODS), Enterprise Data Warehouse (EDW) and Cognos Reporting Environment Services.

Goals:

- Define the roles and responsibilities of the parties
- Define service expectations, communication procedures and escalation processes.
- Provide a reliable, high-performance reporting environment
- Provide an enterprise-level reporting portal
- Create a collaborative, efficient reporting team
- Develop meaningful and relevant reports and reporting tools

Staffing:

Database Administrator (1.0 FTE)
Provide support for all enterprise reporting services production databases, upgrades, on call support, and technical support for all facets of the infrastructure from the operating system up to the software/application level.

Interface with and coordinate work with other ICT and university-wide departments.

Cognos/ODS/EDW Integrator (1.0 FTE)
Provide coordination, scheduling, quality assurance, testing, prioritization, and other details related to implementation of enterprise reporting services.

Provide hands-on technical support of business process analysis, installation/migration into production, report verification.

Provide software/application support for enterprise reporting services.
Interface with and coordinate work with other ICT and university-wide departments.
Help Desk Support (0.5 FTE)
Provide second tier support of reporting infrastructure including escalation of ODS, EDW and Cognos related issue from the first tier of help desk support.

Server Support (0.5 FTE)
Provide basic infrastructure support for hardware and operating systems.

Training Support (0.5 FTE)
Provide university-wide training for basis ODS, EDW, and Cognos.

Security Support (0.5 FTE)
Create security policies, implement security policies, and provide security training.

Project Management
Typically, projects are generated by the needs of an individual or a department. Integration with other departmental projects throughout NMSU varies greatly as does departmental ability to manage the entire process. ICT does not have a formal project management office, department or group, although many ICT staff have project management responsibilities.

Goal: Create a project management group that works directly with other department to provide:
- Create an infrastructure for streamlining the handling of university maintenance and implementation projects

- Provide centralized IT project management support for NMSU
- Provide project tracking and prioritization support
- Increase efficiency of implementation projects by providing a platform for centralized prioritization
- Including Needs analysis, Business process analysis, Specification generation, Request for proposal development, project management, project planning and coordination, quality control.

Staffing:

Provide point of contact for needs analysis related to information technology projects. Work directly with all levels of departments and employees to understand business needs, create business process analysis, draft RFP, maintain technical staff connection and collaboration, ensure project completion and sign off.

Project Manager (1.0 FTE)
Manage tracking and assignment of project tasks

Project Coordinator (1.0 FTE)
Manage project meetings, events and communications

Business Analyst (2.0 FTE)
Work with the clients to understand business needs and produce specifications for developers

Quality Control Specialist (1.0 FTE)
Ensuring documentation and coding standards are met.

Upgrade Coordinator and Vendor Liaison (1.0 FTE)
Maintain upgrade documentation and calendar. Coordinate with vendors, developers and clients for upgrades and maintenance.

Data Maintenance Tasks
These are tasks that are currently performed by FSA or SSSCP, plus additional. These are tasks that require communication with clients, verification of requests and tracking for audit purposes. Currently ICT does not have any infrastructure to provide data maintenance tasks. These tasks are handled by the respective business entities.

ICT needs to build infrastructure for data maintenance. Currently the security functions are performed by the university computer operations crew in between their other hardware maintenance duties. ICT proposes increasing the security office personnel for dedicated security tasks.

Goal: Provide a centralized data maintenance infrastructure for operational system data and maintain audit records for security and access change for the following:
- E-Hire/People Admin
- Timesheet records maintenance
- Module level security maintenance
- P-Card functionality in Banner
- Imaging solution (Feith/ Xtender)

- EPAF template routing administration
- Banner security administration

Security Manger (1.0 FTE)
Manage security requirements for university-wide enterprise systems

Security/Audit Specialists (4.0 FTE)
Provide support and audit for university-wide enterprise systems security.

Records specialists (3.0 FTE)
Provide daily records maintenance.

Help Desk Consolidation
Consolidation will provide better problem resolution to NMSU students, staff and faculty through a unified interface. Consolidation will help determine the root cause of problems by observing key problem patterns and system behaviors under different conditions. NMSU should improve service and relationships with information technology users through development and deployment of a well functioning, centralized help desk.

Goals:
- Manage and track and report of customer problems and requests
- Manage consistent service levels within service categories
- Create and maintain global and local FAQs to better assist customers
- Create and maintain a knowledge base of customer environment
- Create and maintain a centralized inventory of problems associated with computer equipment.
- Provide a source from which to pull reliable reports so that administration can make informed financial decisions.
- Create efficiencies and reduce redundant IT services throughout NMSU.
- Define and delineate services throughout NMSU

Help Desk Manager (1.0 FTE)
Provide overall management of university-wide help desk.

Administrative Specialist (2.0 FTE) (0.5 FTE could be from enterprise reporting)
Provide help desk support and training for university-wide administrative applications.

Student Application Specialist (2.0 FTE)
Provide help desk support and training for university-wide student applications.

NMSU Web Development
At present, the demand for web development is far exceeding the supply. At NMSU, the central IT organization (ICT) has an excellent record of providing design, development and webmaster support. |The current and projected demands are creating an environment where the ICT staff is struggling to deliver high-quality services without working substantial and continual unpaid overtime. Additionally, there are many web designers and developers throughout the campus. These employees are also performing at capacity and are in need of additional resources. We believe that providing a core group of web professionals to serve the entire university, assisting all departments and campuses, is the most efficient use of university resources for these critical

tasks. We estimate that there is an unmet need of at least 270 hours per week and that a minimum of 160 hours per week are needed to overcome the backlog and provide quality, timely service for planned projects. With this in mind, we request four (4) web management positions to support university priority projects, including:

- Expanded My.nmsu.edu portal services (web channel) development for student, finance, HR, workflow, imaging, faculty and academic advisors.
- Integrated reporting portal.
- SCT content management rollout, development and maintenance
- Development of department and student web application development environment
- Student employment system
- Online phonebook and directory services improvements with advertising
- PeopleAdmin applicant tracking system
- Legislative update web page
- Revise tribal leaders website for indexing various initiatives and tribes
- Better tools for revising administrative job postings
- Adirondack housing and judicial services Banner integration and maintenance
- Enrollment management recruiting and application system
- Revise Policy Manual website w/ indexed links, search and change log
- Directory services (LDAP) customizations and department integration
- Integrated web-based E-procurement (Higher Markets)
- Accounts and support for podcasting, blogging and e-portfolio
- Modifications for SCT Banner Self-serve
- Educational technology pilots
- NMSU main webpage support
- NMSU Luminis rapid development framework for all webmasters
- Visual and audio campus tour
- Webmaster training
- Administer web related security measures
- Provide technical support for webmasters at campuses, colleges, and departments
- Universal web payment system
- Online room scheduling system
- InfoEd research pre-award system
- Research main entry web page
- Integrated ID card services
- Maintenance of Provost's web site
- Develop web tools for ad-hoc web surveys and online course evaluations
- Deploy web reporting to campus departments
- Maintain and deploy new web server software and perform capacity planning
- Participate in branding initiatives and graphic design
- Top levels NMSU web page support
- Utilize calendar and announcements via myNMSU
- Enrollment management "micro sites" for targeted recruiting.

Web Developer (4.0 FTE)
Provide support for enterprise web development services and training throughout all campuses of NMSU.   Complete the tasks listed previously.

N. Planning and Information Technology's Organizational Structure

ICT at NMSU is led by a CIO who reports to the Senior Vice President for Planning, Physical Resources, and University Relations, who in turn reports to the President. The following NMSU organizational chart shows the reporting relationship for IT within the university.
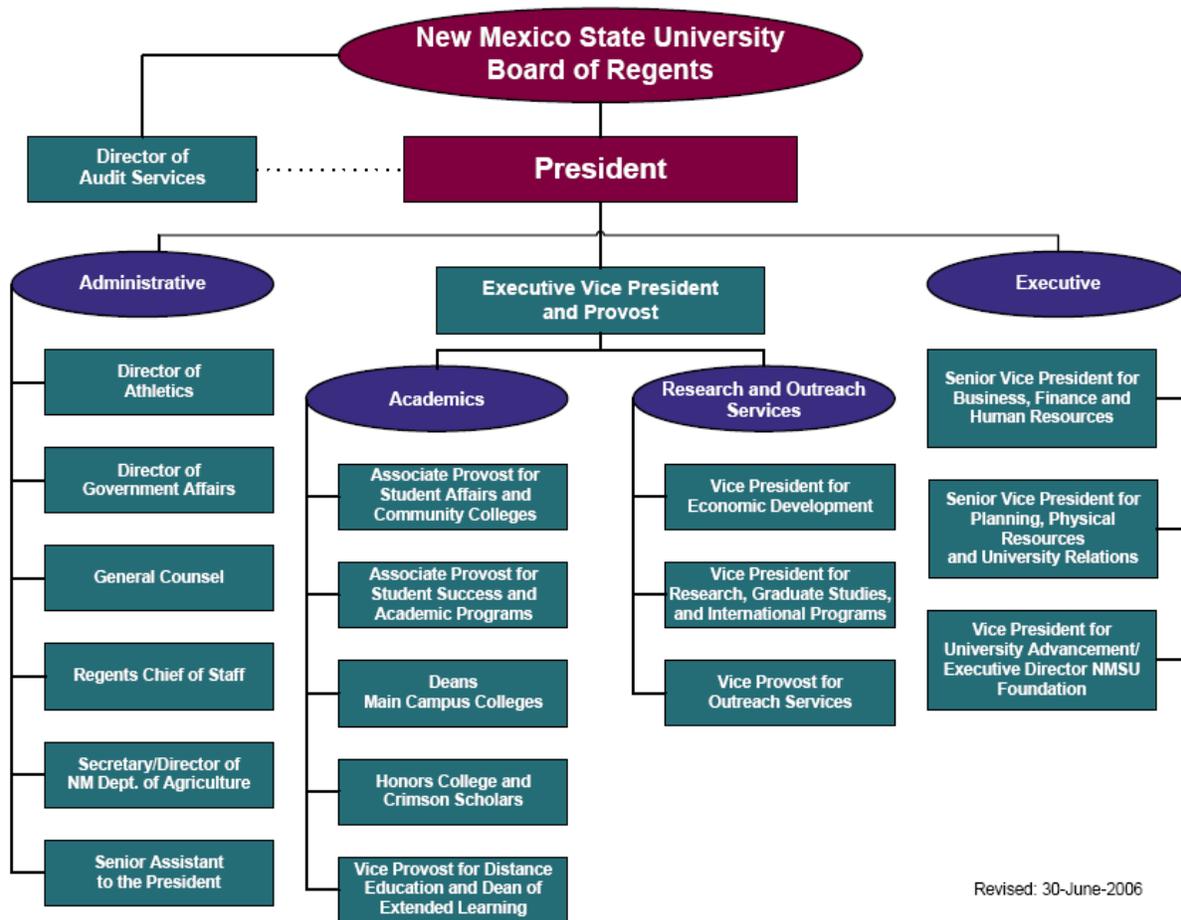
Planning and information technology services at New Mexico State University are provided through a combination of the centralized, campus-level, college-level and departmental staff. The majority of the information technology goals at NMSU reflect strong collaboration between the central IT organization, 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 122 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 eight administrative units that report to the Chief Information Officer, namely Business Operations, Security and Research, Telecommunications and Networking Services, Instructional Support Services, Enterprise Application Services, Computer Systems, Strategic Relations, and Institutional Research, Planning, and Outcomes Assessment. Following are descriptions, budgets and staffing levels for each of the ICT administrative units.

Office of the CIO
April 2006

Michael Hites

Administrative Support

UNO Project Support

Shaun Cooper Security & Research	Teresa Burgin Instructional Support	Norma Grijalva Telecom and Networking	Brian Ormand Strategic Relations	Anthony Parra Business and Finance	John Roberts Computer Systems	Mrinal Virnave Enterprise Applications	Carmen Santana-Melgoza (Interim) IRPOA
Olga Conter Reporting Services	Sue Smiley PC Support	Ray Cadena Voice & Alarm	Steve Leask Outcomes Assessment	Patricia Hartell Financial Support	Curtis Ewing UNIX Systems Administration	Richard Chavez Enterprise Web	
Richard Gottlieb Computer Center	Sharon Lalla Training Services	Nolan Gray Classroom Technology	Kristin Cordova Student Relations	Michele Guerra Billing	Forrest Hammond PC Server Administration	Jesus Hernandez Student Information	
		Dale Whitfield Data & Video	Alejandro Garcia Business Process Analysis	Wynn Dee Wooten Resale & Inventory	Arthur Trujillo Database Administration	Pam Jeffries Financial Information	

III. IT Plan Implementation for FY06-07

ICT 2006 Goals, Projects, and Progress Reports (Director Level)
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. This section of the report was last updated in May 2007.

Business Operations and Financial Services
The primary goal of ICT Business Operations and Financial Services (BOFS) is to provide efficient and effective management of financial operations, cost management, and customer support. Support areas include administrative assistance, billing, and accounting support to all ICT areas. Types of service being provided include unified billing, contract negotiation, documentation maintenance, purchasing support, contract maintenance, and contract renewal. During 2006 ICT/BOFS was responsible for, or involved with, a number of projects supporting the ICT vision of creating an environment where the university community is able to use information technology efficiently and effectively to support its mission as a leading teaching and research university.

Progress in Business Operations and Financial Services
This section details progress achieved for FY 06-07 for Information and Communication Technologies in the areas of financial and business operations.

> ➤ ***Create a unified work order, trouble ticket and billing system for all of ICT***
> **Percent complete:** On-going
> **Status/comments:** All ICT units have been successfully migrated to the Pinnacle System for billing, trouble ticket, and work order processing. The Pinnacle system has been upgraded to V5.4, which is the current release. From January 1, 2006 through February 28, 2007, ICT processed 17903 work orders in the system. Although we are currently utilizing Pinnacle as the main system, ICT is reviewing a trouble ticket / help desk program that would act as a central knowledge base, frequently asked question, and trouble ticket program that would integrate with not only the ICT Pinnacle system but all NMSU work order systems throughout the NMSU system. Billing information under the unified system is provided on billing volume in Appendix B.

> ➤ ***Propose new funding strategies for data, phone, alarm and computing services.***
> **Percent complete:** on-going
> **Status/comments:** ICT/BOFS, in conjunction with other ICT areas, continues to develop additional funding strategies including contracted support services through Desktop Support and Server Administration Support. ICT/BOFS is currently providing administrative support and assisting the VP/CIO to develop an IT company under the University Research Park Act to provide ICT a venue for intellectual property that is developed by ICT employees to be marketed. The company will also serve as a vehicle for ICT employees to offer consulting and other IT services while benefiting the University and the department.

> ➤ ***Revise and publish ICT service level agreements***
> **Percent complete:** on-going

Status/comments: ICT service level agreements for critical services are reviewed annually by the ICT Directors and posted on the ICT Webpage at http://ict.nmsu.edu/Guidelines/. In addition as new central services are developed, corresponding service level agreements are established and posted in cooperation with the ICT area that provides the service.

- ➢ ***Provide more information via the web and post of frequently asked questions through the ICT Customer Service Center.***
  Percent complete: 40% and on-going
  Status/comments: Documentation is being developed specifically dealing with voice services provided by the Telecommunication Services area. Progress has been limited due to waiting on development and decisions on a central help desk / trouble ticket system that would include a knowledge base of frequently asked questions in all IT areas. Current help desk and business office staff are providing assistance by compiling a list of questions they frequently handle. ICT/BOFS managers are collaborating on a plan for completion of this task within the next fiscal year. Updates to frequently asked questions will be ongoing. Preliminary information and service guides are available by visiting http://ict.nmsu.edu/~csc/.

- ➢ ***Document NMSU PC replacement policy***
  Percent complete: 100%
  Status/comments: Initial research of similar policies at other institutions of higher education, including NMSU peer institutions, identified by the "Living the Vision" performance plan has been conducted. Based on the aforementioned research a guideline was developed and posted at http://ict.nmsu.edu/Guidelines/NMSU-computer-replacement-guidelines.html.

- ➢ ***Publish comprehensive list of standard services and cost recovered services***
  Percent complete: 50%
  Status/comments: ICT/BOFS is currently in the process of collecting existing documents. An initial review of the documentation gathered will occur and meeting with individual areas will be conducted in order to complete a comprehensive list. Upon completion, the list will be made available in both a paper format and at http://ict.nmsu.edu. Projected completion August 2007.

- ➢ ***Develop procedure for IT contract review and software purchases including negotiation, payment, schedule, warranty, scope, and acceptance testing***
  Percent complete: 80%
  Status/comments: The review, negotiation, and processing of IT and Software contractual agreements will be processed in the ICT Business Office under an umbrella of shared responsibility with the department Director or designated responsible party pursuing the contractual arrangement. A written procedural document has been prepared and will be posted online at http://ict.nmsu.edu. Projected completion August 2007.

- ➢ ***Departmental Management services.***
  Percent complete: on-going
  Status/comments: The ICT/BOFS office provides fiscal management and administrative services in support of the educational, research, and public service missions of the university. ICT departments rely on the administrative staff to assist with fiscal responsibility through the monthly reconciliation of account revenues, expenditures, and budget tracking and revisions. All requests for back-up support related to account transactions are provided by this office. Accounts payable transactions are reviewed and verified prior to submission to the University Financial Operations office for payment. Receipt and deposit of payments from external parties and collection procedures for amounts due are additional services

provided. Administrative staff provides oversight review of procurement card charges and applies the charges against appropriate index numbers. Purchase requisition requests are reviewed for appropriateness, entered into the procurement accounting system, tracked for approval, and processed from beginning to end. Assistance with travel arrangements, reimbursements, and check requests is also provided. ICT/BOFS administrative staff strives to provide timely and accurate external and internal billings for ICT services. University departments can depend on ICT administration to respond to billing questions and provide back-up for ICT billing charges. Maintenance support agreements are reviewed and renewed for computer software and hardware with the goal of keeping pace with NMSU's technology needs. Through the current management process, ICT has been able to stay within budget and began the fiscal year 05/06 with operating reserves of $313,371 in the ICT ledger and $410,397 in the Telecommunication and Networking ledger. For fiscal year 06/07, the beginning balances were $499,888 in the ICT ledger and $278,601 in the Telecommunication and Networking ledger. In FY 05/06 a combined total of $500,000 was deposited into the Data and Telecommunications Repair and Renewal accounts. In FY 05/06, ICT/BOFS began fiscal management and over site for Institutional Research and Planning (IRP). The IRP budget added an additional $588,682 of budget monitoring and tracking responsibilities to the office.

- *Fiber purchase for collaborative effort between NMSU, NLR and other state programs*
  Percent complete: on-going
  Status/comments: ICT/BOFS in conjunction with ICT Telecommunication and Networking Services has made substantial progress in purchasing fiber that will connect NMSU with the National LambdaRail (NLR). National LambdaRail is a major initiative of U.S. research universities and private sector technology companies to provide a national scale infrastructure for research and experimentation in networking technologies and applications. The initial purchase by NMSU consisted of 4 strands of dark fiber to connect the NLR point of presence in El Paso Texas to the NMSU campus and then extends to the State of New Mexico Offices in Santa Fe. The project scope was extended in FY 05/06 to include partnerships with other public and private entities. The project now has options to extend the network north from Santa Fe to Raton, New Mexico. In addition a partnership is being negotiated jointly with the State of New Mexico to extend the network from El Paso Texas to the Southeastern quarter of the State of New Mexico. When completed this would give the network a redundant loop in the Southeastern portion of the State. The current project scope including construction, fiber and equipment costs is in excess of $8.5 million dollars and is a collaborative effort between the General Services Division of the State of New Mexico, New Mexico Tech, NMSU and partnerships with public and private entities. ICT/BOFS and ICTTNS have facilitated the purchasing process and contract management on behalf of the partnership.

- *Departmental Inventory Management*
  Percent complete: on-going
  Status/comments: The FY04-05 Certification listed 5 missing items with a value of $20,316. The FY05-06 Certification listed 4 missing items with a value of $4,011. Approximate value of 1,519 items at this time is $7,304,879.

- *Resale Inventory Management (TNS)*
  Percent complete: on-going
  Status/comments: ICT/BOFS stocks and maintains 10 warehouses with inventory parts relating to Data, Voice, Alarm, Audio/Video and Cellular products. ICT/BOFS is responsible for purchasing materials needed for projects by obtaining quotes and expected

delivery dates, creating the requisitions and receiving on the purchase orders. Values of resale inventory in stock and on hand range from $200,000 - $300,000. Average material purchases per year are $1,000,000. ICT/BOFS is responsible for physical inventory counts on a quarterly basis. ICT/BOFS is responsible for scanning each item used for projects and assigning each scanned item to work orders for billing purposes.

> ### *Campus Software License Management*
> **Percent complete:** on-going
> **Status/comments:** ICT/BOFS manages the software-licensing program of NMSU and it's branch campuses with a total annual value in excess $400,000 dollars. Licenses offered include Adobe, SAS, SPSS, ESRI, Microsoft Campus Agreement and Sophos Anti-Virus software. The software-licensing program had 6787 customer interactions from March 2006 to February 2007.

Computer Systems Goals and Projects

Computer Systems (C*S*) is a division of Information & Communication Technologies (*ICT*) at New Mexico State University in Las Cruces, New Mexico. We design, procure, implement and maintain computer servers on campus. These include all computer servers supporting the primary business and administrative applications for NMSU. CS installs, configures, and maintains the databases that hold all of the business and administrative data for NMSU. We provide backup and recovery services for all administrative data and servers on campus. This includes both primary and disaster recovery backups. We also provide server administration, database support and backup and recovery services to departments, colleges and branch campuses across NMSU, on a contract basis.

CS has primary responsibility for the two main NMSU email applications, email routing, virus and spam filtering and list server administration. We also build and configure all servers offering user space, logins and PC applications for all PC's in labs controlled by ICT. CS builds, configures and integrates the applications that make up student webpage design and publishing environment.

CS Consists of three major departments, UNIX System Administration, PC System Administration and Database Administration

Progress in Computer Systems

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

> ### *Continue to Test Disaster Recovery Plan*
> **Percent complete:** 100%
> **Outcomes Assessment Tracked (y/n):** No
> **Status/comments:** This is a yearly ongoing process where ICT chooses a subset of our administrative servers and services on an application boundary and performs the documented recovery procedures. This year the completed testing represented the recovery of our core business applications from a disaster or disruption in the main machine room. These include Banner HR, Finance, INB and Self Serve. All Banner OLTP databases are now recoverable up to the last completed transaction prior to the failure.

- ➢ *Complete audit response regarding production systems*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: Computer Systems group responded to three outstanding external audit findings. All production administrative server passwords and production database passwords were set to expire as per NMSU policy of 120 days. These same passwords were set to enforce NMSU password complexity of one number and a minimum of six characters. Finally a password change procedure was implemented and automated for those passwords that could not be set to expire automatically.

- ➢ *Shut down Notes server*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The server TORO has been powered off. The services running on it, including Lotus Notes have been replaced. The data in the Lotus Notes database was copied to disk and has been given to Business and Finance.

- ➢ *Percent complete: 0% Synchronize Microsoft Active Directory with SunGard Luminis Directory Server*
  Outcomes Assessment Tracked (y/n): No
  Status/comments: A project to complete this by writing work around code was unsuccessful. The decision was made to wait until SunGard Luminis Directory Server was upgraded to a level that would run the newer version of Sun One Directory Server which would include Identity Synchronization for Windows. ICT/EWS has since made such an upgrade. We are currently running Sun One Java System Directory Server (formerly Sun One Directory server) 5.2 which includes Sun One Java Identity Synchronization for Windows. The following link describes the product in detail: http://docs.sun.com/source/817-6262/817-6262.html#wp27348

- ➢ *Document Status of Secondary Data Center in Milton Hall Switch Room*
  Percent complete: 70%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: Over the past year ICT has determined that the Milton Hall switch room has insufficient cooling and electrical infrastructure to be expanded beyond current usage as a secondary data center. This past summer brought into focus the lack of cooling capacity. Electricians from OFS informed us that we were reaching electrical usage capacity and that further demand would require considerable upgrades. Also discovered was the possibility of flooding in the room. All of these factors prompted ICT to request BR&R funding for an alternative switching facility and secondary data center across I-25. ICT is also requesting the use of PSL's datacenter in the interim to house the remaining equipment needed to complete a fully functioning secondary data center. This will be moved forward in my 2007 goals as "Complete Population of New Secondary Datacenter to Replace Milton Hall Offsite Data Center."

- ➢ *Maintain Inventory of servers and services*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The server inventory is complete, the services associated with the servers is complete. A list of servers and their services is available in the charts and graphs section below.

- ➤ *Document server replacement strategy*
  Percent complete: 0%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: No formal replacement strategy has been developed. This is because there is no steady stream of funding allocated to this task. The priority is to get rid of the oldest servers; typically we want nothing older that 3 years. Servers running light weight applications are being removed by combining the services they deliver onto one box using virtualization. This work is usually done on servers as problems arise, because working applications are the last to get attention.

- ➤ *Work with Shaun and Teresa to test encryption for NMSU administrative offices*
  Percent complete: 0%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: Still have not worked on this. Certain versions of Windows Vista now include software to do this. The most transparent kind uses a hardware assist module. Setting this up is complex and can be cumbersome to use. This will move to my future goals as "Desktop Disk Encryption for NMSU administrative offices."

- ➤ *Document Consolidated use of shared web servers and database server for department ad hoc applications*
  Percent complete: Ongoing
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The following have been migrated: Aux Admin, Housing, Book Store, Corbett Scheduling, Family and Childhood Training, ICT Business Operations, IRPOA, Scheduling, Wave, Real Estate, Ben Woods office, Admissions, Vice Provost for Student Affairs and Wiggles.

- ➤ *Determine needs of the Advancement Office*
  Percent complete: Ongoing
  Outcomes Assessment Tracked (y/n): No
  Status/comments: We implemented several list serve adjustments for Advancement last year. We also worked with them to estimate the cost of billing for services to run separate SunGard products and databases. We continue to provide network and server support for them on a paying basis.

- ➤ *Document departmental shadow systems*
  Percent complete: Ongoing
  Outcomes Assessment Tracked (y/n): No
  Status/comments: Below under "Non-ICT Departmental Servers" is the beginning of a list of departments that have servers and their contacts.

- ➤ *Create better tools for sending mass email*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: We continue to use Luminis and more accurately SunOne Messaging System to create email lists. We are now on the second version of our new list server product Mailman. Rather than migrate all lists at once whether used or not ICT/USA in coordination with the Help Desk are moving lists as owners make calls for assistance with old listproc lists on bubba. We are seeing 1- 5 lists a week being converted.

- ➢ *Upgrade server OS to support partitioning*
  Percent complete: 10%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: We have Sun Solaris Version 10 installed and are beginning to test partitioning/containers. Many of our administrative applications now support Solaris V10. We have not found a use for partitioning/containers yet. However if we have to upgrade to BlackBoard CE 6 before we begin to implement IDEAL New Mexico, we will be using this feature. We are not planning wholesale Solaris 10 upgrades until Sun or our applications demand it.

- ➢ *Server installs by PSA*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The following is a list of servers purchased, installed, built and secured: Clustered Exchange Blades, PSAstorage1blade, Ad-Astra, Alarm Door Access, Adirondack-1, Adirondack-4, Aux Admim servers DC1, DC2, FPS1, Grants domain controller Chubasco, Centra, MOM, Pharos, PSDB.

- ➢ *Server builds and extra-departmental projects by PSA*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: New server maintenance contracts include 3 telecom servers, pinnacle work order server, 3 alarm services server, 3 KRWG servers, UCOMM Bones server redeployment and Aux Admin 7 servers.. Other stuff includes research department for chemistry pro bono server builds, Art and Art Gallery hourly server builds, help Police department set up roaming policies domain.

- ➢ *Sophos desktop antivirus build by PSA*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: 3 sophos antivirus customized builds we created for use by the NMSU community for both desktops and servers.
      Mainframe.

- ➢ *NMSU mail delivery infrastructure maintenance*
  Percent complete: Ongoing
  Outcomes Assessment Tracked (y/n): No
  Status/comments: Sophos Puremessage was upgraded.

- ➢ *TSM backup enhancements by USA*
  Percent complete: Ongoing
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The USA group upgraded TSM hardware for system and campus backups as well as tuned TSM to accommodate the growing volume of data backups at NMSU.

- ➢ *__Application utility development__*
  Percent complete: Ongoing
  Outcomes Assessment Tracked (y/n): No
  Status/comments: Mobile Campus interface, Webmail address book conversion utility and list opt out web pages.

- ➢ *__Banner product installations and upgrades by DBA__*
  Percent complete: Ongoing
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The DBA group developed the banner database cloning procedure, tested Oracle on Linux for WebCT/BlackBoard, marathon migrated from Banner 6-7, manage meteoric database size increases minimizing performance issues, successful student and Finaid go live with no database performance bottle necks. Most importantly, performed 1600+ upgrades, patches, configuration changes and security changes over this past year.

- ➢ *__Purchase and install of IBM Blade servers and VMware.__*
  Percent complete: 70%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The USA group has purchase another blade center and has had the previous blade center maxed out with 14 servers. We are currently running 4 VMware servers hosting 10 virtual servers including Aggie Apps Dev, ccserver1 & ccserver2, mailman, webmail2, web.nmsu.edu, clockme2, ictbill, wweb, nagios dev and the CS document server. This should become the ongoing task of server virtualization.

- ➢ *__Begin taking advantage of RMAN hot backups and FlashCopy backups.__*
  Percent complete: 20%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The USA group has begun testing the flash copy capabilities of the new IBM SAN controller to help reduce the downtime window for backups. DBA is in the early stages of testing hot backup techniques using RMAN.

- ➢ *__Begin clustering/HA configurations for production servers__*
  Percent complete: 0%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: Other than testing sun clustering the USA group has no production servers clustered. We did receive finding for clustering Luminis Email this year. We also hope to scrape together standby database high availability for or Oracle databases. The PSA group is currently running Exchange as a clustered environment.

- ➢ *__Begin lun mirroring on the SAN__*
  Percent complete: 0%
  Outcomes Assessment Tracked (y/n): No
  Status/comments: The USA group has been waiting for a second san controller to make this worth doing. They also need to begin go to training on the SAN and start monitoring and adjusting how storage is allocated SAN performance. This will become "Expand SAN utilization and performance" for next year's goals.

- ➢ *__Begin clustering/HA configurations for production servers__*
  Percent complete: 0%
  Outcomes Assessment Tracked (y/n): No

Status/comments: Other than testing sun clustering the USA group has no production servers clustered. We did receive finding for clustering Luminis Email this year. We also hope to scrape together standby database high availability for or Oracle databases. The PSA group is currently running Exchange as a clustered environment.

➢ *Staff training*
Percent complete: Ongoing
Outcomes Assessment Tracked (y/n): No
Status/comments: The USA group sent Mike Bock and Scott Archer to TSM management class. Also Matt Presser attended a security conference. The PSA group attended a local server security training held by New Horizons. The DBA group sponsored Oracle Application server training for their group, UNM and reporting services.

➢ *Shutdown low utilization servers and reduce number of servers*
Percent complete: Ongoing
Outcomes Assessment Tracked (y/n): No
Status/comments: PSA removed the IRPOA servers medha and ione. Also shutdown VP for student services and the Novel server wiggles. USA group removed Shaun's test server pulgeeta1, the student login machine hector, and the travel server which was replace with VPN functionality.

➢ *Create Shared Server Room*
Percent complete: Ongoing
Outcomes Assessment Tracked (y/n): No
Status/comments: Many initial estimates and considerations were made to create the server room in the bubble. It was determined that it would be easier to move Piyasat's group to the bubble because it was less expensive to convert to office space than build in power, network and electrical. All of this already exists in his area. By the time this determination was made no funding was available to begin.

➢ *Exit Mainframe Gracefully*
Percent complete: Ongoing
Outcomes Assessment Tracked (y/n): No
Status/comments: The mainframe is only running one production application at this time. That is the final half of the 2006 aid year for the Financial Aid department. The mainframe will be kept under support until December 2007.

➢ *Organize and present Computer Systems metrics for personnel, hardware, software and planning.*
Percent complete: Ongoing
Outcomes Assessment Tracked (y/n): No
Status/comments: This project has not been completed and will move to next year's tasks.

➢ *Implement Server Tuning Software*
Percent complete: Ongoing
Outcomes Assessment Tracked (y/n): No
Status/comments: NMSU purchased SarCheck server tuning software for our production severs to help ICT/USA diagnose and prevent server issues. The USA group is using it on our most important servers.

➢ *Implement Back-up Monitoring and Tuning Software*

Percent complete: Ongoing
Outcomes Assessment Tracked (y/n): No
Status/comments: ICT/USA backs up all administrative servers, contract department servers and contract desktops for NMSU. To assist with the management of this monumental task, NMSU purchased and ICT implemented ServerGraph backup monitoring software. Appendix B tables "New ServerGraph email notifications to backup clients" show sample emails sent to clients to help them manage and track backups of their hardware.

➢ *Implement email Trash and spam folder retention policy*
   Percent complete: Ongoing
   Outcomes Assessment Tracked (y/n): No
   Status/comments: To conserve space and rain in uncontrolled growth of the email data store ICT implemented automatic clean up of spam and trash folders for the main administrative email server.

Enterprise Application Services Goals and Projects

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.

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

➢ *Implement CMS guidelines and support infrastructure for all NMSU departments.*
   Percent complete: 80%
   Status/Comments: The Enterprise Web Services (EWS) team is helping departments with evaluating their current web content and training the web contributors in content publishing. The support infrastructure information is available at http://brand.nmsu.edu/web/documentation. The documented guidelines are complete, however given the steep learning curve a support network is critical to the users of Luminis CMS. EWS is working towards training key personnel in various departments in order to create this support network. This task will be completed once the CMS community reaches critical mass.
   Outcomes Assessment Tracked: Yes
   Outcomes Assessment Metrics:
   o Percent of web publishing managed within departments: 30%
      Departments using the CMS have not migrated their old sites completely to the content management system because of the manual process involved. They prefer to migrate the pages as changes are made to them, therefore ensuring that only active pages are maintained.
   o Number of units that use the CMS to maintain their sites: 4
      The steep learning curve and limited training resources has slowed the spread of the CMS. Once a critical mass of knowledge about the CMS is reached, more units are likely to start using the CMS.

- o Number of designers and content contributors to the CMS template and content library: 10 (approximate)

➢ *Implement Banner Student*
Percent complete: 100%
Status/Comments: SunGard HE Banner Student was live on October 26th 2006 following the conversion of data from VISTAS, the legacy student information system. Fall 2006 grading, registration for Spring 2007 and degree certification were performed on Banner Student for the first time. Banner student has entered regular operation mode since January 2007 and Spring 2007 will be the first complete semester on this system. Several automation scripts were also created as part of the conversion. All student functions that were available on NMSU Online are now available on MyNMSU. Enterprise application services continues to work on peripheral systems that used to rely on VISTAS data and now need to be supported on Banner.
Outcomes Assessment Tracked: Yes
Outcomes Assessment Metrics:
- o Availability for Student and Faculty Self service through MyNMSU for Spring 2007: Achieved
- o Decommissioning of Vistas as the active system of records after Fall 2006: This task is scheduled to happen before the end of the Spring 2007 semester.

➢ *Make relevant data available for core developers through ODS for services*
Percent complete: N/A
Status/Comments: This task is now being performed by units within the core functional unit. Business and Finance has formed the ADM (Administrative Data Management) group and Student Success is in the process of forming a similar group. EAS is now performing a support function for these units, performing research, testing and production implementation tasks. EAS has created some critical views required for the implementation or continuation of the following applications
- o Adirondack Housing Director
- o Crimson Scholar processing
- o Blackboard ID card services
- o Online Phonebook
Outcomes Assessment Tracked: N/A

➢ *Improve usability of applications deployed as part of the UNO project.*
Percent complete: 100%
Status/Comments: The site http://accounts.nmsu.edu was rewritten using newer API and feedback on usability from previous years. This infrastructure is now available for future tools and is being used in the site http://unotools.nmsu.edu
Outcomes Assessment Tracked: Yes
Outcomes Assessment Metrics:
- o Helpdesk received fewer phone calls for self serviceable items (password and PIN) despite the fact that a new Student system went online. The numbers are bound to fall even more.

Time period	Number of Calls
Fall 2004 (steady state of old system)	3645
Fall 2006 (not steady state as Banner Student went live)	2123

- o The Fall 2006 first 3 weeks rush at the helpdesk was far lesser in 2006 than any other previous year.

➢ *Documentation of development and deployment process and infrastructure.*
Percent complete: 100%
Status/Comments: This is a continuation of the documentation project started as a response to the auditor's comments. Standards for code documentation and deployment have already been established. QA of installable product is currently done in-house but is proposed to be an external entity. A follow up project to define a project management process at ICT is underway.
Outcomes Assessment Tracked: No

➢ *Develop software evaluation guidelines for future purchase or development efforts*
Percent complete: 50%
Status/Comments: The software basic functions and requirements have been defined in an RFP format. Any department that wishes to evaluate vendor software may use the given criteria to establish if the software in question will fit the current NMSU software infrastructure. Still remaining is the documentation of guidelines for evaluation of performance, usability and integration ability for new software. These guidelines will also define a costing rubric for implementation projects. Until the time such guidelines are formulated all departments have been advised to keep ICT personnel in the loop while evaluating new software.
Outcomes Assessment Tracked: No

➢ *Perform a smooth transition from Banner 6 to Banner 7*
Percent complete: 100%
Status/Comments: Banner 6 was upgraded to Banner 7 between April 12th – 17th 2006, with minimal interruptions to academic services. Banner HR and Finance tasks were scheduled to be shut down for four days (including the weekend) but were restored in three days. All services were up by Monday April 17th as expected. Apart from minor accessibility problems for users with special access to the system, all functions were restored on time. In order to accommodate for the upgrade the following NMSU developed add-ons to Banner were also upgraded.
        E-Hire upgraded to version 2.0
        PSLMODS upgraded to version 2.0
Outcomes Assessment Tracked: No

➢ *Implement SCI-Quest Higher-markets for purchasing*
Percent complete: 20%
Status/Comments: The development and production installs of LDI for e-procurement have been installed. Sci-Quest and NMSU purchasing office are working on a timeline for installation and activation of services. The purchasing office intends to perform a phased roll-out of the software in the near future.
Outcomes Assessment Tracked: No

➢ *Implement web application and tracking solution for Housing and Meal Plans.*
Percent complete: 100%
Status/Comments: Housing and Meal Plans went live with Adirondack software's The Housing Director product January 2007. Subsequent releases of the "My Housing" and "Apply online" web sites in February 2007, have eliminated lines from the housing office. According to the staff at the housing office the implementation of Adirondack housing

software has eliminated 'more than half' of the foot traffic seen in that office the beginning of every semester.

Outcomes Assessment Tracked: No

➢ *Implement new ID card services integrated with banking services.*

Percent complete: 30%

Status/Comments: ID card services are now fully integrated with Banner. The integration with the bank, however, has been postponed till the Fall of 2007. This change in schedule was made to accommodate the logistics of re-carding the students for the new academic year. In the current state, ID card services can track student and employee status on a daily basis. Integration services currently under development will ensure that the integration will be near real time for both students and employees.

Outcomes Assessment Tracked: No

➢ *Integrate Banner admissions with the central ERP system.*

Percent complete: 100%

Status/Comments: Starting August 2006 the admissions office started using the ERP Banner system as their primary system of record. The transition was gradual since the nature of admissions data requires a phased migration. The transition was completed before classes started for Fall 2006. As part of the transition a new set of web application forms were created for the admissions office. These forms can be viewed at http://admissions.nmsu.edu. Since admissions office enters the most student records into Banner EAS continues to work with the office to establish procedures for maintaining data quality when entering new student records into the system.

Outcomes Assessment Tracked: No

➢ *Implement Banner Financial Aid*

Percent complete: 100%

Status/Comments: Sungard HE Banner Financial Aid went live on February 1st, 2007. New student application, eligibility and various federal records have been loaded into Banner and are being processed for packaging. This year the packaging process is aimed to be completed by April 1st which is sooner than any of the previous years. This will prompt prospective students to make a decision to attend NMSU sooner.

Outcomes Assessment Tracked: No

➢ *Implement Time-clock solution for PSL.*

Percent complete: 80%

Status/Comments: PSL has a unique requirement for entering time for exempt employees, which is contrary to rules set up in the Banner delivered web self service leave reporting. In order to accommodate this a new web time entry solution was created by EAS in collaboration with the PSL technical group. This solution allows exempt employees at PSL to enter hours worked and calculates the appropriate percent of effort to be billed to the appropriate contracts. This web time entry solution still lacks an automated routing process, which is scheduled to be completed by July 1, 2007.

Outcomes Assessment Tracked: No

➢ *Implement FSA-Atlas integration with Banner.*

Percent complete: 90%

Status/Comments: FSA-Atlas tracks international students for the purposes of reporting to the SEVIS database maintained by the department of homeland security. This software is used by the International Programs office and relied on a batch load from VISTAS. The

software has been reconfigured and new integration programs have been implemented to allow it to be fed from Banner Student. Data cleanup is currently being performed on older records and is scheduled to be completed by May 1, 2007.
Outcomes Assessment Tracked: No

> ### *Implement DARS integration with Banner.*
> **Percent complete:** 100%
> **Status/Comments:** As part of the move to Banner as the student information system Degree Audit Reporting System (DARS) was migrated into ORACLE from DB2, upgraded to version 3.5 and integrated with Banner. As a result of the implementation a 'Degree Audit' link is available to students under the student and faculty tabs in MyNMSU. This link provides enhanced functionality to students and faculty by providing up to the minute degree audits in Banner.
> **Outcomes Assessment Tracked:** No

> ### *Upgrade to Cashnet.com hosted solution.*
> **Percent complete:** 100%
> **Status/Comments:** NMSU migrated to a hosted cashiering solution called cashnet.com in July 2006. This solution required a rewrite of the integration of all systems that require cash transactions. Chief among these integrations was the University Accounts Receivable interface. Converting the interface to be real time instead of nightly, now allows students to pay their dues and have their holds removed immediately from their records. Following the real time credit card transactions University Accounts Receivable, several services can now be automated. ID card services will be the first department to directly benefit from this real time integration in Fall 2007, since it will allow them to check student balances in real time when verifying eligibility for entry into games and other benefits for students.
> **Outcomes Assessment Tracked:** No

> ### *Upgrade WebCT 4.0 to WebCT 4.1.*
> **Percent complete:** 100%
> **Status/Comments:** The WebCT upgrade was performed for security reasons and also to support the migration to WebCT Campus edition 6.0. The upgrade was successful with downtime during the regular Sunday morning maintenance window. Since the WebCT upgrade to version 6.0 is on hold for the moment, EAS continues to enhance the integration between Banner and WebCT 4.1
> **Outcomes Assessment Tracked:** No

> ### **Data and application maintenance tasks**
> **Percent complete:** ongoing
> **Status/Comments:** Primary data maintenance tasks performed by EAS include
> * *Duplicate person record resolution*: EAS resolves between 30 to 50 duplicates a week with input from functional areas. Average time to resolution: 30 minutes per duplicate.
> * *Hiring requisition troubleshooting*: Sometimes hiring requisitions are stuck in the workflow system due to faulty routing templates or absent approvers. About 5 to 10 such workflows are unstuck by EAS per week. Average time to resolution: 5 minutes per requisition
> * *Data copy from production to development*: Frequent data copies from production to development are required in order to enable reliable testing. Number of copies performed: 23. Average time per copy: 56 hours

- *Banner upgrade scheduling*: Last year Banner provided about 280 upgrades and patches that applied to our installation. NMSU scheduled 196 of those to be applied in 5 Banner instances in batches. Average install-time per upgrade/patch per instance of Banner: 45 minutes. Average test time per instance: 2 hours.

Outcomes Assessment Tracked: No

Instructional Support Services Goals and Projects

ISS is responsible for providing end-user services to students, faculty and staff primarily related to software and hardware technologies with special focus on the academic mission of the university. ISS Training Services provides application administration, documentation, training, and support for NMSU web-based instructional delivery systems, WebCT and Centra, as well as entry level training and support for the university-wide ERP system. PC Support Services is responsible for the setup and maintenance of computer equipment accessing the ICT ACN domain, including computer labs.

The primary goals of ICT Instructional Support Services (ICT/ISS) are to:
- Provide information and communication technology resources and services to support the educational, research, and public service missions of the university.
- Schedule and maintain computer equipment in ICT computer classrooms.
- Maintain and support the general ICT student computing labs.
- Provide documentation, training, and support for the Learning Management System (WebCT and Centra).
- Act as a clearinghouse for training information available to the NMSU community.
- Provide face to face and Web based training opportunities for the NMSU computing staff so they are able to stay up to date with their knowledge and skills.
- Provide computer desk-top support to faculty and staff.
- Develop presentations, brochures, and other literature used to enhance student, faculty, and staff technology literacy.
- Maintain PC Support equipment rental and checkout pools.

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

➢ ***Reorganize Instructional Support Services department (including Training Services (TS), PC Support Services (PCSS), and Student Computing Services (SCS).***
Percent complete:
Status/comments: To provide more coordinated end-user services TS, PCSS, and SCS were consolidated in Instructional Support Services with PCSS providing more leadership support for the labs.
- The PC Support Services manager now oversees both PC support and lab functions and cross-training of all tech staff is in process.
- All ISS areas have been reorganized and now are fully staffed. We will now focus on creating efficiencies within the units.

➢ ***New student computing services and facilities will be planned jointly with student groups for the FY06/07 budget.***
Percent complete: Ongoing

Status/comments: We were allocated $50,000.00 from Building Renewal and Renovation funds and $94,000.00 from student tech fees to update the Jacobs Hall 215 lab. OFS was to begin the remodel during winter break 2006. In November 2006, OFS requested to push the project to summer 2007.

- We began discussions with the Dean of the library to collaborate on a Cyber Café in the Branson Library building.
- We developed a partnership with Auxiliary Administration and placed computers in the Frenger Food Court, Gerald Thomas Aggies Snack Bar, and the Taos Restaurant in Corbett Center.

➢ *Meet with other student support organizations to document student computing needs.*
Percent complete: Ongoing
Status/comments: Meet on a regular basis with Student Technology Advisory Committee and ASNMSU student representatives.

- Continue to have regular conversations with college representatives and deans to stay abreast with their departmental needs.
- Continue to work closely with housing, Corbett Center, and Auxiliary Services personnel to address student needs.
- Donated older lab/rental pool equipment to student groups that made requests.
- Conduct unscheduled visits to labs and info commons areas to watch behaviors and note student needs.
- Continue to stay abreast on student technology trends by reading books, magazines, and online sources.

➢ *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.*
Percent complete: Ongoing
Status/comments:

- Received $50,000.00 in Building Renovation and Renewal funds to remodel Jacobs Hall 205 lab. This project is scheduled to begin in summer 2007.
- Began discussions with the Dean of the Library and Auxiliary Administration to place a cyber café in the Branson Library building.
- Placed 3 computers in Frenger Food Court.
- Placed 3 computers in the remodeled Aggie Express Café in the Gerald Thomas building.

➢ *Develop information and guidelines for file sharing and copyright at NMSU*
Percent complete: 5%
Status/comments: Began discussions with key people in the library that previously created a committee to address file sharing and copyright issues for the university. After various discussions, it became apparent that this issue should be addressed and developed by university legal counsel.

- Continue to collect information related to this topic and met with library staff to reinstate the copyright policy committee. The key player at the library retired and her position is still vacant.
- We will continue to push forward on this policy in 2007.

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

Percent complete: Ongoing
Status/comments: We continue to meet regularly with the Student Technology Advisory Committee (STAC) to discuss student needs and initiatives.

- We continue to work closely with the ICT Student Relations Coordinator and Strategic Relations staff to determine how much and where to allocate student tech fee funds.
- We continue to visit with various faculty and students to assure they are up to date with current initiatives so they are available and informed to give us their support.
- We continue to provide information to STAC about which computers need upgraded, statistics of usage, and other relevant budget information related to the labs and PCSS.

➢ *Address Jacobs Hall building concerns and assure that it is a safe and user friendly environment conducive to learning.*
   Percent complete: 100%
   Status/comments:
- The Mini HVAC system blower/chiller installation to the tech work room and small JA 128 interior lab was completed during summer 2006.
- We requested and received funding for the remodel of JA 205 and work is scheduled to be completed in summer 2007.

PCSS Goals and Assessments

➢ *At the request of ACANS summit participants, we will begin the research process for a university wide Help Desk tracking system that addresses trouble ticket tracking, computer maintenance/repair history, and an inventory component to meet our ever-increasing responsibilities as service technicians and custodians of a very large inventory. Due to the nature of our business and the necessity of moving equipment often, our inventory is constantly changing and must be monitored for accuracy.*
   Percent complete:
   Status/comments:
- We researched and reviewed a several Help Desk software packages (Track-It!, RightNow, LANdesk, and Boss) and spoke with vendors when attending conferences. In late December, ICT was notified that the NMSU Business, Finance, and HR department was interested in providing a Help Desk software system for the entire NMSU community. We will have to conduct a Request for Information (RFI) and then a Request for Proposals (RFP) prior to purchasing this software. We should have the product chosen and at minimum have beta tested by the end of 2007.
- We will continue to collaborate with the ICT Help Desk to achieve this goal.

➢ *Enhance cost recovery for PC maintenance and at-the-desktop services*
   Percent complete: Ongoing
   Status/comments: We acquired 4 new PCSS contracts for a total of $89,706.00 which includes 1 full time PC Support technician position; renewed 19 additional Service Level Agreements and contracts which totaled $47,896.00; and earned $54,811.00 through trouble ticket calls. We will continue to visit with departments and colleges throughout NMSU community to discern needs for service.

- We will continue to review quarterly trouble tickets and hours vs. dollars received for SLA contracts to determine revenue loss due to too many hours spent on servicing more demanding areas.
- We will continue to add more PCs and laptops to the PCSS equipment rental pool to gain revenue from reusing ICT lab equipment.
- We will continue working on staff certification to become self maintainers for Apple, Dell, and Gateway computers. This provides more immediate access to vendor services and supplies and offers a revenue stream when warranty service is conducted on local machines.

➢ *Acquire signed contracts for all PCSS Service Level Agreements.*
   Percent complete:
   Status/comments: All PCSS contracts and Service Level Agreements were obtained and billed for FY 06/07.

➢ *Solicit additional university departments and colleges to secure more Service Level Agreements and contracts.*
   Percent complete:
   Status/comments: We acquired several new Services Level Agreements and contracts in 2006. These include a large contract for the entire Business and Finance Auxiliary Administration department, KRWG-TV, University Communications, Registrar's Office, and the Music department lab. In December 2006, we began discussions with the Business, Finance, and Human Resources department and the department of Student Success.

➢ *Increase number of options for computer purchases in the Bulk Purchase Program (i.e., mini laptops and tablet PCs). PC bulk purchasing programs will be maintained and enhanced based on feedback from the university community who participate in the program.*
   Percent complete:
   Status/comments: We were able to secure a reasonably priced mini laptop option and it is now included in the bulk purchase program. We continue to offer basic desktop, standard desktop, and regular sized notebooks.
- We continue to monitor purchasing trends and requests from our customers.

➢ *Staff to obtain Dell and Gateway technician certification (or renewal) and become active in self-maintainer programs.*
   Percent complete:
   Status/comments: Five out of six PCSS full-time staff are Dell Warranty Parts Direct certified. We have been trying to work with Gateway certification but due to inconsistent or non-present reps, have been unable to push this through. Several PCSS team members are beginning to work on CompTia A+ certification and are exploring the possibility of becoming Apple certified technicians.

➢ *Find viable options to obtain metrics, statistics, outcomes, and assessments for Bulk Purchase Program, Trouble Tickets (i.e., open, closed, monthly, department/college distribution, type of service request, funds acquired, and revenue vs. service hours), workflow, and service.*
   Percent complete:
   Status/comments: We requested more budget, revenue, and report information from the ICT Business Operations office and were able to set up spreadsheets for trouble ticket tracking,

computer Bulk Purchase Program history, and SLA/contract revenue and expense transactions. We requested monthly reports from Business and Finance Auxiliary Administration for the new Pharos print management system. We will have better reporting capabilities for computer trouble ticket tracking and history once the Help Desk software is implemented.

➢ ***Begin training technicians and student support staff to cross-over to lab and Information Commons areas. This will eliminate the division of services and create efficiencies for ISS.***
Percent complete:
Status/comments: This is a work in progress and will take time to train and transition all involved. The PCSS techs that normally service faculty and staff computers were instrumental in the rebuild of several lab machines over summer 2006. Several of the staff are beginning to acquire knowledge for setting up, rebuilding, and servicing Mac computers. We will continue to encourage the staff to be proactive in updating their skills in all areas of PCSS.

➢ **Decrease initial call response time to ½ day.**
Percent complete:
Status/comments: With the addition of new contract and staff employees, we believe we are meeting this goal. At this time it is a hard task to track because we do not have an adequate reporting mechanism to accurately and easily obtain the information. We hope with the implementation of the new Help Desk software these outcomes become measurable.

Labs Goals and Assessments -
➢ ***Complete Pete's Place 24 hour computer laboratory in Corbett Center***
Percent complete: 100%
Status/comments: Grand Opening occurred in February 2006.
- Pete's Place is now the 24/7 lab during normal school sessions.

➢ ***Finalize Pay for Print system selection, test, and begin system implementation in key ICT computer labs.***
Percent complete:
Status/comments: The Pharos print management system was beta tested in fall 2006 and installed in ICT labs for use by students that return for spring semester 2007. On an as requested basis, we will continue to work with departments and community colleges to find solutions for their needs.

➢ ***Upgrade computer equipment in Jacobs Hall 129 lab.***
Percent complete:
Status/comments: Due to a delay in the release of FY 06/07 equipment money, this upgrade is scheduled to occur over the winter holiday in late December 2006.

➢ ***Renovate Jacobs 205 lab by separating the large space into 2 smaller technology classrooms and removing ½ walls. This would not decrease the number of computers currently available, but would allow ICT ISS to have more options for scheduling classes. The rooms would remain open lab space when not scheduled. This project is Student Tech Fee funding dependant.***
Percent complete:

Status/comments: We received $50,000.00 BR &R money and have $94,000.00 in tech fee dollars available for this project. We will establish a student remodel design team for the project and begin meeting in early 2007. The remodel is scheduled to occur in summer 2007.

➢ *Complete construction and setup of assessment lab in Jacobs Hall.*
Percent complete:
Status/comments: Construction is complete and HR testing and various NMSU department training sessions have been held in this room. It also offers additional open lab/collaborative learning space for students when it is not being used for testing and training purposes.

➢ *Acquire signed contracts for all Lab Service Level Agreements.*
Percent complete:
Status/comments: All Lab contracts and Service Level Agreements were obtained and billed for FY 06/07.

➢ *Solicit additional university departments and colleges to secure more Lab and Information Commons Service Level Agreements and contracts.*
Percent complete:
Status/comments: We continue to communicate with departments and colleges about lab and info commons space. We did not acquire any new contracts and Service Level Agreements for this year. We did renew many lab contracts and changed a few to reflect new service terms. Nine of twenty three (or 39%) PCSS contracts are for lab services support.

➢ *Create schedule to reimage all lab and information commons machines at least twice yearly and diligently strive to meet the scheduled maintenance.*
Percent complete:
Status/comments: All lab machines were reimaged during summer 2006.
Lab support staff are continually trying to update and maintain lab equipment to reflect the most current patches, fixes, and upgrades.
- Due to the number of machines and staff time available for this time consuming process, we will need to continue to visit this goal on a regular basis.

➢ *Create a more efficient storage, tracking, and inventory system for the PC Rental Program.*
Percent complete:
Status/comments: PCSS is responsible for maintaining an accurate inventory for well over 1000 items. A student worker was hired in early 2006 to assist the PCSS technician responsible for setting up the new inventory tracking system, WASP. The new tracking system allows us to tag and track the location of non-capital equipment.
- We continue to work closely with ICT Business Operations to organize and track capital equipment items.
- Rental program contracts and spreadsheets were organized and updated and a thorough assessment of rental equipment inventory was conducted by our new student worker.
- The student worker will continue to work closely with the PCSS and Business Operations staff to assure accurate records.

➢ *Work with other colleges, the library, ASNMSU, Housing, Corbett Center, and Auxiliary Services to determine need and provide additional labs and/or Information Commons areas.*
Percent complete:

Status/comments: We began conversations with the Dean of the Library and Business and Finance Auxiliary Administration staff to determine the feasibility of constructing a cyber café in the Branson Library. These conversations and planning are expected to continue throughout 2007.

- We developed a partnership with Auxiliary Administration and placed computers in the Frenger Food Court and the Gerald Thomas Aggie Snack Bar.

➢ *Audit lab software to assure compliance and record software update needs.*
Percent complete:
Status/comments: We addressed a need for the same version of SAS software in various labs. We were able to upgrade all labs to the same version with the collaborative effort of ICT, Colleges of Ag, Government, Anthropology, and Sociology.

- We have become more diligent in having special request forms filled out prior to the installation of any new software.

➢ *Collaborate with other colleges and departments when purchasing software so cost sharing benefits the university.*
Percent complete:
Status/comments: We established criteria and shared the costs with other colleges, departments, or tech group for a Help Desk Institute membership and Gnosis Web based technical courseware packages.

➢ *Begin training technicians and student support staff to cross-over to PCSS Faculty/Staff areas. This will eliminate the division of services and create efficiencies for ISS.*
Percent complete:
Status/comments: This is a work in progress and will take time to train and transition all involved. We will continue to encourage the staff to be proactive in updating their skills in all areas of PCSS.

Training Services Goals and Assessments -

➢ *Create infrastructure for online distance education counseling*
Percent complete: 0%
Status/comments: ICT Training Services staff will address this goal/request in 2007.

➢ *Funding dependent, an upgrade to WebCT Vista is planned for July 2007 with a pilot system available January 2007. An upgrade to WebCT Vista is funding dependent. If funds (either university or statewide) become available, the WebCT upgrade will become a priority goal.*
Percent complete: 5%
Status/comments: It became apparent in Q4 of 2006 that NMSU may become involved in a statewide initiative to receive funding for a Learning Management System. We will know more about the status of this project by the end of the New Mexico legislative session (Late March 2007).

➢ *Provide support for regular training for technology classrooms at all campuses*
Percent complete: 100%
Status/comments: ICT Training Services staff offered training on Technology Classroom use, but had limited response and participation. They will continue to conduct this course on an as needed basis.

- ➤ *Luminis Content Management System training sessions, online tutorial, and FAQ will be developed.*
  Percent complete: 100%
  Status/comments: On an as needed basis ICT Training Services conducts CMS training using the training guide written by SCT Luminis and provides consultation upon request. It was determined that an online tutorial was not the proper method to address customer needs. FAQs will be developed as more people are trained to use the CMS and questions are posed.

- • *Research profit-making opportunities for training (e.g., Cognos Academic Material sales, WebCT training material sales, site hosting for outside training vendors). Investigate an agreement with New Horizons, or other vendor, for application and technical training. Begin to collaborate with WebCT and other training resource vendors to provide a hosting site for various technical training sessions.*
  Percent complete: Ongoing
  Status/comments: Purchased online technical courseware through Gnosis and distributed costs between other departments that wanted to use it.
    - • Developed partnership with New Horizons for NMSU to be a hosting site until they are able to build a space in Las Cruces.
    - • The current agreement is 1-2 NMSU attendees will be free for each course hosted and a 25% discount for all other NMSU participants.
    - • ICT Training Services staff will continue to track and promote technical trainings for this group.

- ➤ *Provide training for Luminis CMS.*
  Percent complete: 100%
  Status/comments: ICT Training Services began conducting training for Luminis CMS on October 2, 2006, and will continue to offer this training on an as needed basis.

- ➤ *Continue to develop, write, and deliver Cognos reporting documentation and training for UNO/Banner users. Support Cognos related training and documentation as needed for the HR, Finance, and Student modules.*
  Percent complete: 95%
  Status/comments: The Training Services group began monthly training sessions for Cognos Powerplay and began working with the ICT and Business Finance and HR groups to discern training needs of the NMSU community.
    - • Workshops are held on an as needed basis as requested by functional areas.
    - • Scheduled trainings will occur once all Banner systems are fully working and report packages are created for the various NMSU departments.
    - • We are waiting for package security to be defined and direction from the ICT reporting group as to who within the NMSU community needs to be trained.
    - • Curriculum and instruction is being developed for 3 levels of Cognos training (Reportnet, PowerPlay, and Cubes).

- ➤ *Provide excellent technical support and consulting services for faculty.*
  Percent complete: Ongoing
  Status: The Training Services group continues to get many positive comments from faculty, staff and students. We will continue to have a high level of service standard.

- ➤ *Develop and implement a quality assurance plan for training and documentation.*
  Percent complete: 85%

Status: During 2006 the group developed a course materials design template and curriculum development procedures. These new initiatives require collaborative efforts within the group and that will ultimately enhance end user training experiences.

➢ *Create publicity opportunities for ICT Training Services so the group has more exposure to the university community.*
Percent complete: Ongoing
Status/comments: At the request of ICT and ACANS staff who attended the customer service and NMSU IT summit, brown-bag type technical sessions were developed. Three sessions were conducted since the summer of 2005 and six additional sessions were conducted in 2006. The sessions are to cover relevant IT topics presented by staff throughout the NMSU IT community.
  o Information tables were again set up during New Student Orientation, Aggie Welcome Week, and the Aggie Experience.

➢ *Continue student trainings, presentations and info tables. Find additional opportunities and outlets to work with students and stay abreast with their technology needs.*
Percent complete: Ongoing
Status/comments: ICT Training Services student presentations were conducted during the following events:
  ▪ Aggie Welcome Week
  ▪ Lab Assistant trainings
  ▪ Camp trainings
  ▪ Information Tables
  ▪ Technology Day
  ▪ ICT Presentation UNIV 115
  ▪ Aggie Experience Information Fair
  ▪ Banner Student "Go Live," Pete's One Stop help center
  ▪ STAC Meetings
  o During fall semester 2006, free WebCT training was once again provided to Graduate Assistants that work with professors who use WebCT extensively in their curriculum.
  o A Technology day was conducted during the first part of the semester and was very successful. The event included ACANS members that wished to participate.

➢ *Create and update online FAQ, tutorials, and information pages.*
Percent complete: Ongoing
Status/comments: Frequently Asked Questions (FAQ) documentation related to Training Services and student technical needs were produced and made available to the NMSU community.

➢ *Collaborate with other campus units to plan and host summer ITAL.*
Percent complete: Ongoing yearly
Status/comments: The partnership between ICT, the College of Extended Learning, the Teaching Academy, Media Services, and the Library produced 20 faculty member graduates in the summer of 2006.
  • College of Extended Learning secured funds to purchase laptops for the summer 2007 sessions.

- ➢ ***Become clearing house for university wide training initiatives. Collaborate with other campus departments and ICT units to work on creating a university-wide "Technology Help Doc" repository area.***
  Percent complete: 15%
  Status/comments: Training Services staff created a new portal for their home page and it offers various entry points for customers looking for different types of training events.
    - o We began conversations with other NMSU training groups and hope to find a time in spring that the various groups can come together and share information about their areas. Our hope is that this event will allow people to open the door to networking with others that do similar work.

- ➢ ***Review Centra software needs to determine if it is still the best solution for the NMSU community. Increase Centra technical support service level.***
  Percent complete: Ongoing
  Status/comments: Centra continues to be the preferred NMSU web-based tool to create live online meetings, classes, or conferences. It also works effectively over modem connections. During the past year, Dona Ana Community College, Ag Extension, College of Extended Learning, and ICT Training Services have been the heaviest users and supporters of the application.
    - o With the addition of a 15% NMSU staff member, ICT Training Services is now capable of supporting and promoting the Centra online learning tool while continuing to increase the technical support service level campus wide.
    - o There is a statewide initiative to look at other programs of this type and we will not know the outcome until mid 2006.
    - o To increase the usage of the product and show the NMSU community what capabilities this tool offers, the ICT Training Services group and Ag Extension provided free training and events.

- ➢ ***Actively introduce new technologies and related training to NMSU.***
  Percent complete: Ongoing
  Status/comments: The group should have more time and human resources to put into this initiative in 2007.

- ➢ ***Design, collaborate, and market Pathway to Campus-wide Learning Technologies program.***
  Percent complete: Ongoing
  Status/comments: The group should have more time and human resources to put into this initiative in 2007.

Security and Research Computing Goals and Projects

ICT SRC comprises of two departments, namely Reporting Services (RS) and University Computer Center (UCC). This past year marked a number of substantial projects in support of the university mission. Although some of our goals were not met, we took on additional requirements that were more important to university. In particular these groups oversaw

- The decommissioning of FOCUS – An annual savings of $120K
- The deployment of Cognos reporting tool for student
- Elimination of 90% of printing in the data center creating an annual savings of $60K
- The support of distributed printing for Banner Student

- Support the redirecting of Banner Admissions letters to admissions office saving NMSU lost time in personnel traveling to the data center.
- Planning the installation of a Beowulf cluster purchased by Mechanical Engineering
- The support of Positive Pay and ACH for payroll with Wells Fargo.
- Support the creation of 20 appworx process for student, 8 process for financial aid
- Continued support of 126 appworx process for finance, and 45 processes for HR

Progress in Security and Research Computing (SRC)
This section details progress achieved for FY 06-07 for Information and Communication Technologies in the areas of Security and Research Computing.

➢ *Fully implement PIX/VPN firewall for high end users*
   Percent complete: 25%
   Status/Comments: Due to the heavy demands with Banner student, this project required delays this past year. We continue to block ODBC access from off campus and limit the access of specific accounts.

➢ *Support Appworx Deployment for HR and student*
   Percent complete: Ongoing
   Status/Comments: HR has delayed appworx implementation, even with continued requests to complete.
   - Student Appworx projects include the deployment of regular running of advising documents to eprint, a summary of sudent majors to eprint, failing grades report, ID card interface, VISTAS SSI loads to ODS, Email drops to USA for mass email management, financial aid interface
   - Additional efforts were made to support appworx finance to support positive pay and ACH to wells fargo (a project that needed a solution in 2 days due to late planning when we moved from BOA to Wells Fargo)

➢ *Assess current administrative reporting needs with IRPOA to revise and implement NMSU central and end user reporting policy and procedures including the roles of the departments and central administration for data entry, information storage and data reporting*
   Percent complete: Partially completed.
   Status/Comments: Progress includes an initial format for a web portal for reporting, architectural design for enterprise reporting

➢ *Deploy HR end user package, Deploy Finance core packages to production*
   Percent complete: Complete
   Status/Comments: With the new reorganization of Business and Finance, these packages were withdrawn from service. ICT-RS continues to support new packages being deployed by Business and Finance

➢ *Publish data security standards and guidelines for NMSU.*
   Percent complete: Complete
   Status/Comments: http://ict.nmsu.edu/Guidelines/NMSU-data-policy.html

- ➢ *Implement new, consolidated procedure for scanning forms and tabulating results, particularly for testing and course evaluations*
  Percent complete: Ongoing
  Status/Comments: This task requires that we replace custom VM software with Java based software that runs on the scanning PC. The vendor software is too time consuming. This is expected to be a Student Summer project.

- ➢ *Create a university data dictionary for key information commonly used in internal and external reports.*
  Percent complete: Ongoing
  Status/Comments: The salsa.nmsu.edu site contains the meta data from the ODS structures. Much of the low level dictionary
    - A high level reporting portal is being developed (new goals).

- ➢ *Meet with VPR staff to determine role and support structure for Info Ed (with Mrinal)*
  Percent complete: No progress
  Status/Comments:

- ➢ *Implement long term printing strategy*
  Percent complete: Ongoing
  Status/Comments: Substantial progress has been made in this area. In particular the reduction of mainframe printing at the 90% level. Residual printing remains in support of the old SAM Financial Aid system.
    - We continue to have a need to print volume of labels.
    - Many of our reports for student are now using eprint.

- ➢ *Continue to support the Adventures in Supercomputing Challenge.*
  Percent complete: Ongoing
  Status/Comments: Participated on the Board for the NM SuperComputing Challenge.

- ➢ *Develop standards for data transmission*
  Percent complete: Complete
  Status/Comments: http://ict.nmsu.edu/Guidelines/NMSU-data-policy.html

- ➢ *Document faculty computing needs*
  Percent complete: Ongoing
  Status/Comments: Performed by Strategic Planning. Resulted in a common statewide funding project.

- ➢ *Participate in research grant proposals*
  Percent complete: Ongoing
  Status/Comments: Participated in grants with Jeanine Cook and Martha Mitchell. Worked on project proposals with LANL

- ➢ *Oversaw the removal of FOCUS (NEW)*
  Percent complete: Ongoing
  Status/Comments: Due to a requirement by FOCUS to pay $120K, we created a project to replace the existing student FOCUS jobs into a set of Cognos reports.

- ➢ *Support Banner Student Go Live Project (NEW)*
  Percent complete: Ongoing
  Status/Comments: Dedicated June/July and August to Project Management of Student due to absence of the primary Project Manager
    - Oversaw the deployment of admissions into ERP Banner in September
    - Created Appworx process to run advising documents to eprint on a bi-weekly basis.
    - Wrote stop-gap PL/SQL code to list majors and deliver into Eprint

- ➢ *Design Data center for all campus use (new)*
  Percent complete: Ongoing
  Status/Comments: Created plans for all campus data center
    - Took on new customers (mainly education)
    - Reviewed power consumption requirements

Strategic Relations Goals and Projects

The primary goal of ICT Strategic Relations (ICT/SR) is to bring various stakeholders together to address university-wide and state-wide technology opportunities or issues. Services include partnership identification/engagement, ongoing expectation management and reporting for funded projects, development of new funding proposals, strategic and tactical planning, researching value-added technologies, and communication about technology services. Examples of these services include ongoing coordination/reporting for student technology fee projects, development of statewide multi-institutional funding proposals, creation of RFPs, and management of stakeholder expectation via development of MOUs & SLAs.

In Q1-2006 ICT/SR one staff FTE position (Alex Garcia) was moved to ICT Enterprise Applications Services to provide needed BPA support and to assist in implementation of a new Campus-wide Room Scheduling System. In Q1-2006 ICT/SR picked up PI responsibilities on a project funded through the Higher Education Department.

Progress in Strategic Relations
This section details progress achieved for FY 06-07 for Information and Communication Technologies in the area of Strategic Relations.

- ➢ *Cultivate Funding & Partnership Opportunities*
  Percent complete: Ongoing
  Status/comments: In 2006, ICT/SR strengthen a number of working relationships with a number of entities including student government, colleges, funded programs, state agencies, governor advisors, state legislators, and other education institutions. Most (but not all) of these relationships were related to the statewide proposal to develop collaborate eLearning technologies. These relationship resulted in significant funding for this initiative ($6.4M non-recurring, and $1.1M ongoing), plus aligned efforts of several other funded initiatives (i.e. NMLN, RETA, E2T2, etc.). The key to maintaining these relationships is to ensure that the projects that were funding are successful. This is not a trivial task, but will ensure that additional funded projects are built on prior ones.
    - In 2006, ICT/SR initiated a concept document with the College of Engineering around Information and Communication Literacy as the basis for a future Title V proposal to be developed in 2007. This is an important proposal because if the

Federal Government removes the wait out period for HSIs then Title V has the potential to be and ongoing program. Updates will be reported next year.

- In 2006 ICT/SR arranged an Asprey Award event to honor the Asprey family who are generous donors that set up an employee award for ICT. We plan to invite the Asprey family back to employee award ceremonies in 2007.

➤ *Develop CHECS & NMSU Funding Proposals*
Percent complete: 100%
Status/comments: In 2006 ICT/SR took the lead on developing several state funding proposals. Eleven of these were NMSU specific proposals, and one was a large multi-institutional proposal. The eleven NMSU proposal included;
1) Banner/Luminis Hardware Replacement; 2) Core SAN Storage Replacement; 3) NMSU Classroom Technology; 4) University-wide Reporting Services Hardware; 5) NMSU Core Network Upgrade; 6) NMSU Wireless Initiative; 7) E-Portfolio; 8) Web-based Course Evaluation; 9) Outcomes Assessment; 10) University Help Desk and FAQ Solution; 11) Statewide Networking Partnerships. Four of these proposals were recommended for full funding by the Higher Education Department. The State CIO's office did not recommend any of these. However, $7.5M ($6.4 non-recurring and $1.1 recurring) of funding was approved by the legislature and the Governor for the large multi-institutional proposal that was an evolution of a prior year proposal. The proposal was eventually made into a Governor's initiative called IDEAL-NM. This initiative is discussed in more detail later in the report.

➤ *Student Technology Fee Accountability*
Percent complete: 100%
Status/comments: In 2006, ICT/SR provided account oversight, coordination, and reporting for over $900k in funding provided by the students of NMSU through a direct student technology fee. This involved working directly with STAC (Student Technology Advisory Committee) and various areas of ICT that deliver student services including Student Computing Services, Telecommunications and Network Services, Enterprise Applications Services, Help Desk, Training Services, etc. Coordination included ensuring the funds were expended for the appropriate projects or services, and that proper reporting occurred.

➤ *Student Technology Fee Increase Proposal*
Percent complete: 100%
Status/comments: In 2006, ICT/SR prepared a proposal for a increase in the Student Technology Fee at NMSU. This proposal included extensive updated research related to student technology fees and services at peer institutions. The research went beyond what could be found on websites and included telephone follow-ups and cross checking with other national surveys to ensure there was a accurate picture of what technology services are provided to students at peer institutions and what the student fees are at the overall campus and individual college/department level.

➤ *Conduct ACANS Fall Planning Event*
Percent complete: 100%
Status/comments: In 2006, ICT/SR organized the Fall ACANS Planning Summit that was held October 5, 2006 at The Hotel Encanto de Las Cruces. Participants included technical and functional personnel from across all NMSU campuses and colleges. Preparation for the planning event involved updating the profiles of the ACANS membership and ensuring correct contact information was available. The focus of the Summit was IT planning and

support relative to the initiatives set forth by the NMSU administration. Participants took part in various sessions throughout the day that focused on input discussion and future expansion of support from IT areas. The five initiatives selected by participants to discuss during the Summit were; 1) Branding Initiative; 2) Facilities Master Plan; 3) Creative Media Institute; 4) Unifying NMSU Online (UNO); 5) Foundations of Excellence – 1st Year Experience. The results of the summit are reported in a Wrap-up Report which will be posted to the ACANS website (http://acans.nmsu.edu).

- *Maintain ACANS News &Info Center*
  Percent complete: 100%
  Status/comments: The "ACANS News and Information Center" was launched in January, 2006 (URL: http://acans.nmsu.edu/) as the first production application for the Luminis CMS (Content Management System). SR oversees up to 2 graduate students that develop the stories that are added to the ACANS site on a continuous basis rather than the concept of a monthly newsletter. Selected stories are announced on the ACANS listserv, the NMSU Student News, and the NMSU Hotline with a link back to the ACANS Center. To submit story ideas or for more information on the ACANS News and Information Center contact SR (646-4857 / ict_sr@nmsu.edu).

- *Lead selection of room/event scheduling software*
  Note: Implementation of this project has been moved to ICT/EAS along with 1 FTE
  Percent complete: 100%
  Status/comments: In 2006 ICT/SR lead in the selection of room scheduling software through an RFP process coordinated with NMSU procurement. The primary goal of this project is to provide all NMSU campuses a web-based scheduling system that will serve the scheduling needs for classrooms, conference spaces, and other shared resources. A selection team was formed including the Purchasing department, Registrar, Conference Services, and DACC. An RFP was developed and sent out and responses were received, and following the selection process the Ad Astra scheduling system was selected. ICT/EAS will lead the product implementation.

- *Principle Investigator – NMLN Project*
  Percent complete: 25% (ongoing)
  Status/comments: In 2006 ICT/SR acquired Principal Investigator responsibility for the New Mexico Learning Network Project. This project has major implications for NMSU and the state of NM. The NMLN Project is funded through the NM Higher Education Department (FY05-FY07=$1.2M). The primary goal of the project is to create sustainable statewide services for eLearning opportunities in New Mexico provided by public educational entities. This project is dovetailed with the IDEAL-NM project described later in this report and will be moving from planning to implementation phase in 2007 with NMSU playing a lead role in this statewide initiative.

- *IDEAL-NM – Statewide LMS, Web Conf, and Cyber Academy*
  Percent complete: 10%
  Status/comments: ICT/SR has taken a lead role in IDEAL-NM which is a statewide Governor's initiative to develop statewide eLearning software standard and create a statewide Cyber Academy with an initial focus to serve rural high schools. IDEAL-NM has as primary goals to acquire and fund a common learning management system and web-conferencing system for higher and public education. Additionally it has as a primary goal which is more visible to legislators is the creation the NM Cyber Academy with an initial focus on eLearning courses delivered to students in rural high schools (eventually all high schools).

- **ICT Outcomes Assessment**
  Percent complete: 50%
  Status/comments: Annual Report outline to Directors sent out – this included questions needed to complete assessment and will be used to assess selected ICT Projects and Services. ICT directors will identify which key services will have Outcomes Assessments and what the outcome measures that will be applied. Results from the OA results will be reported in July, 2007.

- **Complete faculty computing services survey**
  Percent complete: 75%
  Status/comments: The survey "Faculty Adoption of Instructional Technology" was completed in 2006 and a summary report was given to the Faculty Advisory Committee on Technology (FACT) before the end of the spring semester. Most relevant observations were that classroom technology does not yet have consistent enough availability or reliability to allow for broad faculty adoption. WebCT is used by approximately 50 percent of NMSU faculty, but a significant percentage of faculty members would like better functionality in an upgraded Learning Management System. The results need to be more broadly distributed and potential for another survey to be done in 2008 to understand how faculty adoption and perceptions of instructional technologies change over time.

- **Lead selection and implementation of web-based course evaluation software**
  Percent complete: 25%
  Status/comments: ICT worked with IRPOA to evaluate a variety of survey software and services that could be used for a variety of purposes (including this project). An online course evaluation pilot using this tool was planned for spring 2006, but was not completed due to personnel/priority changes in IRPOA and other ICT/SR priorities. In 2007, DACC will be conducting an investigation of automating course evaluations and ICT/SR will offer to help in that effort with an eye towards multi-campus adoption. The goals are to decrease inefficiencies of the past/current process to perform evaluations, improve turnaround of information for faculty, and have an instrument that is valid and reliable.

- ***Continue longitudinal study of NMSU student ownership and use of technology and satisfaction with technology services***
  Percent complete: 100%
  Status/comments: NMSU did participate in a national ECAR study that measured student use and attitudes related to information technology. This study occurred in the spring of 2006 and results, including peer comparisons, are available in the fall. The NMSU response rate was low with 54 responses. Results were shared with the Student Technology Advisory Committee (STAC). Reference the URL: http://www.educause.edu/ir/library/pdf/ers0607/ERS0607w.pdf to see the study.

- ***Update the campus-wide "Assessment of Educational Technology" for review by the Faculty Senate Technology Committee (FSTC) and others.***
  Percent complete: 0% (transferred)
  Status/comments: This assessment report of the status of classroom technology was compiled in 2005 by Alex Garcia who is no longer in ICT/SR. ICT/TNS (Nolan Gray) assumed responsibly for producing this report.
- ***Communicate IT policies and their impact to NMSU departments***
  Percent complete: 100% (ongoing)

Status/comments: ICT/SR participates with other ICT departments as needed to communicate to the various NMSU stakeholders concerning changes and IT policies. This is done through the student and faculty advisory committees, ACANS News & Info Center, hotline, student news, and targeted email.

> *Investigate and propose an online testing and evaluation policy*
> **Percent complete:** 0% (postponed)
> **Status/comments:** This goal has been postponed until the selection of the statewide Learning Management System. Different solutions may be chosen based on which system is selected.

> *Revise NMSU acceptable use policy*
> **Percent complete:** 0%
> **Status/comments:** This goal was not completed

> *Update Educause Core Data Survey for NMSU*
> **Percent complete:** 100%
> **Status/comments:** ICT/SR worked with the various ICT areas to gather and complete an accurate submission for NMSU to the Educause Core Data Survey. This study is one that NMSU participates in each year and is an important source of data that is used for a variety of peer comparisons.

Telecommunication and Networking Services Goals and Projects

ICT Telecommunication & Networking Services (*TNS*) consists of the Data and Video Services; Voice and Alarm Services; and the Classroom Technology groups. It is a department of Information & Communication Technologies (*ICT*) the central information technology organization at New Mexico State University. The primary TNS function is to design, maintain and provide fundamental telecommunication infrastructure and services. These services include but are not limited to the following:

- Voice
- Data
- Video
- Alarm
- Classroom technology
- ICT Help Desk

- Cable and instructional television
- Satellite up and down link services
- Video conferencing services
- Web casting services
- DHCP/DNS services
- Wireless services

ICT Telecommunication and Networking Services has three main functions: design and maintain the fundamental telecommunication infrastructure, classroom technology, 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).

In addition, TNS manages and operates the statewide intranet for education known as CHECS-Net. CHECS-Net provides Internet and video services to many educational institutions in the state.

Progress in Telecommunication and Networking Services
This section details progress achieved for FY 06-07 for Information and Communication Technologies in the area of Telecommunication and Networking Services.

- ➤ *Complete NLR Connection (to NMSU)*
  Percent complete: 50%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
  - The fiber purchase from El Paso to Santa Fe was completed in October 2005
  - Need to complete the fiber build from the above fiber path to NMSU
  - A path using El Paso Electric power lines was developed
  - Business office negotiated agreement with El Paso Electric
  - An RFP was awarded to Lynco Electric in early 2007 to build this fiber

  Comments: Connectivity is very important for the future of NMSU. This project will tie NMSU directly to the high speed national networks. This project is scheduled to be complete by Summer 2007

- ➤ *Complete "Big Pipe" project with State of NM*
  Percent complete: 75%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
  - Completed fiber purchase in October 2005
  - Establish an MOU between major stake holder (NMSU, NM TECH , and GSD)
  - Negotiating and purchasing the Collocation Agreements
  - Complete the design of the fiber backbone network
  - Plan stakeholder access
  - Purchase and install DWDM equipment for path from Santa Fe to El Paso

  Comments: Working with all entities to develop a solution that meets all the partner's needs.

- ➤ *Plan, and possibly complete, PSL NM Dot fiber project*
  Percent complete: 50%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
  - Completed fiber purchase in October 2005
  - Generate MOU between major stakeholders (NMSU (ICT and PSL), and NMDOT
  - Develop a design for connection of Santa Teresa in the Rio Grande Corridor Fiber Project
  - Project was held up by the NM FHWA administration
  - We have decided as a group to let NM DOT take the lead on the project

  Comments: There are ongoing meetings of the stake holders. A draft of the MOU, MOA and budget have been created and submitted to the funding agencies.

- ➤ *Complete installation of all planned technology classrooms*
  Percent complete: 100% of planned and scheduled for the period
  Outcomes Assessment Tracked (y/n): Yes
  Service metrics- **Completed Projects:**
  - Senate Chambers and Gallery (need second confirmation vote by ASNMSU)
  - Regents Room
  - Hadley Hall Conference Room

- English 125, 127
- Communication Studies – Speech Bldg 247
- Special Education – Speech Bldg 191
- Breland Hall 192
- Chemistry 203
- Three rooms in Gerald Thomas
- Install Doc Cams in 6 room of HSS
- Teaching Academy Training Room
- Training Room in Jacobs Hall 205
- Biology 201, pending remodel
- Milton Hall 133 and 152/153
- Install cameras and microphones in 6 rooms with central DVR in Speech

Comments: A standard configuration developed for a multimedia classroom and is being implemented campus-wide. There are many new requests for installation. We received an extremely nice note from the Speech department on who much the technology has helped the department.

➢ *Obtain funding for additional technology classrooms*
    Percent complete: 100%
    Outcomes Assessment Tracked (y/n): Yes
    Service metrics:
- Developed a model of cost-sharing between ICT and the Departments
- ICT obtained $65,000 in funding from the Student Technology Fee, an increase of $15,000 from the previous year
- ICT obtained $30,000 in funding from the BRR process, double the amount of last year
- Obtain at least an equivalent amount from the individual departments , in FY 05/06 obtained an $211,000 from the colleges compared to the 75000 in central BRR and Student Tech funds. This is a ratio of 2.8 to 1.

    Comments: The cost-sharing model has been instrumental in developing "buy in" from the departments. The BRR and student tech fee money nicely complement the ERR money that departments usually have available

➢ *Continue NMSU wireless network*
    Percent complete: 100%
    Outcomes Assessment Tracked (y/n): No
    Service metrics:
- Goddard Tower
- BC Commons Area
- GT Commons Area
- Chemistry Commons Area
- Science Hall Commons Area
- Garcia Annex Lobby
- Zuhl Museum
- ARB South Side
- Guthrie Commons Area
- Activity Center Commons Area

Comments: The above were priorities set by the students. New areas are added as funding is available. The student tech fee is providing $30000 in funding for FY05/06. In FY 06/07 ICT received $50,000 in student tech funding. The city took the lead on the wireless project in the city and the funding was not approved.

➢ *Implement VOIP Test*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
     • Implemented the Ericsson Telephony Server System
     • The system can provide IP, Digital and Analog Telephony Service
     • The trial was successful and we deployed VOIP as service as result of the trial
     • A Cisco VOIP test was also deployed in the Albuquerque center
     • Created VOIP kit for the NMSU Police, this will allow the PD to set up voice communications anywhere on the NMSU network
  Comments: This allows us to provide enhanced voice services to areas of campus to far away to receive digital service. We are now able to provide digital like services in over IP to DSL connected sites.

➢ *Expand revenue generation for video services*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
     • Upgraded the video and webcast infrastructure with HED money
     • Convocation, graduation and Navajo Language sporting are webcast on a regular basis
     • Expand Video Conference bridging services
     • Expanded the service to education entities in New Mexico
  Comments: ICT continues to expand its core video infrastructure.

➢ *Provide regular training for technology classrooms at all campuses*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
     • Training is provided at the beginning of every semester.
     • Training is provided on an as requested basis
     • Training is essential for getting "buy in" from NMSU instructors
  Comments: ICT believes that providing training is necessary for the most effective use of classroom technology.

➢ *Install and configure firewall*
  Percent complete: 75%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
     • Redundant Firewalls have been purchased
     • The primary and secondary firewalls have been installed
     • The primary firewall is running in "pass through" mode to gather statistics
     • Receive security policies for Security group

- Configure security measures
- Convert all direct access users of production databases to a VPN solution

Comments: The primary firewall was installed in July 2005. The security features should be implemented by March 2006.

➢ *Install and configure proximity card access system*
    Percent complete: 80%
    Outcomes Assessment Tracked (y/n): No
    Service metrics:
- Went through an RFP process in conjunction with OFS
- The central servers have been purchased and installed
- Phase 1 has been completed, four doors in Computer Center building
- Working with OFS and NMDA to convert their systems

Comments: Other departments are also interested in connecting to the central system. The system selected manages both network and standalone card access system.

➢ *Create standards for automatic vacation email and voicemail messages*
    Percent complete: 25%
    Outcomes Assessment Tracked (y/n): No
    Service metrics:
- Work with campus community
- Work with vendor to implement solution

Comments:

➢ *Complete voicemail upgrade survey and plan*
    Percent complete: 50%
    Outcomes Assessment Tracked (y/n): No
    Service metrics:
- Voicemail feature sets were researched
- Voicemail survey was created and given to IRP for distribution
- Results of survey expected in March
- Issue RFP based on survey results
- New Voicemail system should be purchased and installed by summer of 2006

Comments: The voicemail system is scheduled to be complete before fall semester 2006.

➢ *Install new 911 system*
    Percent complete: 100%
    Outcomes Assessment Tracked (y/n): No
    Service metrics:
- The system was specified in conjunction with the NMSU Police Department
- The design was approved and a system was procured
- A mechanism was developed to handle unlisted calls
- The system was installed
- Training was provided
- The upgrade doubled the number of 911 stations
- Provides a redundant database in case of lose of the network

Comments: This upgrade was completed in March 2006.

> *Install fiber to east side of I-25*
>> **Percent complete:** 100%
>> **Outcomes Assessment Tracked (y/n):** No
>> **Service metrics**:
>> - Identified fiber path
>> - Identified termination/splice location for future growth
>> - Procured and installed fiber
>> - Used HED and BRR funds to complete this project
>
> **Comments:** The growth on the east side of I25 requires telecommunications services be provided to that area.

Other Projects for Calendar Year 2006
The area of telecommunications is very dynamic and as such there are many projects which are not defined in the yearly goals, but yet are important. This section details those projects

> *Converted PSL to the NMSU Central Phone System*
>> **Percent complete:** 100%
>> **Outcomes Assessment Tracked (y/n):** No
>> **Service metrics**:
>> - Surveyed Existing System
>> - Provided financials associated with the conversion
>> - Developed a migration strategy and plan
>> - Purchased and installed new equipment
>> - Converted system in a slow migration over a period of a month
>> - 370 phones were converted to the NMSU central system
>
> **Comments:** This project was completed in July 2006.

> *IDEAL New Mexico Support*
>> **Percent complete:** 100%
>> **Outcomes Assessment Tracked (y/n):** No
>> **Service metrics**:
>> - Project to develop a state wide LMS and Web conferencing system
>> - Co-wrote the business plan associated with the Ideal NM project
>> - Helped develop the budget
>> - Developed input by attending several statewide meetings
>> - The project was submitted with an $8.5 million dollar one time budget and a $2.5 million dollar ongoing budget.
>
> **Comments:** This project was funded at a reduced rate during the spring 2007 legislative session. It was funded at $6.4 million dollars with $500K in ongoing funding.

> *Upgraded the Telephone Switch from version BC11 to BC13 (Telephony switch)*
>> **Percent complete:** 100%
>> **Outcomes Assessment Tracked (y/n):** No
>> **Service metrics**:
>> - The upgrade was completed in August 2006; Alamogordo in 12/2006
>> - This brought some of the feature sets available on the telephony server
>> - The services available under the new platform are IP telephony and caller ID
>
> **Comments:** This upgrade enabled TNS to provide other critical services.

- ➢ *Pan American Center Support*
  Percent complete: 85%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
    - The Pan American Center was remodeled in 2006
    - This resulted in a complete revamping of the data, voice and video services in the building
    - Many additional requirements were added. This includes additional network outlets, video distribution and telephone support.

  Comments: This project will continue until the remodel is complete, the expected in Spring 2007.

- ➢ *Internet Upgrade*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
    - The Qwest Upgrade the Internet feed was increased from 180 to 225 Mbps

  Comments: This project was completed in October 2006.

- ➢ *Foster Hall Support*
  Percent complete: 75%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
    - Designed new network, voice and fire alarm infrastructure
    - Added voice, data and fire alarm capabilities
    - Added Wireless capabilities
    - Added technology classrooms

  Comments: This project is scheduled to be complete by August 2007.

- ➢ *Entertainment Television for Pinion Hall*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
    - Specified a new central distribution system
    - Negotiated services and price with housing
    - Did an RFP for the distribution equipment
    - Installed the equipment
    - Entered into a service agreement for satellite cable services

  Comments: This project was completed in August 2006. We have had no complaints with the service.

- ➢ *DNS/DHCP upgrade*
  Percent complete: 100%
  Outcomes Assessment Tracked (y/n): No
  Service metrics:
    - Specify and procure a high available system for DNS and DHCP
    - Modify network registration process to be instantaneous
    - Have the NMSU network registration system authenticate against LDAP

- Blue Cat Adonis project was selected for the DNS portion of this project

Comments: This project was completed in December of 2006. The HED money was used to fund this project.

➢ *A Mountain Project*

    Percent complete: 50%

    Outcomes Assessment Tracked (y/n): No

    Service metrics:

- Move wireless data equipment to the new tower site
- Negotiate with BLM and EPE on new electrical path
- Fiber will ride the same path
- Extend fiber to new tower
- Provide service for KRWG
- Provide service for life safety

Comments: This project was completed in August of 2004.

➢ *Creative Media Institute*

    Percent complete: 100% of planned activity

    Outcomes Assessment Tracked (y/n): No

    Service metrics:

- Move campus cable equipment to another location
- Reroute existing services to facilitate construction
- Design and install multimedia classrooms
- Provide services to new CMI area
-

Comments: This project was completed by August 2006.

➢ *Small and Other Projects*

    Percent complete: 100%

    Outcomes Assessment Tracked (y/n): No

    Service metrics:

- Children's Village Phase 3 completed Summer 06
- Family resources completed May 06
- East Mesa Phase 2 completed Summer 06
- Zuhl Museum East Side Addition November 06
- Adding fiber to bolster campus network
- ACD Deployment for Harris Corporation
- Banner Room Remodel at PSL
- Now monitor 100 Fire Alarm, 66 security panels and 4 card access system

Comments: There are many other daily projects these are biggest of those projects.

Relationship to the State of New Mexico 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 philosophy follows precisely the guidance of the State's FY06 Strategic IT Road Map. It agrees with 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

Relationship to the Governor of New Mexico Initiatives
- The NMSU IT Plan is supporting many of the Governor's Initiatives through active partnerships with CHECS and State of New Mexico Agencies. NMSU and its partners continue to work to establish high-speed connectivity throughout the state. The partnerships are working to support economic development, the growing film industry, research, and education.

ICT FY06-07 Appropriations and Expenditures

Following the Form C1 are lists of IT projects using non-recurring funding during FY06-07

Form C1

<table>
<tr><td colspan="6">Information Technology
Base Operating Budget, Special and Supplemental requests[1]
Informational Purposes Only[2]</td></tr>
<tr><td>Agency Name:</td><td colspan="3">New Mexico State University</td><td>Agency Code:</td><td>953</td></tr>
<tr><td>Project Start Date:</td><td colspan="5"></td></tr>
<tr><td rowspan="2">Project & Appropriation Funding Type[3]:</td><td colspan="2"><u>Base Request</u>
<u>Operational Support of IT</u>
Normal Hardware Replacement ☐
Standard Software Upgrade ☐
or
Software/Hardware Maintenance ☐</td><td colspan="2"><u>Supplemental Request</u>
<u>Cost before July 1, 2008</u>
Operational Enhancements ☐
or
Completion of IT Projects ☐</td><td><u>Special Request</u>
<u>Costs on or after July 1, 2007</u>
Operational Enhancements ☐
or
Completion of IT project ☐</td></tr>
<tr></tr>
<tr><td colspan="6">Project Cost (dollars in thousands)</td></tr>
<tr><td></td><td>FY06 & Prior</td><td>FY07 Actual</td><td>FY08 OpBud</td><td>FY09 Request</td><td>FY10 Estimate</td></tr>
<tr><td>General Fund</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Other State Funds</td><td>7,301.6</td><td>6,683.4</td><td>7,010.8</td><td></td><td></td></tr>
<tr><td>InterAgency Transfers/ Internal Service Funds</td><td>6,545.5</td><td>8,315.0</td><td>9602.7</td><td></td><td></td></tr>
<tr><td>Federal Funds</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td>13,847.1</td><td>14,998.4</td><td>16.613.5*</td><td>0.0</td><td>0.0</td></tr>
<tr><td colspan="6">* Banner Installation</td></tr>
<tr><td colspan="6">Expenditure Categories (dollars in thousands)</td></tr>
<tr><td></td><td>FY06 & Prior Actuals</td><td>FY07 Actual</td><td>FY08 OpBud</td><td>FY09 Request</td><td>FY10 Estimate</td></tr>
<tr><td>Personal Services & Employee Benefits</td><td>7,478.4</td><td>7,936.3</td><td>8,210.8</td><td></td><td></td></tr>
<tr><td>Contractual Services</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Professional Services</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>IT Services</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Other</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Travel</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Maintenance</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Supplies/Inv. Exempt</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Operating Costs</td><td>5,725.7</td><td>6285.8</td><td>8,210.8</td><td></td><td></td></tr>
<tr><td>Capital Outlay</td><td>643.0</td><td>310.3</td><td>344.0</td><td></td><td></td></tr>
<tr><td>Other Financing Uses</td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Total</td><td>13847.1</td><td>14532.4</td><td>16206.3</td><td>0.0</td><td>0.0</td></tr>
<tr><td colspan="2">Agency Cabinet Secretary/Director</td><td colspan="2">CIO or IT Lead</td><td colspan="2">Budget Director</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Phone number</td><td colspan="2">Phone number</td><td colspan="2">Phone number</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td colspan="2"></td></tr>
<tr><td colspan="2">Date</td><td colspan="2">Date</td><td colspan="2">Date</td></tr>
</table>

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[1] Please see DFA's FY09 Appropriation Request Preparation Manual for Base Operating Budget instructions.

[2] **Base budget** information is strictly used for informational purposes only.

[3] **Follow the FY09 Funding Request Flow Chart.** Submit one form per funding type.

Lists of FY05-06 IT Projects Funded Outside Base Budget

New Mexico State University Equipment Repair & Renewal Projects (ER&R) FY06-07	Project Cost
2 - Catalyst 3750 – 10 Gig upgrade	$37,488
Packet Shaper to support increased bandwidth growth	40,395
Video Encoder and receiver for satellite operations	19,375
Fiber optic transceivers	4,220
San controller	115,078
IBM Blade Center	44,610
Fiber Channel controller	3,600
Web server	55,639
Luminis Email	30,000
ICT Computer replacement	57,574
Computer Lab replacement	200,062
Classroom technology upgrades from Student Technology Fee	56,477
Classroom technology upgrades from college ER&R funds	166,848
TOTAL	$

New Mexico State University Building Repair & Renewal Projects (BR&R) FY06-07	Project Cost
Communications Network Improvements	$35,230
Improve Teaching Technology in Classrooms	30,296
Fire Alarm Upgrades	30,000
Hardman Hall Upgrades	10,000
Milton Hall, Room 70 Remodel	20,000
Computer Center, Rooms 130 & 130D Remodel	10,000
Hacob's Hall, Room 205 Remodel	50,000
Casa del Sol Fiber Optic	10,000
TOTAL	$195,526

New Mexico State University Collaborative Projects FY05-06	FY05-06
State Optical Network allocated to GSD	$2,000,000
Upgrading Core CHECS-Net Infrastructure (HED) – NM Tech fiscal agent	150,735
TOTAL	$2,150,735

IV. NMSU Environment and Infrastructure

NMSU Disaster Recovery Plan
The NMSU Disaster Recovery Plan was completed on January 31, 2006, and submitted to internal and external auditors. It is a living document and, as such, will always be undergoing review and updating. The Disaster Recovery Plan is not included in its entirety because it contains sensitive material. Requests for a copy of the plan can be sent to hites@nmsu.edu.

Executive Summary
Over the past forty years, New Mexico State University's (NMSU) dependence on computer systems, and the networks that link them, has grown significantly. Critical and non-critical business functions of the university are increasingly dependent on the availability of these systems of computing and networking technology for the successful completion of daily business activities.

The primary purpose of this document is to provide a planned response to a disaster that destroys or severely cripples the university's central computer technologies that are operated by NMSU's primary computing organization, Information and Communication Technologies (ICT). When properly executed, the plan will direct ICT personnel in the restoration of ICT-supported technology while minimizing the loss of core data.

Risk
Inherent to all disaster recovery plans is a certain amount of assumed risk; the primary risk being data loss as a result of a disaster. Obvious compromises exist between the amount of time, effort, and capital resources that are expended in planning and preparation for a disaster and the amount of data loss that an organization can sustain following a disaster and still remain operational. This being understood, NMSU administration is willing to assume the risk of data loss and the loss of computing services for a limited amount of time following a disaster that causes interruption of ICT-supported computing services.

Objectives
Data recovery efforts outlined in this plan are specifically targeted for the recovery of ICT-supported technologies that are the backbone of critical university business functions. Recovery to the last available data for critical functions, from disk drives or backup tapes, is inherent to the plan. The plan does not include recovery for departmental/individual computers and data that are not part of the critical functions of the university.

The following are the primary objectives of the Disaster Recovery Plan:
- Complete a business impact analysis of critical university processes and identify the underlying computing and communications technologies
- Develop a list of critical services which must be restored in short period of time (24 to 96 hours) from the analysis of the business impact analysis
- Conduct a risk analysis on the central computing and communications resources

- Develop a recovery strategy
- Describe the recovery organizational structure
- Provide emergency recovery procedures
- Describe the plan administration
- Provide a testing schedule and results

Approach

This plan assumes a step-by-step approach in the recovery from a disaster that destroys or severely cripples the computing resources at the Computer Center Building or other critical campus facilities.

Initial recovery efforts are targeted at protection and preservation. In particular, any magnetic storage media (hard drives, magnetic tapes, diskettes) are identified and either protected from the elements or removed to a clean, dry environment away from the disaster site. Simultaneously, a survey of the disaster scene is conducted by appropriate personnel to estimate the amount of time required to restore the facility to working order. A decision is then made whether to use an alternate site, a location away from the scene of the disaster where computing and networking capabilities can be temporarily restored until the primary site is again available.

The recovery process relies heavily upon vendors to quickly provide replacement technologies for any tangible resource that cannot be salvaged. The university will rely upon emergency procurement procedures already in place to ensure timely replacement. Salvaged and new equipment are reassembled at the recovery site according to the instructions contained in this plan. If vendors cannot provide certain pieces of equipment on a timely basis, it may be necessary for the recovery personnel to make last-minute substitutions. After the equipment reassembly phase is complete, and core infrastructure is restored, efforts turn to data recovery procedures.

Data recovery relies on the use of backup tapes, drives, and other media stored in locations away from the computing centers of the campus. Initial data recovery efforts focus on the restoration of the operating system(s) for each computer system, followed by the applications and corresponding databases and data.

Summary

The Disaster Recovery Plan ensures the reestablishment of ICT foundation technologies so critical business functions are working within acceptable timeframes while minimizing the impact of disaster-related service interruption on the university with respect to safety and business continuity.

Introduction
NMSU administration recognizes the university's dependency on technologies such as computer, alarm, and communications systems. Certain systems, including telephone, broad and local area networks, software applications, Internet, Intranet, and e-mail service are integral to the continued operation of the university. As such, the potential for interruption of services, which rely on critical systems supported by NMSU's Information and Communications Technology Department (ICT), cannot be ignored.

The intent of this document is to provide a plan for the recovery of critical ICT-supported systems in the event of an unexpected catastrophic occurrence that results in the failure those systems.

This Disaster Recovery Plan, or DRP, includes:

- Identification of business functions that rely on ICT-supported technologies
- Analysis of the business impact on service interruption and the determination of critical recovery timeframes from that analysis
- Identification of potential risks to ICT-supported technologies
- Development of a recovery strategy in the event of a disaster
- Documentation of recovery team organization and responsibilities
- Documentation of emergency procedures
- Documentation of plan testing procedures and schedules

Objectives
The objective of the DRP is to establish defined responsibilities, actions, and procedures to recover ICT's computer, alarm, communications systems, and network environment in the event of an unexpected service interruption. The plan is structured to attain the following objectives:

- Recover the physical network and applications within the timeframes established by the university community
- Reestablish foundation technologies so critical business functions are working within acceptable timeframes
- Minimize the impact of disaster-related service interruption on the university with respect to safety and business continuity
- Establish schedules and procedures for testing of the plan

Plan Scope
This plan presents contingency guidance information that is intended to supplement the recovery capabilities of the ICT staff for the following technologies:

- Critical business function applications
- Fire and security monitoring systems
- Facility monitoring systems
- Telephone communications.

- E-mail
- Hardware that supports critical business function applications
- Critical technical infrastructure

Authorization
NMSU recognizes the need for a DRP for critical operations that are directly or indirectly dependent on data processing and network connectivity. NMSU's Chief Information Officer (CIO) has authorized the development and ongoing maintenance of this plan.

Responsibility
Responsibility for the development and maintenance of the plan is assumed by ICT's Leadership Team. Specific responsibility for the plan rests with the CIO. ICT directors are responsible to coordinate with the CIO, or designee, regarding technology disaster recovery requirements.

Key Plan Assumptions
The following assumptions have been established as the basis for the development of the DRP:

- This plan addresses information technology and networking disasters. It is subservient to established plans that address health and NMSU safety issues and emergency operations.
- The plan is designed to recover from the "worst case" destruction of ICT's operating environment.
- Inherent in the plan is ICT's ability to recover from minor interruptions of service that occur in the normal course of business. Typically, this would include equipment failures, temporary loss of key personnel, etc.

The plan is based upon a sufficient complement of ICT staff who would be available to implement recovery. Accordingly, the plan's level of detail is sufficient for a staff of equivalent experience in university computing and communication services to adequately use the plan.

- Off-site inventory and equipment acquired through vendors is considered to be one of the resources that will be used in recovery. Equipment at the site of event impact may or may not be salvageable and used for recovery depending on the type and extent of damage.
- An alternate site (backup computer facility) in which to establish recovery of computer processing or communication services may not exist.
- Complete duplication of computer facilities at the Milton Hall alternative site is not within the scope of this plan. Additionally, it is assumed that Milton Hall is not impacted by any disaster that may interrupt operations at the computer center.
- "Shell" sites with appropriate computing hardware, power and network connections have been identified as possible alternative sites. They are: NMDA on the university campus, UNM in Albuquerque and the State of New Mexico offices in Santa Fe.
- MOU established with UNM to provide assistance in the event of a disaster at NMSU

Disaster Definition /Assessment
For the purposes of this plan, a disaster is defined as an interruption of computer or
network operations that results in a cessation of ICT-supported services that affect the
health and safety of the NMSU community or negatively impact the critical business
functions of the university.

The Disaster Recovery Team (see Section 6.1) is charged with assessing the damage to
the data center and reporting to the ICT Leadership Team. The objective is to report the
assessment of damage within four hours of service interruption. The ICT Leadership
Team is charged with either deciding 1) if the damage is repairable and operations at the
current location can continue, 2) move computer operations to the off-site recovery
location at Milton Hall or 3) implement selected manual procedures as identified later in
the plan or 4) move operations to a "shell" site.

#	Executive Business Continuity Plan (BCP) Scorecard	Yes	No	Unknown
1.	Do you have a written business continuity of operation plan (COOP)?	X		
2.	If so, have you fully tested it?	X		
3.	If tested, did you pass your test?	X		
4.	Have you quantified and ranked the business and financial risk of outages to all vital functions?	X		
5.	Are you prepared to address liabilities and fiduciary responsibilities in case of a disaster?	X		
6.	Are business continuity plans kept current and updated for business changes?	X		
7.	Do you perform back-ups faithfully and include every server and hard drive?	X		
8.	Do you regularly send your back-ups to a safe, off-site archive?	X		
9.	Have you standardized back-up solution on a proven media?	X		
10.	Does business continuity and disaster recovery readiness have support of top management in your organization?	X		

NMSU Institutional Data Security

Institutional Data Security Policy

Rationale
Managing institutional data is a requirement for NMSU, particularly as it relates to electronic information systems and electronic reports. With emerging technologies and the increases in desktop software sophistication, both desktop computers and standalone servers hold institutional data and personal data. This policy addresses the secure management of data at NMSU.

Access to Information
NMSU specifies that institutional and personal data only be used for work related activities. Access to and use of these data granted based on an employee's position and duties, and approval for access is granted by the appropriate data custodians. Employees cannot transfer their access to other employees. Rather employees must be granted approval by the appropriate VP/Dean/Director and the data custodian. No personal use of institutional data is permitted unless acquired through appropriate open records act procedures.

All users of NMSU institutional data must sign a non-disclosure form and follow all federal laws, state laws and university policies, including FERPA, GLB, and HIPAA. Failure to abide by laws and policies will result in appropriate university sanctions. Transmission of university data to other NMSU affiliates (like 3rd party vendors) must have prior approval by the appropriate VP/Dean/Director and data custodian.

Information Stored on Desktop Computers
Since desktop computers are a tool of choice for manipulating data, users with access to institutional data must maintain reasonable measures to ensure that the copies of data they posses are not stolen. The following requirements must be observed:

- A password is required to access the computer whenever the computer is started or rebooted.
- Sensitive institutional data on a desktop computer must be encrypted and/or password protected
- Sensitive institutional data must be transmitted using encryption.
    - For all ISP connected computers and wireless computers
    - For on-campus wired computers, this encrypted transmission is encouraged, but not required.
- Institutional data must be removed from the desktop computer when it is no longer needed. For long-term storage, data should be copied to permanent electronic media, for example DVD or CD, and kept in a secure storage area.
- Regular backups of the desktop

Information Security on Desktop Computers
All desktop computers that hold institutional data, including personal computers used from home, must follow the above security procedures. In addition, each desktop computer must:

- Use a vendor-supported operating system
- Maintain a current virus scan product
- Enable automatic updates the operating system and virus protection
- Use a password to gain access to a restarted machine

- Use a password-protected screen saver which locks access to an unattended desktop
- No use of file sharing software, in particular software that allows the sharing of music and videos.

Information Security on Servers

There are many applications where institutional data is maintained on a server outside of the SCT Banner system for specific departmental or university needs. These servers require additional security measures because they often contain sensitive information about the entire university community, including students, faculty, staff and alumni. To limit the exposure of these servers, all servers must

- Run a supported version of the operating system
- Have automatic updates enabled
- Have an updated virus scan product installed and operational
- Have a full-time employee assigned as the primary system administrator of the server. Students and temporary staff cannot be the primary contact for the server. The administrator must be a trained administrator, which could be an outsourced contractor.
- Reside on a physically separate subnet than that of desktop computers.
- Have all unnecessary services turned off and/or removed from the server.
- Be backed up regularly, including offsite storage of the backup media.
- Have a firewall enabled.
- Not be used as a desktop or personal computer.
- Use a web browser only for the download/update of software

Institutional Data Security Guidelines

Rationale
Based on the NMSU Institutional Data Security Policy, these policies are followed:

Banner Server Security and Sensitive Transactions
Along with desktop security of institutional data, the security of the servers must also be maintained. This security includes the use of vendor security systems as well as system level security to include firewalls and virtual private networks

General Oracle Security
Banner is built using an Oracle database. SCT is the prime architect for how the data is architected in Oracle (as they are the ones who specify the schema owners, tables and columns). SCT relies upon oracle security to provide security to the database.

Remote access to the SCT Banner Oracle server is completely through an ODBC listener at port 1521. For the vast majority of users, their access is through either Self-serve or Internet Banner. Both access methods use front-end software to focus/limit the user's access to activities relating to that form. For example, a form which deals with adding a person has been programmed to interrogate tables about people and may also add data into the tables about people. Access to these forms is limited on a per person basis and hence access to the table information is also limited.

SCT also has a level of security at the "module" level. For Human Resources and Finance, it is possible to limit what a user sees in a form. For example, a departmental secretary in Computer Science could be set up to have access to HR and finance data for the Computer Science Department. It should be noted that users who are in the central offices (like purchasing, payroll, etc) normally have access to all data in a module (e.g. Business office has access to all finance transactions).

Server level security
The main oracle server resides on a SUN SPARC based architecture running Solaris 9. Automatic updates are run on all servers to ensure prompt application of vendor supplied fixes. TCP wrappers are used to limit remote access to administrative ports like SSH and SCP. Telnet is turned off. FTP is limited to the mainframe and known hosts which provide data sources for the regular operation of the banner system. Port 1521 (ODBC) is fire walled at this time to all campus users (see below for future action). Users with the appropriate password can establish a session to query data. A limited number of accounts have the ability to query the server and only a couple of accounts have the rights to update data. In all cases, the users who have access to the database have specific job requirements to have this sort of access (e.g.. IRP, ICT, FSA in Business and Finance). All default passwords delivered by SCT banner have been changed. User passwords expire every 120 days.

Row level security via ODBC is not implemented at this time. SCT does not recommend this level of security for Banner 6.

Network Firewall
ICT has deployed a CISCO PIX firewall. The PIX firewall will limit the access of port 1521 to the specific authorized users via a VPN. This will eliminate the possible on-campus hacker attempting to make connections to our database via the 1521 port. Authorized access will require the user to have VPN software, a login and password for the VPN and a separate oracle login and password.

Oracle Reports
As part of the SCT product offering 16 finance reports are provided using oracle reports. This offering requires that the user needing these 16 reports have full query access to the finance tables to operate properly. Users of these reports may be able to pull data from finance areas not within their assigned finance module security using the supplied oracle reports. In most cases, these users will not have access to the 1521 port unless authorized via other job requirements.

ODS
Selected data elements from the banner system are migrated to our data warehouse. The data warehouse is called Operational Data Store (ODS) by SCT. Any finance security engineered in SCT banner is not migrated over to the ODS. ODS access is managed at a per table basis. Users who have direct access to the tables (via port 1521) can see all data in all tables. Row level security is not implemented in ODS at this time. There are a small number users who have direct access to the ODS – all of whom work in one of the core reporting areas (ICT, Institutional Research, Business and Finance). End users will have filtered data based on their security roles established in the banner system.

Development
NMSU maintains two additional environments for development in which institutional data is retained. Access to these environments is limited to the ICT development team and core function users. However, it should be noted that all transactions are on these development environments.

Assessment of sensitive transactions
A number of questions have come up concerning specific transactions (finance and HR) that may have a more sensitive nature. Specifically: Are SCT Banner and SCT ODS engineered in such a way to limit the access of this data to authorized personnel?

The following areas have personnel who have unfettered access to this data:

1. IT development staff have access to the database and all data in the tables. They use tools to analyze broken transactions

2. Report Writers -- Technical staff who write reports typically have access to all data, SCT does not provide any logical manner to limit the report writers from sensitive transactions.

3. Core users – Purchasing officers, budget directors, etc, have access to every transaction of the system

It is always possible to secure sensitive transactions. In the SCT environment, it would take substantial work to limit access for the named above groups due to the nature of their work. I believe making such an attempt could affect the functionality of the SCT system. If such a step were made, I would recommend an assessment by SCT as well as any SCT customers who may have attempted this activity.

Also, a concern with the open records act may also be in play. Is there anything in the opens records act which would prevent someone from getting these detailed transactions? If nothing prevents a person from acquiring this data via open records act, then securing the transaction from internal core staff would not make sense.

ICT 2007 Goals and Projects (Director Level)
Following is the list of projects identified by ICT, IRPOA, and the various technology partners throughout NMSU. Discussion between ICT/IRPOA leadership, the NMSU community, and information technology committees will establish the priorities, budget, and timelines. 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.

ICT Business Operations
- Unified work order, trouble ticket and billing system for all of ICT
- Propose several new funding strategies for data, phone, alarm and computing services
- Revise ICT service level agreements
- Provide more information via the web and post of frequently asked questions through the ICT Customer Service Center.
- Document NMSU PC replacement policy
- Publish comprehensive list of standard services and cost recovered services
- Develop procedure for IT contract review and software purchase including negotiation, payment, schedule, warranty, scope and acceptance testing

ICT Security and Research Computing
- Fully implement PIX/VPN firewall for high end users
- Support Appworx Deployment for HR and student
- Assess current administrative reporting needs with IRPOA to revise and implement NMSU central and end user reporting policy and procedures including the roles of the departments and central administration for data entry, information storage and data reporting
- Deploy HR end user package, Deploy Finance core packages to production
- Publish data security standards and guidelines for NMSU.
- Implement new, consolidated procedure for scanning forms and tabulating results, particularly for testing and course evaluations
- Create a university data dictionary for key information commonly used in internal and external reports.
- Meet with VPR staff to determine role and support structure for Info Ed (with Mrinal)
- Implement long term printing strategy
- Continue to support the Adventures in Supercomputing Challenge.
- Develop standards for data transmission
- Document faculty computing needs
- Participate in research grant proposals

ICT Instructional Support Services

- Continue to develop, write, and deliver Cognos reporting documentation and training for UNO/Banner users. Support Cognos related training and documentation as needed for the HR, Finance, and Student modules.
- An upgrade to WebCT Vista is funding dependent. If funds (either university or statewide) become available, the WebCT upgrade will become a priority goal.
- Review Centra software needs to determine if it is still the best solution for the NMSU community. Increase Centra technical support service level.
- Develop and implement a quality assurance plan for training and documentation.
- Begin to collaborate with WebCT and other training resource vendors to provide a hosting site for various technical training sessions.
- Actively introduce new technologies and related training to NMSU.
- Collaborate with other campus units to plan and host summer ITAL.
- Provide excellent technical support and consulting services for faculty.
- Become clearing house for university wide training initiatives.
- Create and update online FAQ, tutorials, and information pages.
- Collaborate with other campus departments and ICT units to work on creating a university-wide "Technology Help Doc" repository area.
- Design, collaborate, and market Pathway to Campus-wide Learning Technologies program.
- Research profit-making opportunities for training (e.g., Cognos Academic Material sales, WebCT training material sales, site hosting for outside training vendors).
- Continue student trainings, presentations and info tables. Find additional opportunities and outlets to work with students and stay abreast with their technology needs.
- Enhance cost recovery for PC maintenance and at-the-desktop services
- Implement pay-for-print in computer laboratories
- Seek external funding to support instructional technology at NMSU
- Continue to 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.
- Work with student technology committee to insure continued support through the student technology fee.

ICT Enterprise Application Services

- Implement CMS guidelines and support infrastructure for all NMSU departments.
- Make relevant data available for core developers through ODS for services like ad-hoc reporting and other auxiliary applications, following the business rules defined by HR and Finance functional users.
- Improve usability of applications deployed as part of the UNO project.
- Documentation of development and deployment process and infrastructure.
- Develop software evaluation guidelines for future purchase or development efforts
- Perform a smooth transition from Banner 6 to Banner 7

- Implement SCI-Quest Higher-markets for purchasing
- Implement web application and tracking solution for Housing and Meal Plans.
- Implement new ID card services integrated with banking services.
- Implement Banner Student, CMS, and EDW.
- Create "quick enrollment" form for non-degree seeking students
- Expand self-service web-accessible administrative applications for students, faculty, and staff.
- Implement at least one Xtender imaging project
- Implement DARS and transfer articulation module with Banner
- Implement priorities for recruitment and retention efforts.
- Move ict.nmsu.edu to CMS
- Develop guidelines for departmental responsibilities in web content management.
- Establish a library of resources and tools for web publishing.
- Install room scheduling software
- Institutionalize CAHE e-portfolio

ICT Computer Systems
- Compute and display on the web NMSU administrative server uptime statistics and to increase our availability yearly.
- Continue to test disaster recovery plan
- Shut down Notes server
- Synchronize ADS with LDAP
- Complete backup site in Milton Hall
- Inventory servers and services and document replacement strategy
- Install and test PGP encryption for NMSU administrative offices
- Consolidate use of shared web servers and database server for department ad hoc applications
- Determine needs of the Advancement Office for alumni email and implement
- Document departmental shadow systems
- Create better tools for sending mass email
- Upgrade server OS to support partitioning
- Develop long-term staffing plan
- Create shared server room

ICT Strategic Relations
- Manage NMLN Project – Principle Investigator
- Manage IDEAL-NM – Statewide LMS, Web Conf, and Cyber Academy
- Develop Specific CHECS & NMSU Funding Proposals
- Student Technology Fee (STF) Accountability & Increase Proposal
- Cultivate New Funding & Partnership Opportunities
- Conduct ACANS Fall Planning Event
- Maintain ACANS News & Info Center
- Create consolidated news content management and departmental news letters

- ➢ Develop plan for increased instructional design assistance
- ➢ Document all current faculty education technology needs, including video server, wiki, blog, forum, second life, and faculty training
- ➢ Investigate general education assessment tools, outcomes assessment and planning tools such as e-portfolio, TracDat, and CLA
- ➢ Develop online course evaluation policy and procedure
- ➢ ICT Outcomes Assessment
- ➢ Assess NMSU student ownership/use of technology and satisfaction with technology services
- ➢ Investigate and propose an online testing and evaluation policy
- ➢ Update Educause Core Data Survey for NMSU

ICT Telecommunication and Networking Services
- Complete NLR connection
- Complete "Big Pipe" project with State of NM
- Complete, PSL NM Dot fiber project
- Complete installation of all planned technology classrooms
- Obtain funding for additional technology classrooms
- Continue NMSU wireless network.
- Implement VOIP test
- Expand revenue generation for video services
- Provide regular training for technology classrooms at all campuses
- Install and configure firewall
- Install and configure proximity card access system
- Create standards for automatic vacation email and voicemail messages
- Install new voicemail system
- Install new 911 system
- Install fiber to east side of I-25

IRPOA
- Complete NMSU reporting and data analysis needs assessment
- Form faculty research analysis group to assist with university programs and projects
- Hire new research analysts
- Formalize relationship with ICT and define roles
- Document procedures for external reports and surveys
- Document internal office customer service and prioritization procedures.
- Document standard services such as evaluations.
- Revise IRPOA website with new goals and services

V. Information Technology Funding Requests

FY 08 Funding Requests
The following table contains the FY08 funding requests in priority order. A one-page business case for each request follows the table.

NMSU Priority	NMSU Projects	Project Budget Request
1	Banner/Luminis Hardware Replacement	$750,000
2	Core SAN Storage Replacement	$500,000
3	NMSU Classroom Technology	$3,500,000
4	University-wide Reporting Services Hardware	$325,000
5	NMSU Core Network Upgrade	$990,000
6	NMSU Wireless Initiative	$1,622,000
7	E-Portfolio	$370,000
8	Web-based Course Evaluation	$300,000
9	Outcomes Assessment	$275,000
10	University Help Desk and FAQ Solution	$200,000
11.	Statewide Networking Partnerships	$5,000,000

NMSU Banner/Luminis Hardware Replacement

1. Executive Summary
NMSU requests $750,000 to replace the Banner/Luminis computing hardware. The NMSU Banner/Luminis hardware represents the computing core of NMSU's Banner system. These machines are used for registering new students, providing central access to e-mail, calendars, and timesheets, and to the various data concerning both students and staff. These machines should be replaced to ensure that the primary interface with NMSU customers does not become obsolete.

2. Business Problem and Opportunity
The Banner machines provide a vital service to the University and periodic replacement is required to support service performance and enhance reliability. The current Banner machines are more than two years old. The goal is to replace mission critical hardware every three years.

3. Proposed Project Objectives/Performance Metrics
The objective of this project is to maintain computing responsiveness as existing services are expanded and new services are added. Performance metrics include response times and system downtime.

4. Business Risks
As the hardware exceeds its expected lifetime, performance and reliability will decrease. Without periodic technology replacement, the ability to implement new software and to support more customers (ie: students) is limited.

5. Alternative Solutions
1) Status Quo – Doing nothing will not cause any immediate problems, but will lead to a period of "bad performance" and customer complaints.
2) Reorganize older hardware –It may be possible to cluster machines together, or re-arrange the functions of each server to lessen the demands on the servers, but it often comes at the cost of complexity and increased failure.

6. Cost Benefit Analysis
1) Purchase new hardware – The purchase of new hardware would be a non-recurring cost that would provide better services and a lower chance of hardware failure
2) Status Quo – Although there are no non-recurring costs, there may be increased support costs for older hardware and an increased change of failure.
3) Reorganize hardware – No non-recurring costs, but possible increased support costs and a greater chance of a system failure.

7. Recommendation
Periodic hardware replacement is necessary for all quality IT organizations. The NMSU strategy is to replace production servers every three years. It has been more than two years since the current the machines were acquired and it is time to begin the process of acquiring the next generation of machines.

NMSU Core SAN Replacement

A. Executive Summary
NMSU requests $500,000 to replace the core Storage Area Network (SAN). All of the business data used by NMSU's Banner system resides on the current Storage Area Network (SAN). Purchasing new SAN technology will allow NMSU to establish a more secure and efficient system to support its mission and goals.

B. Business Problem and Opportunity
A Storage Area Network (SAN) is a collection of disk space that is accessible by any computer connected to the SAN, eliminating the need for multiple disk arrays. The current NMSU SAN is outdated and lacks many of the capabilities of new technology. The purchase of a new SAN will increase security, reliability, and disaster recovery capabilities.

C. Proposed Project Objectives/Performance Metrics
The objectives of this proposal include the centralization of data storage by establishing a larger, more efficient, and faster SAN. The new SAN would increase storage capabilities, while providing a more secure and efficient environment. Performance metrics would include less downtime, reduced support staff hours, and fewer security breaches.

D. Business Risks
If NMSU does not acquire a new SAN it will quickly reach the technical limits of the current system and expose itself to hardware failures. Very few things could be worse for NMSU than a catastrophic hardware failure on its central data storage system.

E. Alternative Solutions
    1) Status Quo
    2) Switch to individual disk arrays

F. Cost Benefit Analysis
    1) Purchase a new SAN- $500,000 in non-recurring costs, recurring costs for technical support and maintenance. Benefits include improved workforce efficiency, better disaster recovery, centralized management,
    2) Status Quo – No non-recurring costs, recurring costs include technical support and parts with no business benefits.
    3) Switch to individual disk arrays - Non-Recurring costs include the purchase of each array per server. Recurring costs include technical support, periodic replacement parts, and periodic purchases of more disk space based on each server's need.

G. Recommendation
What can be accomplished with a SAN completely overshadows other possible solutions. The single fact that we can serve disk space from multiple physical locations to multiple physical locations makes for a huge leap forward in our disaster recovery abilities. With a new SAN, NMSU can begin to use virtual machines and reduce hardware purchases. It is recommended that NMSU purchase a new SAN to make data storage faster and more agile, with dramatically improve abilities.

<u>NMSU Classroom Technology Upgrades</u>

A. Executive Summary
NMSU requests $3,500,000 in non-reoccurring money for classroom technology upgrades. This proposal will improve classroom technology and infrastructure at all NMSU campuses. The technology includes projection systems, instructor stations, computer, document cam, and wireless connectivity. Due to the scope of work this proposal is for year one of three.

B. Business Problem and Opportunity
These rooms have been very well received by the faculty and students and are in high demand. Having technology classrooms ubiquitously available not only enhance classroom presentations, but prepare faculty to serve students at-a-distance. These classrooms are based on a standard classroom technology baseline that increases ease of use and reliability. NMSU currently has a limited number (approx. 60) of technologically enabled classrooms. This leaves 394 classrooms within the NMSU system in need of a technological upgrade.

C. Proposed Project Objectives/Performance Metrics
The objective of this project is to make technology equipped classrooms ubiquitously available. This project year will provide 330 (1/3 of the 394) classrooms technology upgrades.

D. Business Risks
Failure to provide ubiquitous classroom technology will prevent systematic adoption of newer teaching methods to serve students who need a more technological approach to education both on campus and at-a-distance.

E. Alternative Solutions
Maintain the status quo – maintain a small number of technology equipped classrooms
Upgrade/replace overhead projectors – will require more investment in transparencies and retraining newer faculty in old technology (i.e. moving online presentations offline)

F. Cost Benefit Analysis
1. The total cost of ownership is $9,456,000 for a three year life cycle.
      Non-recurring Costs $3,500,000
      Recurring Costs N/A
2. Modernize teaching techniques and increase ability for instruction to reach many more students at-a-distance.

G. Recommendation
Periodic upgrades are necessary to provide a ubiquitous technology teaching environment at NMSU. As students are prepared to thrive in a digitally driven economy the teaching approach of higher education needs to be updated based on a modern classroom technology infrastructure. Therefore the recommendation is to fully fund the Classroom Technology Upgrades.

University-wide Reporting Services Hardware

A. Executive Summary
This proposal requests $325,000 to deploy a computational platform that is sufficiently robust to support the institutional needs to run reports. Departmental units are expected to use data driven decisions to improve efficiency, but without adequate access to data this directive cannot be achieved. Instead of having departments replicate reporting repositories NMSU wishes to enhance its enterprise reporting infrastructure.

B. Business Problem and Opportunity
NMSU needs the ability to report accurately and efficiently to a vast array of constituents. The current NMSU architecture allows for centralized data repositories and the use of a common web based tool. This will allow NMSU to improve data accuracy, data security, and to be more efficient with technical support staff support.

C. Proposed Project Objectives/Performance Metrics
The objectives of this project include reducing the number of copies of institutional data housed in a department, the reduction of individual reports written by departments, and improved accuracy of the reported data. Metrics include number of institutional reports, use of institutional reports, number of individual reports, and reduction of servers.

D. Business Risks
Without this project funding, NMSU will have an underpowered computational reporting environment. This implies that departments will be forced to copy data to their local servers which increases the concern of stolen data. Also, the potential for inconsistent reporting of the data can cause additional work in reconciling discrepancies.

E. Alternative Solutions
Status Quo – Current architecture allows departments to pull data to their local servers, write their own reports, etc. increasing security risks.

Add additional hardware to support core team usage –departments and branches would still need to copy the data since the NMSU infrastructure would not have sufficient computational capacity to serve the entire organization

F. Cost Benefit Analysis
The cost of maintaining the current system has two major implications. First, the potential security breaches into the several systems across the institutional can be quite expensive. The second cost benefit is the duplication of expensive technical staff extracting and analyzing data from the various systems.

G. Recommendation
It is to the benefit to the university to have a consolidated reporting infrastructure. Consistent data improves the quality of the reports presented by the university. Housing the data in a single location allows the university to address security firewalls more effectively. By having consistent views of the data, we reduce the total amount of work in creating and maintaining reports.

NMSU Core Network Upgrade

A. Executive Summary

NMSU requests $990,000 in non-reoccurring money for Core Network Upgrades to ensure that the business, academic, and research needs of the University are met. NMSU continues to increase its reliance on network based applications for business, research, and student support functions. This increases the demand for more bandwidth, advanced features for security, and quality of service from the network.

B. Business Problem and Opportunity

The NMSU campus backbone is currently operating at 1 Gbps with a secondary backbone of 100 Mbps. When the secondary backbone is required to take over there is a noticeable degradation of network performance. Several departments have already installed firewalls and more requests are pending. Without a standardized solution, the network engineers must learn the operating characteristics for each instance.

C. Proposed Project Objectives/Performance Metrics

Upgrade the backbone infrastructure to 10 Gbps. Install firewall blades in the core routers for specialized security requests. Increase the basic building connectivity to 1 Gbps. Bolster the monitoring capability to be more responsive to the NMSU community. Complete the fiber optic cable project to the new KRWG tower. Replace the campus packet shaper.

D. Business Risks

Without this upgrade the NMSU-Net will suffer significantly reduced performance if the primary backbone fails. By not completing the fiber optic cabling to the KRWG tower, NMSU will not be able provide high speed networking to a site which supports city, county, and other life safety organizations. KRWG-TV and NMSU Las Cruces metropolitan area wireless networking will also be affected.

E. Alternative Solutions

Maintain the status quo or do incremental upgrades.

F. Cost Benefit Analysis

1. The total cost of ownership is $1,355,000 for a five year life cycle.
   >   Non-recurring Costs $990,000
   >   Recurring Costs $365,000
2. Improve response time (10 Gbps & 1 Gbps), standardize processes & improve workforce efficiency, increase reliability, increase span of control, enhance the delivery of services to constituents. In addition, standardized equipment also improves workforce efficiency and reduces training costs.

G. Recommendation

Periodic upgrades are necessary to provide network based services at NMSU. As more and more business, academic and research services are established, it is important to maintain a high network. Therefore the recommendation is to fully fund the Core Network Upgrade.

NMSU Wireless Initiative

A.   Executive Summary
NMSU requests $1,622,000 in non-recurring costs for a centralized NMSU Wireless
Initiative. Laptop computers continue to gain popularity and the demand for wireless
connectivity continues to grow within the academic areas of NMSU. This demand comes
from faculty, staff, students, and visitors to the campus. To meet this demand NMSU
proposes expanding the current wireless deployment to 30 academic buildings.

B.   Business Problem and Opportunity
Currently, wireless access is limited to 10 major buildings (250 access points) of which none
can currently support multiple fully occupied classrooms. Outdoor areas covered by wireless
systems are limited to 4 major congregation areas. The wireless access points as deployed do
not have a centralized management system. To manually perform a software upgrade
requires approximately 120 man hours (2 systems/hour).

C.   Proposed Project Objectives/Performance Metrics
Provide full coverage capable of supporting multiple fully occupied classrooms in 30 major
academic buildings, 3 student activity buildings, and outdoor areas surrounding these
buildings. Install a centralized management system and the associated core networking
equipment, which will facilitate software updates, increase monitoring capabilities, and
improve tuning and troubleshooting capabilities.

D.   Business Risks
Without this expansion, faculty, staff, students, and visitors will still need to search the
campus for "hot spots" as opposed to being able to roam freely across campus. Faculty will
not be able to require students to have laptops for classes as service is limited. If the
centralized management and core networking equipment is not deployed, all problem
resolution will have to respond to complaints (reactive) as opposed to active monitoring and
problem diagnosis (proactive).

E.   Alternative Solutions
Maintain the status quo
Continue adding ad hoc access points.

F.   Cost Benefit Analysis
a.)**The total cost of ownership** is $1,847,000 over five years.
        non-recurring costs $1,622,000
        recurring costs $225,000
b.)**Benefits**   Improve response time, standardize processes & improve workforce
efficiency, increase reliability, increase span of control, enhance the delivery of services to
constituents

G.   Recommendation
NMSU needs to provide ubiquitous network access to the academic community. As laptop
sales no exceed desktops there is now an expectation of portability and access. NMSU
recommends that this project is fully funded.

NMSU E-Portfolio System

A. Executive Summary
NMSU requests $370,000 to establish a statewide web-based e-portfolio system. The e-portfolio system will provide a platform for students at NMSU to publish their academic and personal achievements, and resumes for future employers and prospective students. This system will provide a front face for the universities ultimate purpose, creating educated citizens. A web based portfolio system will grow into a medium of expression for the NMSU student community and eventually support networking among researchers.

B. Business Problem and Opportunity
Currently, transcripts and grades are the only mechanism for assessing student progress. A weak grade hardly describes the rich educational experience of the student. This can cause the student to lose interest and not take ownership of their learning experience. There is an opportunity to provide the students with a platform for expression and a showcase of tangible artifacts. This will enable future employers to judge NMSU students on more than mere grades.

C. Proposed Project Objectives/Performance Metrics
The objectives for this project include providing students with easy to use publication tools for projects, blogs, and resumes and to make them easily searchable by external observers. Initial performance metrics will include volume of publications (number of students with a portfolio) and unique hits. Detailed metrics will need to be defined as this site evolves.

D. Business Risks
There are no business risks as long as this project does not compete for resources with other development and maintenance tasks.

E. Alternative Solutions
There are no local alternatives for this solution. This drives students to non-monitored alternatives like myspace and Yahoo, who provide a free environment for publication by individuals, but no guidance for showcasing educational experiences.

F. Cost Benefit Analysis
The benefits of this project will be truly realized after its usage reaches a critical mass. Other schools that provide an e-portfolio system have realized benefits in student retention, better placement, and greater admission numbers because of the promise of placement. These benefits are visible in 2-4 years after the first few generations of students have published their portfolios. This also provides truly efficient and highly credible advertising for NMSU.

G. Recommendation
The recommendation is to have a 2-phased approach for this project. The first phase described in this proposal will create a scalable repository of portfolios for the students. The second phase shall expand the e-portfolio system to the research faculty and staff for the creation of a highly interactive resource for researchers across all institutions in the state.

NMSU Web-based Course Evaluation

A. Executive Summary
NMSU requests $300,000 to establish a highly customizable survey tool with multi modal delivery and notification. It will be able to provide customized course evaluations and real time analysis tools. The program features will include an automated online evaluation form distribution that is dependent upon the student's enrolled courses at each institution, multiple analysis methods, reminder mechanisms, and optional professor rating/discussion.

B. Business Problem and Opportunity
The ability for the institution to survey its constituents is a very important and valuable tool. Understanding the desires of the university community allows the university to better serve its mission of public service. With web based tools being ubiquitous, using a web based tool is a logical step to gathering this information. Such a tool can also be used to automate activities like course evaluation.

C. Proposed Project Objectives/Performance Metrics
The proposal to purchase/build a web-based system will allow NMSU to perform a number of survey instruments. The tool will allow NMSU to target its audience more efficiently and to report the results more quickly. Metrics include the reduction of paper surveys, time to collect the data, and improved response rates from targeted surveys.

D. Business Risks
Without using new tools, NMSU constituents will be less likely to participate. The biggest client is the student population who demand electronic solutions for everything. Their input is of great value; not using the tools of their choice will limit the ability to respond to their needs. Also, the local community is much more electronically aware. Not accessing the general input of the local community with a current issue could cause long term public relations nightmares.

E. Alternative Solutions
Alternate solutions include using hand created web based tools and paper instruments. NMSU can create web based solutions, but the time to create one takes 3-4 staff members a few weeks. Paper based instruments can also be used, but paper instruments requires a scanner ($10K), dedicated staff ($60K), and a reduced response time.

F. Cost Benefit Analysis
The initial cost of infrastructure will be offset by less daily, expensive technical staff time spent developing forms. NMSU will not need to hire additional staff to run this project, but rather re-train those who are already performing similar activity. Essentially, this project will allow current faculty and staff to be more efficient with their time resulting in less demand to increase number of employees in these areas.

G. Recommendation
It is recommended that a web based evaluation tool be fully funded. Having such a tool will allow rapid deployment of surveys, real time analysis of data and electronic delivery of final results. Alternatives leave the university less nimble to ever increasing demands to deliver efficient service to the university community.

NMSU Outcomes Assessment

A. Executive Summary
NMSU requests $275,000 to establish an assessment tool sized to support all NMSU campuses and the required storage. As part of a data driven improvement directive from the NMSU President, it is imperative that the University gather feedback about various activities. Information such as jobs obtained by a graduate and education required by a new employer are not currently in our curriculum. Assessment of NMSU activities by the local community is also important.

B. Business Problem and Opportunity
NMSU is lacking sufficient infrastructure to track the jobs and salaries of NMSU graduates. Currently, this information is poorly maintained and scattered across a few departments. Many of the funding models and research grants are dependent upon knowing this information. In order for NMSU to effectively analyze the type of education being delivered, it is necessary to start collecting post-graduate information.

C. Proposed Project Objectives/Performance Metrics
This project proposes to purchase a server, storage, and database tools to help create an environment where NMSU post-graduates could update information, respond to various questionnaires, and that would provide an interface to accreditation teams. The performance metrics would include having 20% participation the first year and 50% or more participation the following year.

D. Business Risks
NMSU currently suffers from lack of information on the effectiveness of its programs. Departments have sketchy data at best. The risks for not performing this activity include the reducing of student, the reduction of funding for the institution, and the reduction in confidence that the university is providing effective service.

E. Alternative Solutions
Alternatives include finding a business to contact the graduates or to allow departments to collect this information. Hiring a company may be possible, but we have not been able to find a suitable service which would allow us to customize our collection needs for NMSU. Departments collecting this information have not been effective in getting responses.

F. Cost Benefit Analysis
The cost of not performing the collection of post-graduate information is very large. Using such a tool will allow NMSU to demonstrate that their graduates have an economic impact benefiting New Mexico. The ability of NMSU to use this investment wisely is our primary charge. How do we know what we are doing is beneficial to New Mexico without knowing the?

G. Recommendation
We recommend this project be funded to allow NMSU to effectively manage data about our graduates. This information is key to the accreditation cycle required by the North Central Accreditation Association. Without having information about our graduates, NMSU is making changes to education products without knowing the true value of these changes.

NMSU Help Desk and FAQ solution

A. Executive Summary
This proposal seeks $200,000 in funding for a campus wide Help Desk and Frequently Asked Questions (FAQ) software solution that will provide internal service and support solutions to automate the help desk and service desk function. The production functionality includes knowledge management, call tracking and management, problem resolution, web based services, and self-help capabilities.   The Help Desk solution will also be able to integrate with the work order system to exchange information.

B. Business Problem and Opportunity
Currently several help desk are run across campus. There is limited exchange of information amongst them. The help desk's functions range in nature from technical to general information. The FAQs currently maintained are not prioritized on user input but on the impressions of administrator at each department. As result of the multiple servers and no centralized database, customer service is limited. In addition after hours support is almost non existent except for some departmental FAQs.

C. Proposed Project Objectives/Performance Metrics
NMSU will purchase and install a central server and corresponding software package that will support all the departmental help desks. The software will prioritize the order of the FAQ based on usage. The software supports the "One University" initiative, which states that "units are intended as means to meet the demands and expectations of a shared university mission." The software will act as a clearinghouse for information and the information can be provided in a general or specialized form. There is an escalation feature to bring problems to the attention management in an automated fashion.

D. Business Risks
There is a possibility that there would not be widespread adoption of the technology. NMSU must modify its culture and such the migration to the system should have incentives.

E. Alternative Solutions
Maintain the status quo

F. Cost Benefit Analysis
a.)**The total cost of ownership** is $350,000 over five years.
      non-recurring costs $200,000
      recurring costs $150,000
b.)**Benefits**   Improve customer service response time, standardize processes & improve workforce efficiency, increase reliability and data quality, increase span of control, enhance the delivery of services to constituents

G. Recommendation
NMSU needs to provide ubiquitous customer service support to the University community, potential students and faculty, and others. Therefore NMSU requests full funding for this project.

<u>Statewide Networking Partnerships</u>

A. Executive Summary
NMSU requests $5,000,000 to bolster the statewide connectivity by partnering with various entities including NM General Services Department, NM Department of Transportation, other Colleges and Universities, Dona Ana County, and the City of Las Cruces. This would be accomplished through the procurement of dark fiber and the equipment required to expand high-speed networking in the state of New Mexico. One project that is very well defined is interconnecting the City of Las Cruces and Dona Ana County's fiber with NMSU. This partnership will support life safety services, regional communications, and upgraded local capabilities. These efforts will also support the research mission of the university.

B. Business Problem and Opportunity
High speed connectivity is limited and expensive in many areas of the state. High speed networking is necessary to support the research mission of NMSU but, also serves to facilitate life safety services and regional communications. There are limited disaster recovery resources available and offsite backups are not easily accessed

C. Proposed Project Objectives/Performance Metrics
It is proposed that this project continue with build outs in rural parts of the state connecting to the nearest metropolitan area. With these high speed hubs the educational institutions and state agencies can start migrating communications circuits to shorter hauls and save on the long haul expenses currently being paid. In addition, long distance disaster recovery sites can be established and will have high speed connectivity to those sites.

D. Business Risks
Without the successful completion of this project all the above mentioned entities will have limited options for high speed offsite backup for disaster recovery. As the need for high speed networking for education, business, and life safety continues to spiral up so does it need for bandwidth, this will mitigate the associated costs.

E. Alternative Solutions
Maintain the status quo or do incremental upgrades.

F. Cost Benefit Analysis
a.) The total cost of ownership is $6,250,000 for a five year life cycle.
      Non-recurring Costs $5,000,000
      Recurring Costs $1,250,000
b.) Improve response time, increase reliability, and enhance the delivery of services to constituents. It will reduce the cost of IT operations through an enterprise model.

G. Recommendation
NMSU recommends full funding for this proposal to bolster the statewide connectivity to enhance service delivery, economic development, and disaster recovery.

Appendix A: Outcomes Assessment Reporting

A-1: Business Operations Outcomes Assessment Reporting - 2006
Contact – Anthony Parra
Objective 1.1 – Improve customer service in all ICT areas

Objective	Service being measured?	Assessment procedures	Analysis of the results	Actions based on the assessment results
1.1	ICT Customer Services	Customer Survey	See table on following page	Investigated fair and poor ratings and made changes to workorder system
Status/Comments: All ICT units have been successfully migrated to the Pinnacle System for billing, trouble ticket, and work order processing. The Pinnacle system has been upgraded to V5.4, which is the current release. From January 1, 2006 through February 28, 2007, ICT processed 17903 work orders in the system. Although we are currently utilizing Pinnacle as the main system, ICT is reviewing a trouble ticket / help desk program that would act as a central knowledge base, frequently asked question, and trouble ticket program that would integrate with not only the ICT Pinnacle system, but all NMSU work order systems throughout the NMSU system.				

A-2: Computer Systems Outcomes Assessment Reporting - 2006
Contact – John Roberts
Objective 2.1 – Create the policies and procedures necessary to establish a sound production
        server environment.
Objective 2.2 - Monitor and increase University administrative server uptime and availability
Objective 2.3 – Establish a proven Disaster Recovery Plan.

Objective	Service being measured?	Assessment procedures	Analysis of the results	Actions based on the assessment results
2.1	Production Admin Security	External Audit	Auditor found three outstanding issues	Changed policy and procedures to meet auditor requests
2.2	Server Availability	Software Monitoring	Production WebCT Server locking up and performing poorly.	Used monitoring software to discover locking problem and to improve performance 10%.
2.3	Disaster Recovery	Internal Testing	Tested recovery of Banner HR, Finance, INB and Self Serve.	Produced procedural and timing documentation to assist with a recovery during a real failure.

A-3: Enterprise Application Services Outcomes Assessment Reporting - 2006
Contact – Mrinal Virnave
Objective 3.1 – Implement CMS guidelines and support infrastructure for all NMSU departments
Objective 3.2 – Implement Banner Student
Objective 3.3 – Make relevant data available for core developers through ODS for services like ad-hoc reporting and other auxiliary applications, following the business rules defined by HR and Finance functional users.
Objective 3.4 – Improve usability of applications deployed as part of the UNO project

Objective	Service being measured?	Assessment procedures	Analysis of the results	Actions based on the assessment results
3.1	Content Management System	1. % of web publishing managed within depts. 2. # of units that use the CMS to maintain their sites 3. Number of designers & content contributors	1. 30% of departments 2. 4 units 3. 10 designers and content contributors	Continue to train key personnel & modify documentation as necessary
3.2	Banner Student	1. Availability of Student & Faculty Self Service 2. Decommissioning of Vistas	1. Self service available 2. Vistas decommissioned	Continue to monitor applications and make modifications as necessary
3.3	Core Data Service	This task is now being performed by units within the core functional unit. Business and Finance has formed the ADM (Administrative Data Management) group and Student Success is in the process of forming a similar group. EAS is now performing a support function for these units, performing research, testing and production implementation tasks.		
3.4	Application Usability	User feedback from web form	Users unclear on how to access certain account information	Modified web sites & monitor user feedback

A-4: Instructional Support Services Outcomes Assessment Reporting - 2006
Contact – Teresa Burgin
Objective 4.1 – Develop and implement a quality assurance plan for training and documentation.
Objective 4.2 – Continue to provide a variety of student computing resources.
Objective 4.3 – Continue to provide training and instruction to support ERP, administrative and student systems.
Objective 4.4 – Develop, write, and deliver Cognos reporting documentation and training for UNO/Banner users.
Objective 4.5 - Continue to provide efficient computer lab services for the NMSU student population.
Objective 4.6 - Provide quality and timely PC customer service and support for NMSU community.

Objective	Service being measured	Assessment Procedures	Analysis of the results	Actions based on the assessment results
4.1	Quality educational materials and instruction provided by ICT Training Services.	Survey and written evaluations from workshop participants.	Workshop evaluations produced an average score of 3.3 out of 4.	Continue to acquire survey and written evaluations from workshop participants. Monitor evaluations and change training curriculum and/or training materials as needed.
4.2	Student and faculty satisfaction with computer technology services and labs.	Regularly scheduled meetings with STAC, FACT, ASNMSU, and other student or faculty organizations.	The positive relationship with the STAC group helped us gain an increase of $10.00 per semester per student to the technology fee.	Continue to acquire feedback through regularly scheduled meetings
4.3	Positive training experiences for the NMSU community.	Survey and course/workshop evaluations.	Provided 2214.5 hours of training in FY 06/07. There was a 95% response rate to the workshop evaluations with an average work shop evaluation	Continue to acquire survey and written evaluations from workshop participants.

			score of 3.3 out of 4.	
4.4	NMSU community able to successfully run their own reports using the Cognos reporting tool.	NMSU community reports created using Cognos and survey and course/ workshop evaluations.	Provided over 193 hours of Cognos Training with positive evaluation responses to the NMSU community during FY 06/07. Various faculty and staff are currently utilizing the Cognos tool to run their reports.	Continue to acquire survey and written evaluations from workshop participants. Occasionally review NMSU community reports created using Cognos
4.5	Student satisfaction with lab services, operating hours, equipment and software.	Survey/Evaluation tool available in labs and on the SCS web site.	Formal evaluation tool was not created. Several verbal compliments and emails and lack of complaints indicate services are adequate	Create and provide an evaluation tool to the users of Student Computing Services. Continue to monitor lab hours, equipment, software and computer lab service needs.
4.6	Faculty, staff, and student satisfaction with PCSS customer service and repairs.	Pinnacle reports, surveys/evaluations, and NMSU community feedback.	We gained more department contracts in FY 06/07 and provided over 1600 trouble ticket hours of service to the NMSU community. Many contract holders and end users provided positive comments related to meeting service level agreements.	Continue to monitor PC Support response time and Pinnacle trouble ticket entries. Continue to be open to feedback and comments from end users and review service level agreements as needed.

A-5: Security and Research Computing Outcomes Assessment Reporting – 2006
Contact – Shaun Cooper
Objective 5.1 – Fully implement PIX/VPN firewall for high end users
Objective 5.2 – Assess current administrative reporting needs
Objective 5.3 – Eliminate Mainframe Printing/Redirect
Objective 5.4 - Deploy HR end user package, Deploy Finance core packages to production

Objective	Service being measured	Assessment Procedures	Analysis of the results	Actions based on the assessment results
5.1	All non-public access to the banner systems	Enumerate the users of ODBC and other connections deployed; count the number of non-firewall VPN connections	Incomplete due to student go live.	Given as a task to Matt Presser as the primary contact to implement. Expect a December 2007 completion
5.2	Reporting documents for Deans and above	Collect outstanding requests, implement reports, then re-assess.	Received a number of reports needed by Deans and support offices. In conjunction with Registrar, sequenced the reports needed by NMSU	Created 25 reports replacing 250 previous reports. Deployed student reports to 300 people since March 15, 2007. Continue to receive new request and continue to deploy reports as sequenced by the data custodian
5.3	NMSU printing services	Reduce the number of lines of print on the MVS3900. Identify the critical customers using the 3900 and find alternate solutions for them.	Meetings with external users Mathematics and worked with them to move product to WebCT.	Reduced 1.5 million sheets to 100,000 sheets. Replaced letter head printing to remote printing. Replaced central label printing with remote label printing. Purchase a high volume label printer to replace the one attached to the mainframe. Took the mainframe 3900 printer off of maintenance saving $20K. Implemented Advising documents in eprint.

Objective	Service being measured	Assessment Procedures	Analysis of the results	Actions based on the assessment results
5.4	End users access to HR and Finance data	Number of packages deployed, number of reports deployed.	B&F took over this task and it was removed from ICT workload No longer an objective	

A-6: Strategic Relations Outcomes Assessment Reporting - 2006
Contact – Brian Ormand
Objective 6.1 – Increase funding & partnership opportunities
Objective 6.2 – Account for NMSU Student Technology Fees (STF)
Objective 6.3 - Gather information and ideas from individuals who support technology on all
NMSU campuses

Objective	Service being measured	Assessment Procedures	Analysis of the results	Actions based on the assessment results
6.1	Funding proposals, funded proposals, and potential partnerships	Identify the delta from Jan06 to Jan07	Student Tech Fee increase of $386,500 ICT/SR awarded $394,100 as PI on NM Learning Network New partnerships formed with various state departments	Continue to seek new funding opportunities Maintain relationships with existing partners.
6.2	Student services made available through the NMSU Student Fee. Provide peer institution comparison data for student technology services	Completed STF projects, satisfaction of STAC (Student Technology Advisory Committee) & ASNMSU based on annual reporting feedback.	STAC and ASNMSU expressed high satisfaction with the services provided by the Student Technology fee. The level of accountability reporting that is done through STAC. ASNMSU passed a resolution for the student technology fee to increase for the 2006-07 school year.	Continue supporting STAC meetings & accountability reports. Continue involving students in the technology planning process and priority.

Objective	Service being measured	Assessment Procedures	Analysis of the results	Actions based on the assessment results
6.3	ACANS Strategic Planning Summit.	(1) Produce ACANS IT planning document, (2) Complete action items from ACANS planning document, (3) Participant feedback on planning process	Results of ACANS Planning Summit were very positive with virtually all participants indicating on the assessment that the event was useful and they would attend again if invited. The update Spring meeting showed good progress on goals identified at the Summit.	Continue to have ACANS planning events each fall with campus technology leaders. Investigate ways to bring the results of these efforts into the overall campus planning.

A-7: Telecommunication & Networking Services Outcomes Assessment Reporting - 2006
Contact – Norma Grijalva
Objective 7.1 – Complete an Annual Review of NMSU Networking services data
Objective 7.2 – Continue to provide a variety of faculty and student computing resources.
Objective 7.3 – Provide regular training for technology classrooms at all campuses
Objective 7.4 – Provide high speed networking for all NMSU departments and facilities

Objective	Service being measured	Assessment Procedures	Analysis of the results	Actions based on the assessment results
7.1	Determine needed additional network capability for NMSU Community; plan for expansion as needed	Review of data; comparison to previous year and from month to month	- Need to increase backbone bandwidth. - Need to reengineer NMSU server network	- In process of updating network to 10 gigabit. - Reengineering 34 net in progress.
7.2	Implementation of a high quality VOIP system for the NMSU community	Survey of potential VOIP users	Determined there is a need and established a priority list	- Deployed VOIP in Albuquerque, Leyendecker, home offices. - Branches looking at possible deployment

7.3	Provide a high quality workshop that prepares users with the needed information	Participant workshop evaluation, email and voice communication feedback	Faculty happy with workshops	Continue to provide workshops. No changes.
7.4	Install high speed connectivity and voice services to entities on the east side of I-25	Feedback from email survey	Found a need to provide high speed networking east of I25	In process of installing fiber. Is currently to the water tower.

Appendix B: NMSU IT Comparison to EDUCAUSE Core Data Service

Table 1-5
Average Number of FTE Staff
in the Central IT Organization in Each Functional Area

FY04

	ALL	DR	NMSU	MA	BA	AA	OTHER
Administration of IT Organization, Clerical Support	4.8	12.6	16.0	3.1	1.9	1.6	5.3
Administrative/Enterprise Information Systems	12.1	34.4	23.0	6.9	3.3	3.4	14.1
Desktop Computing Support, User Support Services, Training, Computer Store	8.1	18.1	3.8	5.6	3.2	3.7	10.9
Enterprise Infrastructure and Services, Identity Management	2.5	6.9	9.0	1.2	0.5	0.7	3.7
Help Desk	3.4	7.7	2.0	2.4	1.1	1.6	4.6
IT Policy	0.4	0.9	0.3	0.3	0.2	0.2	0.7
IT Security	1.1	2.8	0.5	0.6	0.3	0.4	1.5
Instructional Technology, Multimedia Services, Student Computing	6.1	15.7	9.0	4.4	2.3	2.9	5.6
Network Infrastructure and Services	5.6	15.9	14.0	3.3	1.9	1.8	6.0
Operations, Data Center, Print Services	5.1	15.8	24.0	2.5	0.9	1.3	5.7
Research Computing, Academic Computing	2.3	6.7	0.0	1.4	0.6	1.0	2.1
Telephony	4.5	14.6	9.0	2.3	0.9	0.8	4.2
Web Support Services	2.4	5.4	3.0	1.7	1.0	1.1	3.1
Other Function	7.6	12.5	0.0	4.2	1.2	4.7	12.9

Table 1-7
Percentage of FTE Staff in
the Central IT Organization in Each Functional Area

	ALL	DR	NMSU	MA	BA	AA	OTHER
Administration of IT Organization, Clerical Support	9.2%	7.8%	14.10%	8.9%	10.9%	8.9%	9.7%
Administrative/Enterprise Information Systems	17.9%	20.6%	20.3%	18.6%	17.1%	14.4%	18.6%
Desktop Computing Support, User Support Services, Training, Computer Store	16.0%	12.0%	3.3%	16.2%	17.0%	19.4%	15.4%
Enterprise Infrastructure and Services, Identity Management	3.5%	4.3%	7.9%	3.0%	2.9%	3.2%	4.9%
Help Desk	7.3%	5.4%	1.8%	7.4%	7.3%	8.6%	7.7%
IT Policy	1.2%	60.0%	0.26%	1.0%	1.6%	1.4%	1.7%
IT Security	2.1%	1.8%	0.40%	1.9%	2.3%	2.3%	2.5%
Instructional Technology, Multimedia Services, Student Computing	10.2%	9.8%	7.9%	11.0%	10.2%	11.5%	7.5%
Network Infrastructure and Services	9.9%	10.0%	12.3%	9.3%	11.3%	9.6%	9.3%
Operations, Data Center, Print Services	6.2%	9.3%	13.5%	5.9%	4.4%	4.9%	6.4%
Research Computing, Academic Computing	3.8%	4.1%	0.0%	3.7%	3.4%	4.5%	3.4%
Telephony	5.5%	8.4%	7.9%	5.6%	4.7%	3.6%	4.5%
Web Support Services	5.1%	3.5%	2.6%	5.1%	5.7%	6.1%	5.2%
Other Function	7.6%	6.2%	0.0%	7.9%	5.8%	8.9%	10.0%

Table 1-9
Summary Statistics of Total Central FTE IT Staff

	Mean	Median	Minimum	Maximum
ALL	60.5	29.9	1.0	652.0
DR EXT	203.4	174.0	14.0	652.0
NMSU	113.5	113.5	113.5	113.5
DR INT	82.5	69.0	17.5	280.0
MA I	40.2	33.0	4.0	174.0
MA II	17.4	14.0	3.0	55.0
BA LA	23.6	22.0	3.5	69.5
BA GEN	12.7	9.5	1.0	77.0
AA	21.3	15.0	2.0	112.0
OTHER	71.5	49.5	1.0	507.0

Table 1-10
Central FTE IT Staff as a Percentage of
Total Campus FTE IT Staff

	Mean Central FTE IT Staff	Mean Total Campus FTE IT Staff*	% Central FTE IT Staff
ALL	60.5	90.9	83.5%
DR EXT	203.4	358.7	66.4%
NMSU	113.5	175.5	64.7%
DR INT	82.5	117.9	75.9%
MA I	40.0	50.0	85.2%
MA II	17.4	19.6	91.4%
BA LA	23.6	26.3	90.4%
BA GEN	12.7	14.1	91.4%
AA	21.3	24.6	89.8%
OTHER	71.5	101.3	79.8%
* Central plus estimated distributed/departmental IT staff			

Table 1-11
Students Supported per Central FTE IT Staff Member

	ALL	DR	NMSU	MA	BA	AA	OTHER
Mean	160.2	127.2	119.0	162.9	134.8	246.0	125.2
Median	140.4	119.1	119.0	149.2	111.1	210.1	0.0
Minimum	0.0	23.2	119.0	56.5	40.6	29.1	0.0
Maximum	1522.0	413.8	119.0	548.0	649.5	1522.0	536.9

Table 1-13
Separate IT Job Titles or a Broadband IT Classification
and Compensation System

	ALL	DR	NMSU	MA	BA	AA	OTHER
Yes	61.7%	75.9%	X	64.7%	47.3%	56.6%	62.1%
No	38.3%	24.1%		35.3%	52.7%	43.4%	37.9%

Table 1-14
Dollar Amount in Budget per FTE IT Staff Member
for Professional Development/Training

	ALL	DR	NMSU	MA	BA	AA	OTHER
Mean	$1,123	$1,103	$750	$977	$1,279	$969	$1,392
Median	$1,000	$1,000	$750	$1,000	$1,200	$800	$1,003
Minimum	$0	$0	$750	$0	$0	$0	$0
Maximum	$13,500	$3,500	$750	$3,655	$3,625	$4,000	$13,500

Table 2-2
Median Amounts of Funding for the Central IT Organization
(in 1,000s of dollars) by Funding Source for All Responding Institutions

Funding Source	N =	ALL	DR	NMSU	MA	BA	AA	OTHER
Operating appropriation to central IT organization	887	$2,301	$9,420	$6,393	$2,176	$1,185	$1,100	$3,200
Capital appropriations for central IT organization	587	$452	$897	$292	$350	$300	$236	$120
Revenue generated from student technology fees	295	$460	$1,183	$200	$468	$300	$307	$320
Sale of central services (chargeback) to departments	365	$721	$4,340	$4,473	$249	$55	$48	$1,300
Sale of central services to external entities	125	$212	$452	$520	$86	$6	$13	$156
Resale of products to departments	113	$74	$200	$0	$26	$5	$4	$102
Resale of products to external entities	48	$23	$44	$0	$23	$16	$10	$39
Proportional share of dollar equivalent of systems/services provided at system or district level	140	$500	$1,041	$0	$600	$280	$138	$420
Other source	104	$285	$517	$0	$285	$350	$225	$250

Table 2-4
Means and Medians for Total Central IT Funding (in 1,000s of Dollars)

	Mean	Median
ALL	$7,875	$3,378
DR EXT	$28,087	$23,197
NMSU	$11,878	$11,878
DR INT	$9,863	$8,676
MA I	$5,006	$3,741
MA II	$1,957	$1,443
BA LA	$3,035	$2,683
BA GEN	$1,586	$1,097
AA	$2,359	$1,569
OTHER	$9,346	$5,286

Table 2-5
Central IT Funding per FTE Student

	ALL	DR	NMSU	MA	BA	AA	OTHER
Mean	$2,658	$1,390	$880	$832	$1,249	$567	$12,397
Median	$803	$1,037	$880	$754	$1,071	$514	$823

Table 2-9
Percentage of Total Central IT Funding Spent on Central IT Staff Compensation

	ALL	DR	NMSU	MA	BA	AA	OTHER
Mean	47.2%	48.8%	82.4%	48.2%	44.4%	48.8%	45.3%
Median	46.5%	46.9%	82.4%	46.4%	44.2%	49.1%	45.3%

Table 12-11
Mean IT Expenditures
Outside the Central IT Organization (in 1,000s of dollars)
for Institutions Where Such Expenditures Are Known

	N =	ALL	DR	NMSU	MA	BA	AA	OTHER
IT Compensation	673	$1,939	$8,866	$3,100	$446	$104	$142	$1,692
Other IT expenditures	605	$2,476	$10,322	$3,100	$642	$113	$261	$2,655

Table 2-12
Central IT Personal Expenditures
as a Percentage of Total Campus IT Personnel Expenditures

	ALL*	DR	NMSU	MA	BA	AA	OTHER
Mean	83.6%	62.4%	64.7%	87.2%	93.1%	91.0%	78.8%
Median	89.3%	60.6%	64.7%	91.4%	94.2%	96.8%	82.9%
* N = 673							

Table 2-14
Percentage of Campuses That Charge General Technology Fees

	ALL	DR	NMSU	MA	BA	AA	OTHER
Yes	52.4%	56.9%	X	61.0%	43.2%	62.0%	31.4%
No	47.6%	43.1%		39.0%	56.8%	38.0%	68.6%

Table 2-16
Total Dollars Generated per Campus from General Technology Fees
(in 1,000s of Dollars) for Institutions That Charge Such Fees

	ALL*	DR	NMSU	MA	BA	AA	OTHER
Mean	$1,310	$3,404	$516	$1,132	$375	$577	$463
Median	$592	$2,390	$516	$700	$250	$409	$275
* N = 466							

Table 3-4
Mean Percentage of Classrooms Equipped with Various Technologies

	ALL	DR	NMSU	MA	BA	AA	OTHER
Wired Internet connectivity	86.5%	83.7%	80.0%	90.9%	90.1%	88.4%	76.0%
Wireless Internet connectivity	33.5%	40.4%	5.00%	35.5%	32.8%	27.1%	30.3%
LCD projectors	50.5%	46.2%	20.0%	52.1%	50.3%	49.9%	54.4%
Computers	41.9%	31.5%	30.0%	43.2%	45.0%	47.6%	42.1%
Televisions	31.7%	22.0%	49.0%	34.5%	33.9%	39.8%	26.5%
Smart boards	4.6%	3.3%	1.00%	4.9%	3.9%	6.0%	4.9%
Document projectors/systems/ cameras	18.7%	17.5%	10.0%	19.0%	15.2%	18.0%	24.6%

Appendix C: NM HED Peers for New Mexico State University – Las Cruces

In Region By State

University of Arizona	Tucson, Arizona
University of Arkansas	Fayetteville, Arkansas
Colorado State University	Fort Collins, Colorado
Iowa State University	Ames, Iowa
Kansas State University	Manhattan, Kansas
Louisiana State University	Baton Rouge, Louisiana
University of Missouri	Columbia, Missouri
Oklahoma State University	Stillwater, Oklahoma
Oregon State University	Corvallis, Oregon
Texas A & M University	College Station, Texas
Utah State University	Logan, Utah
Washington State University	Pullman, Washington
University of Wyoming	Laramie, Wyoming

Out of Region By State

Clemson University	Clemson, South Carolina
University of Tennessee	Knoxville, Tennessee
Virginia Polytechnic Institute & State University	Blacksburg, Virginia

Regional Competitors
(Not Required by NMCHE)

University of New Mexico	Albuquerque, New Mexico
University of Texas at El Paso	El Paso, Texas

Appendix D: Service Metric Graphs and Tables (of primary service metrics)

ICT/BOFS

Summary
Delivered Surveys: 1054
Received Reponses: 76

* Voice Service: 28-Excellent   14-Good
* Cellular   3-Excellent   1-Good
* Administrative   3-Excellent   1-Fair
* Server Admin: 1-Excellent   2-Good
* PC Support: 3-Excellent   1-Good
* Software   11-Excellent   7-Good   1-Fair

ICT Survey Results
3/28/06 - 3/19/07
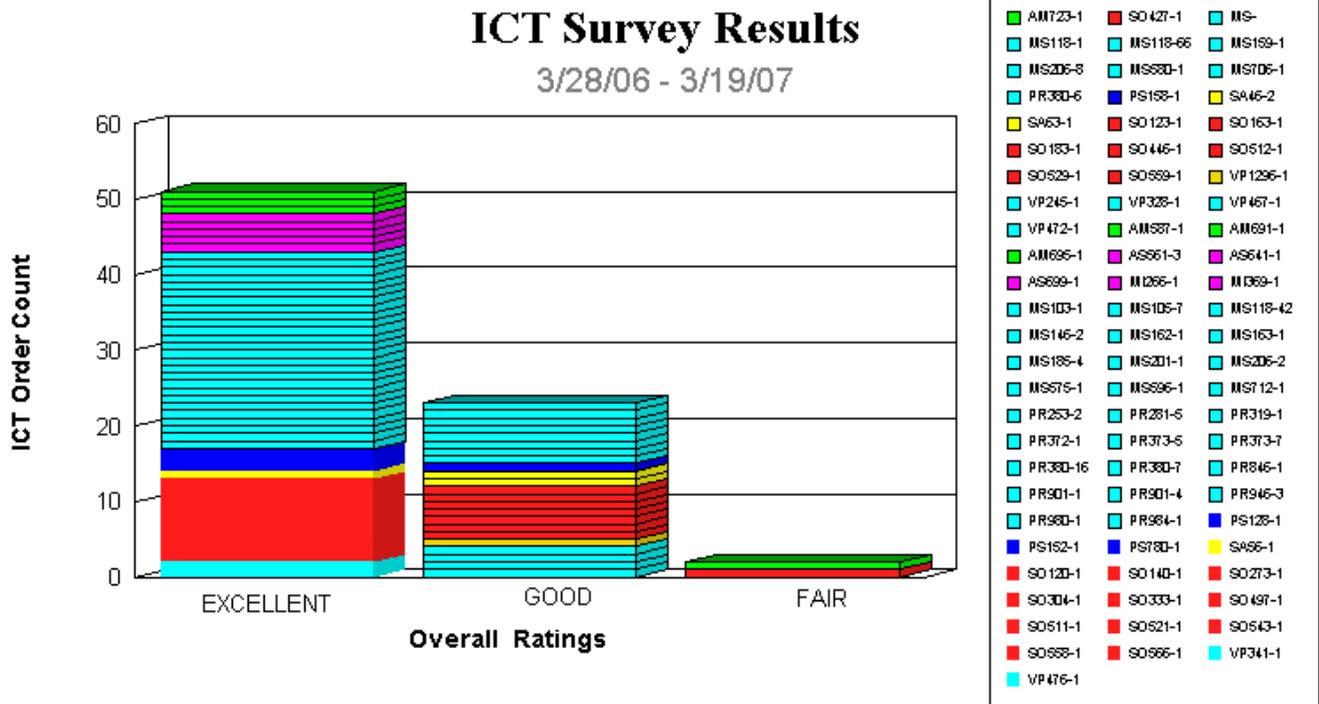
ICT/USA
Server Availability

HOST_NAME	PERCENT TOTAL TIME UP	FUNCTION
banner-as-d	99.24%	Banner
banner-as-p	99.75%	Banner
banner-d	99.21%	Banner
banner-ods-d	99.04%	Banner
banner-ods-p	99.74%	Banner
banner-p	99.61%	Banner
banner-ss-d	99.24%	Banner
banner-ss-p	99.74%	Banner
banner-wf-d	99.36%	Banner
banner-wf-p	99.75%	Banner
oem-p	99.82%	Banner
luminis-cms	99.92%	Content Management Server
luminis-d	99.31%	Development Portal Server
luminis-email	99.84%	Mail Server
luminis-ldap	99.98%	Portal and Authentication Server
luminis-scs	99.93%	Luminis
luminis-sitestudio	99.93%	Luminis
bejarat(luminis-t)	99.99%	Test Portal Server
bubba	99.99%	Listproc
ccserver1	86.46%	gateway mail server
ccserver2	99.99%	gateway mail server
ccserver3	99.99%	gateway mail server
ccserver4	99.99%	gateway mail server
ccserver5	99.99%	gateway mail server
cheech	99.89%	Webmail
ernie	99.99%	Webmail Database
chong	99.99%	Corbett Clockme & Dial-up Authentication
clave	99.61%	WebCT
corridor	99.97%	Window webserver
dino	99.99%	Networker Backups for freeBSD
dns1	99.99%	name resolution
dns2	99.75%	name resolution
drpepper	99.99%	Administrative Dialups
eprint	99.99%	
mammon	99.99%	Cashnet

ginger	99.97%	TSM Backup Server
maryann	92.90%	Test TSM Server
joebob	99.91%	WWW
larson	99.99%	WWW test
nmsu-check	99.99%	NMSU Check Printing
nocona	99.98%	Accounts Web Server
parsec	99.99%	ICT ClockMe
passagem	99.99%	DB2 Gateway
pulgita	99.98%	Legacy Web Applications
salsa	99.81%	WebCT
salsa-d	99.99%	WebCT Dev
guiro	98.31%	WebCT DR & Solaris Flash Archive Server
teletac	99.99%	Premium Dial-ups
uno-gw	99.99%	SCP services
usstarprd	99.99%	DARS
uswebdev	99.99%	DARS Dev
uswebprd	99.94%	SES
verdi	99.97%	Student Web Pages
nestor	99.99%	Student Web disk server
wilma	99.99%	File and Mail Server for Telecommunications
Average Server Uptime	99.45%	

ICT/PSA Server Availability

HOST_NAME	PERCENT TOTAL TIME UP	FUNCTION
matrixdevas	99.94%	Matrix
matrixdevds	99.83%	Matrix
matrixprodas1	99.94%	Matrix
matrixprodas2	99.94%	Matrix
matrixproddc1	99.94%	Matrix
matrixproddc2	99.94%	Matrix
matrixprodds1	99.91%	Matrix
matrixprodds2	99.85%	Matrix
matrixtestas	99.94%	Matrix
matrixtestdc	99.94%	Matrix
consol	99.34%	Novell Server
hurricane	99.96%	ACN Domain Controller
tidalwave	99.98%	ACN Domain Controller
exchange	99.99%	Exchamge Mail System
exchange-be1	99.99%	Exchamge Mail System
exchange-fe1	99.99%	Exchamge Mail System
exchange-fe1a	99.99%	Exchamge Mail System
exchange-fe2	99.99%	Exchamge Mail System
exchange-fe2a	99.99%	Exchamge Mail System
exchange-pub	99.99%	Exchamge Mail System
exchange1	99.99%	Exchamge Mail System
centra1	99.20%	Centra
entrada	99.99%	Banner forms access server
psastorage1	99.90%	Central File Services
Average Server Uptime	99.92%	

ICT/DBA Banner Oracle Database Availability

Database Availability

	PBAN	PODS	PCRN	PCMS	PAWX	DBAN	DODS
☐ Planned Outages	4.5%	11.8%	0.6%	0.6%	0.5%	2.6%	3.3%
■ Unplanned Outages	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
☐ Availability	95.5%	88.2%	99.4%	99.4%	99.5%	98.6%	96.7%
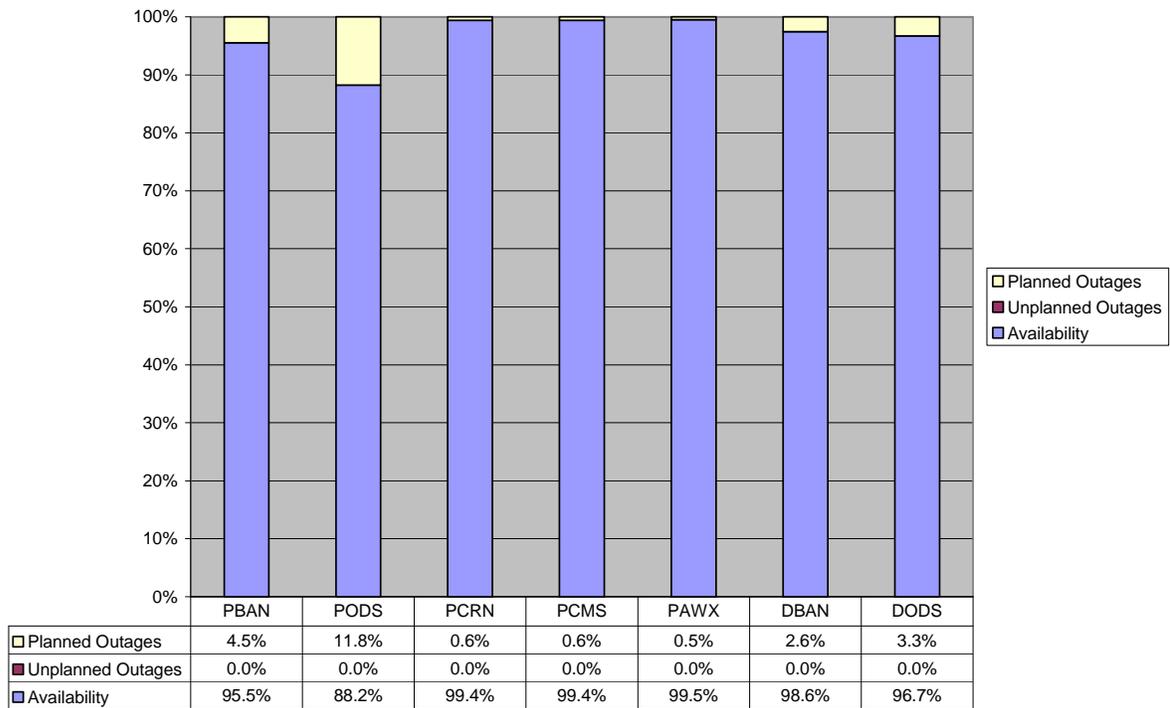
ICT/CS/USA Managed Unix Servers

Hostname	Group	OS	Version	HW Vender	Model	Serial Number	IP	Critical
eprint (old)	(Off) Broken	Redhat		Dell	PowerEdge 4400	DGDTH01	.3.30	No
teachmehr	(Off) eaf training	Windows		Dell	Optiplex G1	0XMMI	.3.230	No
emserve	(Off) va gen	Windows		Gateway	G6-200	4674184	.3.32	No
neo	(Off) va gen	Windows		Compaq	Proliant 800	D720BJW10520	.3.31	No
nestor	AAMS	AIX	AIX 5.2	IBM	Pseries	10-8A23A	.34.146	No
travel	AAMS	Redhat	4.7	Homemade	N/A	N/A	.3.6	No
romulus	AAMS (Old)	AIX		IBM	RS/6000 250	10-C99FD	.34.6	No
murphie	AgExt	Solaris	SunOS 8	Sun	V120	FF33830190	.34.57	Yes
Atmos	Astronomy	Solaris	SunOS 8	Sun			.5.201	No
dino	Backups	Solaris	SunOS 8	Sun	Ultra 5	FW01920673	.3.24	No
maryann	Backups	AIX	AIX 4.3	IBM	eServer	10-24FDA	.34.174	No
ginger	Backups	AIX	AIX 5.2	IBM	N/A	N/A	.34.83	Yes
banner-as-d	Banner	Solaris	SunOS 9	Sun	V240	FN42630075	.4.9	No
banner-d	Banner	Solaris	SunOS 9	Sun	Sun-Fire-880	0346AM0175	.4.3 0	No
banner-ods-d	Banner	Solaris	SunOS 9	Sun	Sun-Fire-440	0347AD11A4	.4.14	No
banner-ss-d	Banner	Solaris	SunOS 9	Sun	Sun-Fire-V240	FN42630150	.4.7	No
banner-wf-d	Banner	Solaris	SunOS 9	Sun	V240	FN42630200	.4.22	No
luminis-d	Banner	Solaris	SunOS 9	Sun	Sun-Fire-V240	FN42630163	.4.11	No

banner-as-p	Banner	Solaris	SunOS 9	Sun	V440	0357AD1216	.4.32	Yes
banner-ods-p	Banner	Solaris	SunOS 9	Sun	Sun-Fire-480R	0425AM006A	.4.30	Yes
banner-p	Banner	Solaris	SunOS 9	Sun	Netra-T12	0426MM215A	.4.27	Yes
banner-ss-p	Banner	Solaris	SunOS 9	Sun	Sun-Fire-V440	0424AD2122	.4.31	Yes
banner-wf-p	Banner	Solaris	SunOS 9	Sun	V440	0347AD1218	.4.13	Yes
lum.-email	Banner	Solaris	SunOS 9	Sun	Sun-Fire-480R	0424AM02D6	.4.36	Yes
luminis-cms	Banner	Solaris	SunOS 9	Sun	Sun-Fire-V440	0347AD11A1	.4.35	Yes
lum-ldap	Banner	Solaris	SunOS 9	Sun	Sun-Fire-V440	0347AD1211	.4.34	Yes
lum-sitestudio	Banner	Solaris	SunOS 9	Sun	Sun-Fire-V440	N/A	.4.33	Yes
mammonivr	Cashiering	DOS		Gateway	G2000 P5-75	3803778	Offline	No
mammon	Cashiering	AIX	AIX 4.3	IBM	eServer	10-B8DBA	.210.46	Yes
parsec	Clockme	Redhat	9	Dell	Precision	C8J0Y21	.34.78	No
binks	Console	Linux	2.2.14	Cyclades	TS2000	N/A	.34.75	No
doodoo	Console	Linux	2.2.14	Cyclades	TS800	N/A	.4.5	Yes
jarjar	Console	Linux	2.2.14	Cyclades	TS2000	N/A	.34.84	Yes
snot	Console	Linux	2.2.14	Cyclades	TS800	N/A	.4.24	Yes
spit	Console	Linux	2.2.14	Cyclades	TS800	N/A	.4.25	Yes
tinkle	Console	Linux	2.2.14	Cyclades	TS800	N/A	.4.4	Yes
usstarprd	DARS	Solaris	SunOS 8	Sun	Sun-Fire-280R	213C0533	.34.31	Yes
hermes	Data Warehouse	AIX	AIX 3.4	IBM	eServer	10-1222A	.34.28	No
kapu	Dave Rocks	Solaris	SunOS 9	Sun	Sunfire 280R	333AD1943	.34.52	No
gazoo	DB Gateway Mainfr.	AIX	AIX 3.4	IBM	RS/6000 380	570122683679	.210.198	Yes
dba-test	DBA	Solaris	SunOS 9	Sun	V120	FF35170037	.34.8 0	No
dba-test2	DBA	Solaris	SunOS 9	Sun	V120	FF35220119	.4.45	No
oem-p	DBA	Solaris	SunOS 9	Sun	V440	0347AD105D	.4.6	Yes
ernie	Email	Redhat	7.2	Dell	PowerEdge 1300	B6HJ401	.34.137	No
cheech	E-Mail	Redhat	7	Gateway	930 Series	26456086	.34.14	No
chong	E-Mail	Redhat	9	Gateway	930 Series	26456087	.34.15	No
sophos	E-Mail	Redhat	es 3	Dell	PowerEdge 4400	1JBIH	.3.229	Yes
ccserver3	E-Mail-IN/Sophos	Redhat	es 4	Dell	PowerEdge 2850	7P1QW61	.34.98	No
ccserver1	E-Mail-IN/Sophos	Redhat	es 3	Dell	PowerEdge 2650	80WCT21	.34.19	Yes
ccserver2	E-Mail-IN/Sophos	Redhat	es 3	Dell	PowerEdge 2650	9GNF23	.34.53	Yes
ccserver4	E-Mail-OUT/Sophos	Redhat	es 4	Dell	PowerEdge 2850	9P1QW61	.34.102	Yes
ccserver5	E-Mail-OUT/Sophos	Redhat	es 4	Dell	PowerEdge 2850	8P1QW61	.34.103	Yes
kang	E-Procurement	Redhat		Dell	PowerEdge 1650	JW1KG11	.34.24	Yes
kodos	E-Procurement	Redhat		Dell	PowerEdge 1650	HW1KG11	.34.25	Yes
Hobbes	Hobbes	AIX	AIX 4.3	IBM	PowerServer 580	S091 2001-001	.3.50	No
lois	Internal	AIX	AIX 4.3	IBM	RS/6000 43P 140	10-56572	.34.33	No
lovey	Internal	AIX	AIX 5L	IBM	RS/6000 Server F50	10-32705	.34.133	No
drpepper	Internal Docs	FreeBSD	4.7	Homemade	N/A	N/A	.3.11	Yes

redrover	Internal Docs (Dev.)	Windows		Dell	PowerEdge 1300	OSLWQ	.3.47	No
dns1	Internet	FreeBSD	4.8	Dell			3.5	Yes
dns2	Internet	FreeBSD	4.8	Dell			2.19	Yes
agni	Jira (Trouble Tick.)	Solaris	SunOS 9	Sun	V100	FV34310170	.37.77	No
wrangler	LDAP Auth. (Web)	Solaris	SunOS 9	Sun	V120	FF44310066	.34.188	Yes
catalog2	Library	Solaris	SunOS ?	Sun			.18.17	Yes
lib	Library	Solaris	SunOS ?	Sun	V100		.18.12	Yes
libproxy	Library			Gateway	Everex	QNX-8252009	.3.34	Yes
bubba	listserve/radius/news	Solaris	SunOS 9	Sun	V120	FF35220020	.3.39	Yes
bejarat	Luminis-d	Solaris	SunOS 9	Sun	280R	309AD1002D	.34.4 0	No
tuzkar	Luminis-T	Solaris	SunOS 9	Sun	V100	FV34310251	.34.76	No
itchy	maybe new eprint	FreeBSD	AIX 4.3	Dell	PowerEdge 2650	1M4DS11	.3.71	No
nocona	New AAMS, (Boot)	Solaris	SunOS 9	Sun	V120	FF42350154	.4.26	Yes
gargamel	New Hobbes	AIX	AIX 4.3	IBM	RS/6000 43P-140	10-44366	.3.28	No
ropers	New Verdi, Web	Solaris	SunOS 9	Sun	V120	F42350142	.4.29	No
toro	Old EAF System	Windows		Dell	PowerEdge 2300	5NLIZ	.3.227	No
hector (old)	Old Server (SAS)	AIX	AIX 4.3	IBM	RS/6000 43P-140	10-79901	Offline	No
pulgita1	Old WWW/Online	AIX		IBM	RS/6000 250	MS70116524	.3.178	No
pulgita	Online Registration	AIX		IBM	Pseries	10-C3810	.3.17	Yes
entrada	Oracle/Crystal Rep.	Windows		Dell	PowerEdge 6400	G9J8Y01	.3.44	Yes
remus	Paging	AIX	AIX 4.3	IBM	RS/6000 250	MS70112626923	.34.7	Yes
Caucasus	Physics	Solaris	SunOS 8	Sun			.181.69	No
ccws	SAN Controller	Solaris	SunOS 9	Sun	V120	FF35220085	.4.37	Yes
calendar	SMTP (NMSU)	Redhat	es 3	Dell	PowerEdge 2400	8CVSF01	.3.228	No
marconi	Supercomputer	Skyld		Penguin	InfiniCon 9100	N/A	.34.100	No
wilma	Telecomm	FreeBSD		Dell	PowerEdge 2650	4S5JK11	.34.32	No
bert	temp. eprint	Redhat	2.1 AS	Dell	PowerEdge 1300	C6HJ401	.34.139	No
tonyllama	Test for Flash Rec.	Solaris	SunOS 9	Sun	V120	F42140276	.4.28	No
stetson	Test Server	Solaris	SunOS 9	Sun	V120	FF44310031	.34.92	No
uswebprd	Web Prod. Box	Solaris		Sun	Sunfire 280R	213C0532	.34.29	Yes
corridor	Web Server	Windows		Dell	PowerEdge 2400	BCVSF01	.3.25	No
uswebdev	Web Test Box	Solaris	SunOS 8	Sun	Sun-Blade-100	F121620010	.34.27	No
guiro	WebCT	Solaris	SunOS 9	Sun	V240	FN34720043	.4.46	No
maraca	WebCT	Solaris	SunOS 9	Sun	V120	FF40850023	.4.40	No
clave	WebCT	Solaris	SunOS 9	Sun	V120	FF40850161	.4.41	Yes
salsa	WebCT	Solaris	SunOS 9	Sun	V440	00347AD11A3	.4.47	Yes
joebob (old)	WWW	Solaris	SunOS	Sun	V120	FF35220110	.3.4	No

			9					
larson	WWW	Solaris	SunIS 9	Sun	V120	FF35220110	.3.116	Yes

ICT/CS/PSA Managed Windows Servers

Server	IP Address	Operating System
advancement	128.123.34.94	Windows 2003 SP1
as1	128.123.34.56	Windows 2000 SP4
as2	128.123.34.70	Windows 2000 SP4
asaserver	128.123.34.71	Windows 2003 SP1
asnmsusvr	128.123.87.220	Windows 2003 SP1
bfdb1	128.123.34.12	Windows 2000 SP4
bfdb2	128.123.34.45	Windows 2000 SP4
bfdev1	128.123.34.11	Windows 2000 SP4
bffps1	128.123.34.44	Windows 2003 SP1
bffps2	128.123.34.72	Windows 2003 SP1
bfprd2	128.123.34.35	Windows 2000 SP4
bfbrd3	128.123.34.47	Windows 2000 SP3
bfprd4	128.123.34.85	Windows 2003 SP1
bfprd5	128.123.34.55	Windows 2000 SP4
bfprd6	128.123.34.62	Windows 2003 SP1
bfweb1	128.123.34.13	Windows 2000 SP4
biztalk	128.123.4.60	Windows 2003 SP1
blackberry	128.123.34.87	Windows 2003 SP1
bonzai	128.123.251.33	Windows 2003 SP1
centra1	128.123.34.21	Windows 2000 SP4
centraDev	128.123.34.16	Windows 2000 SP4
cip-sevis	128.123.34.38	Windows 2003 SP1
cognos-iis	128.123.4.23	Windows 2003 SP1
cognos-p	128.123.4.20	Windows 2003 SP1
cognos-u	128.123.4.21	Windows 2003 SP1
coleccion	128.123.28.10	Windows 2003 SP1
entrada	128.123.3.20	Windows 2000 SP$
epidemic	128.123.51.220	Windows 2003 SP1
exchange1	128.123.34.79	Windows 2003 SP1
firestorm	128.123.34.58	Windows 2003 SP1
forestfire	128.123.34.67	Windows 2003 SP1
ganc	128.123.185.210	Windows 2003 SP1
gradschool	128.123.217.146	Windows 2003 SP1
grants-DC1	128.123.51.217	Windows 2003 SP1
grants-DC2	128.123.51.218	Windows 2003 SP1
grants-FPS1	128.123.51.216	Windows 2003 SP1
hailstorm	128.123.2.30	Windows 2003 SP1
hawkeye	128.123.6.205	Windows 2003 SP1
hope	128.123.34.43	Windows 2003 SP1

hurricane	128.123.2.3	Windows 2003 SP1
info-ed	128.123.34.39	Windows 2003 SP1
lesaserver	128.123.251.69	Windows 2003 SP1
mapper	128.123.251.50	Windows 2003 SP1
matrixdevas	128.123.4.51	Windows 2003 SP1
matrixdevds	128.123.4.52	Windows 2003 SP1
matrixprodas1	128.123.4.53	Windows 2003 SP1
matrixprodas2	128.123.4.54	Windows 2003 SP1
matrixproddc1	128.123.4.56	Windows 2003 SP1
matrixproddc2	128.123.4.55	Windows 2003 SP1
matrixprodds1	128.123.4.57	Windows 2003 SP1
matrixprodds2	128.123.4.58	Windows 2003 SP1
matrixtestas	128.123.4.50	Windows 2003 SP1
matrixtestdc	128.123.4.48	Windows 2003 SP1
matrixtestds	128.123.4.49	Windows 2003 SP1
microburst	128.123.119.77	Windows 2003 SP1
miis	1283123.34.93	Windows 2003 EE SP1
monsoon	128.123.23.225	Windows 2003 SP1
nasa-1	128.123.34.95	Windows 2003 SP1
newsking	128.123.83.227	Windows 2003 SP1
nmsubookstore	128.123.34.50	Windows 2003 sp1
nmsu-Check	128.123.34.18	Windows 2000 SP?
nmsusql	128.123.34.108	Windows 2003 SP1
osp	128.123.185.206	Windows 2003 SP1
parking	128.123.34.?	Windows 2003 SP1
parkServe	128.123.3.10	Windows 2003 SP1
pfprd1	128.123.34.10	Windows 2000 SP4
pharos	128.123.34.20	Windows 2003 SP1
pos-server	128.123.87.86	Windows 2003 SP1
psatorage1	128.123.34.96	Windows 2003 SP1
psdb	128.123.3.7	Windows 2003 SP1
riptide	128.123.34.135	Windows 2003 EE SP1
sandstorm	128.123.34.59	Windows 2003 SP1
sharepoint	128.123.34.105	Windows 2003 SP1
sharepoint-dev	128.123.34.51	Windows 2003 SP1
ssstrio	128.123.165.209	Windows 2003 SP1
teleapp	128.123.195.150	Windows 2003 SP1
tidalwave	128.123.34.161	Windows 2003 SP1
tma	128.123.34.54	Windows 2003 SP1
trapper	128.123.6.207	Windows 2003 SP1
trapper2	128.123.6.206	Windows 2003 sp1
twister	128.123.2.20	Windows 2003 SP1
ucommdb	128.123.34.142	Windows 2003 SP1

vpr	128.123.34.163	Windows 2003 SP1
vpsaserver	128.123.87.184	Windows 2003 SP1
whirlwind	128.123.2.20	Windows 2003 SP1
xtend911	128.123.229.25	Windows 2003 SP1
xtender-as	128.123.4.16	Windows 2003 SP1
xtender-d	128.123.4.15	Windows 2000 SP4?
xtender-disk	128.123.4.19	Windows 2003 SP1
xtender-web	128.123.4.17	Windows 2003 SP1

Non-ICT Departmental Servers and Contacts

Biology	Vince Gutschick	6-5661
Chemistry	Keith Burke	6-4627
Chemistry	Pete Lammers	6-3918
Physics	Jim Ni	6-1920
EE	Bill Smith	6-5590
ME;ET;CHEME	Holly Ricketts	6-6116
CS	Ivan Strnad	6-6831
Astronomy	Joni Johnson	678-4211
Astronomy	Lyle Huber	6-1862
BCS	Tammy Camp	6-2930
BCS	Mike Kimetz	N/A
WRI	Bobby Creel	6-4337
IE	Percy Walls	6-3035
CCSU	Rich Chavez	6-1810
OFS	Tom Puckett	6-1449
AgEXT	Don Rhea	6-2701
Ag	Allen Terrell	
Police Dept.		
Student Heath		
Athletics		
Fish & Wildlife		
IRPOA		
PSL		
Math		

ICT/CS/USA Managed Central Storage Growth

Managed Central Storage
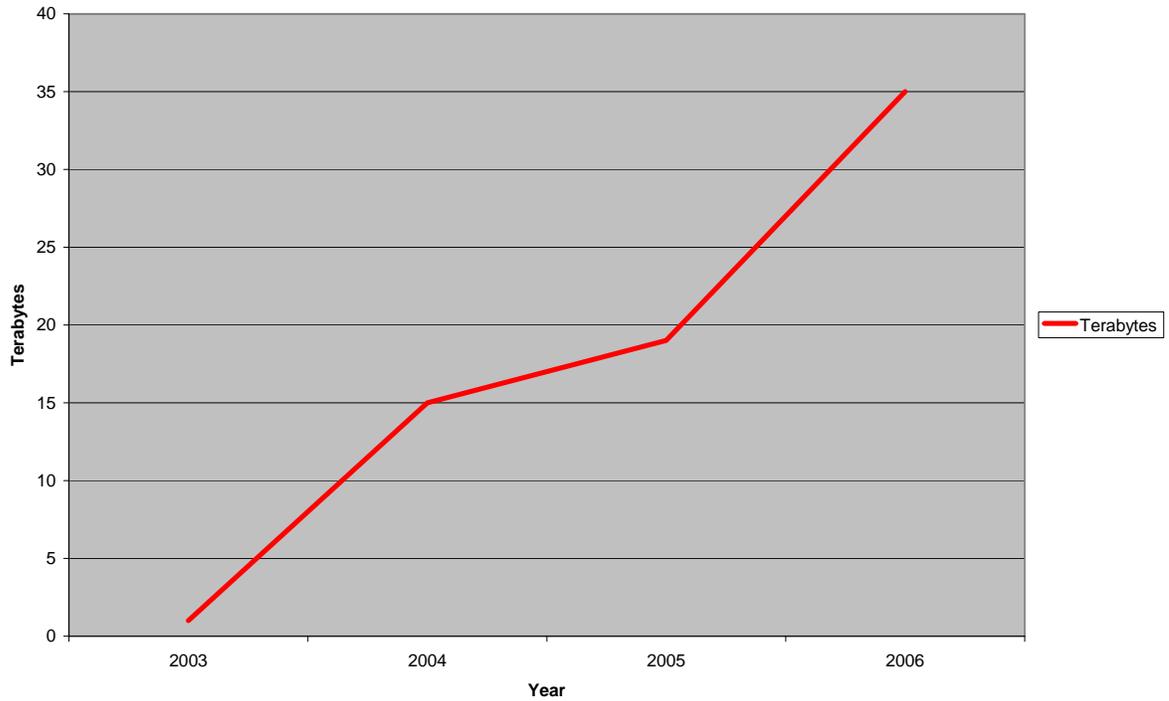
New ServerGraph email notifications to backup clients.
The following system(s) completely missed backup:

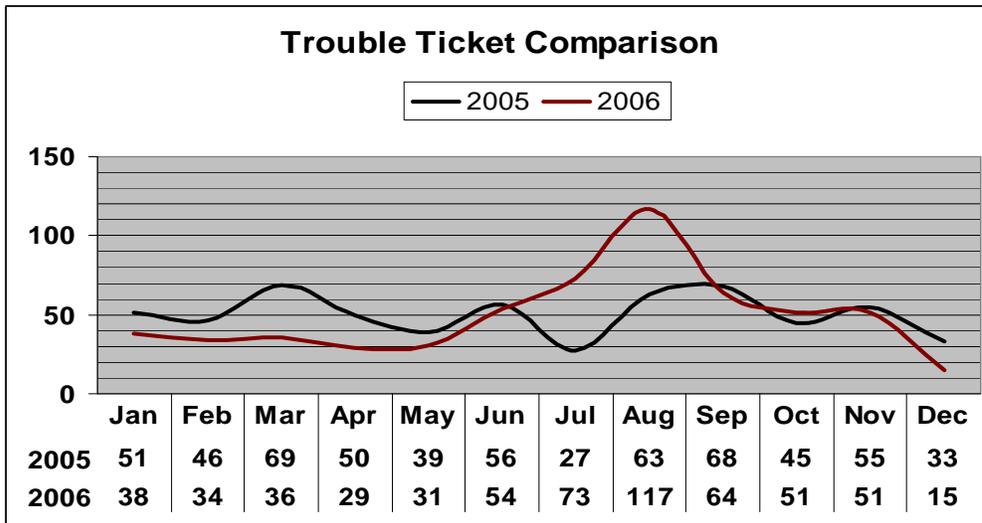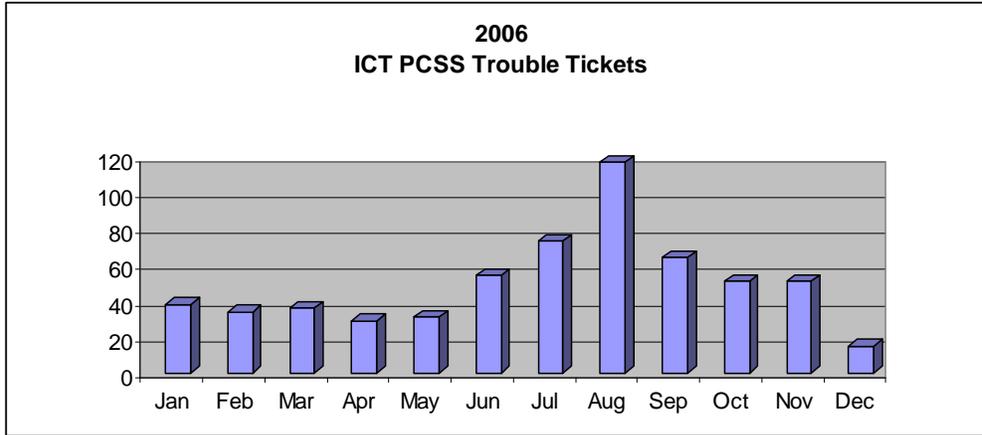| Backup Server	Node Name	Filespace Missed	Filespace Size	Days Since Last Backup	Days Allowed
dsmserv1	macanudo	Macintosh_HD	2 G	Never	3
dsmserv1	mushroom	ASR	0	309.1	3
dsmserv1	mushroom	SYSTEM_OBJECT	0	309.1	3
dsmserv1	mushroom	\\mushroom\c$	2 G	303.7	3
dsmserv1	mushroom	\\mushroom\d$	2 G	Never	3
dsmserv1	mushroom	\\mushroom\f$	2 G	309.1	3
dsmserv1	vpr	\\housing\sys	1.5 G	303.8	3
dsmserv1	vpr	\\vpr\data	2 G	119.6	3

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The following system(s) failed to back up some filespaces:

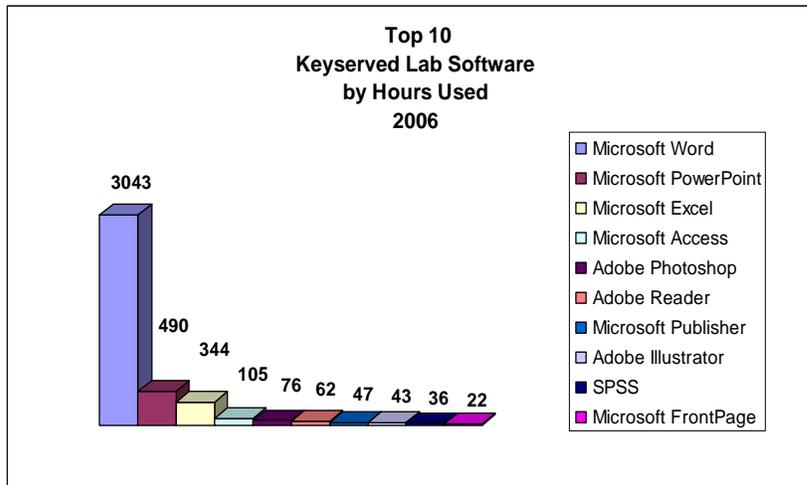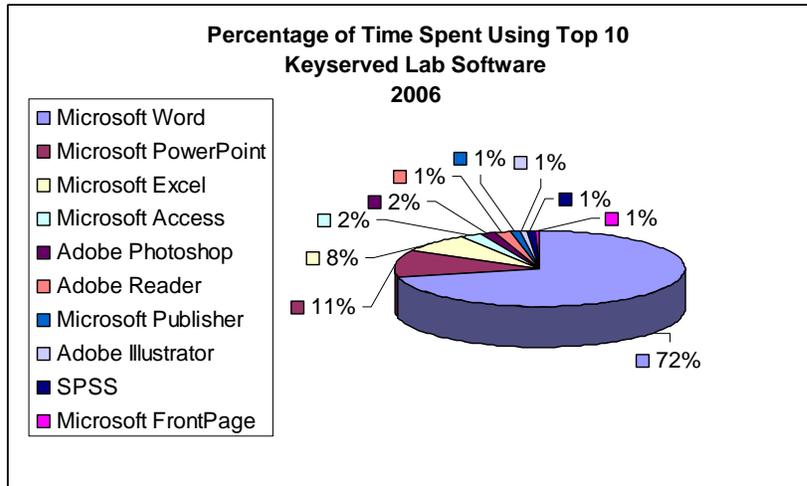| Backup Server	Node Name	Filespace Missed	Filespace Size	Days Since Last Backup	Days Allowed
dsmserv1	advancement	KMSL	619.5 M	410.3	3
dsmserv1	advancement	Siebel	359.4 M	308	3
dsmserv1	bb-ap	ASR	0	455.1	3
dsmserv1	bb-ap	SYSTEM_SERVICES	0	455.1	3
dsmserv1	bfprd4	SYSTEM_OBJECT	0	385.5	3
dsmserv1	bonzai	SYSTEM_OBJECT	0	478	3
dsmserv1	bookstore	SYSTEM_OBJECT	0	273.1	3
dsmserv1	centra1	SYSTEM_OBJECT	0	382	3
dsmserv1	centradev	ASR	0	453.8	3
dsmserv1	centradev	SYSTEM_SERVICES	0	453.8	3
dsmserv1	cognos-p.nmsu.edu	\\cognos-iis\c$	2 G	21.2	3
dsmserv1	cognos-p.nmsu.edu	\\cognos-iis\e$	2 G	21.1	3
dsmserv1	exchange1	\\exchange1\address	2 G	234.1	3
dsmserv1	exchange1	\\exchange1\exchange1.log	2 G	234.1	3
dsmserv1	exchange1	\\exchange1\resources$	2 G	234.1	3
dsmserv1	matrixprodds1	\\matrixprodds1\f$	1.3 G	64.1	3
dsmserv1	matrixprodds1	\\matrixprodds1\g$	2 G	64.1	3
dsmserv1	matrixprodds1	\\matrixprodds1\h$	0	64.1	3
dsmserv1	matrixprodds1	\\matrixprodds1\i$	140 M	64.1	3

ICT/ISS
Trouble Tickets
PCSS addressed 593 trouble tickets between January 1, 2006 and December 31, 2006. This is an average of 49 tickets per month with the highest request month producing 117 tickets and the lowest 15 trouble tickets.

2006
ICT PCSS Trouble Tickets

Trouble Ticket Comparison

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2005	51	46	69	50	39	56	27	63	68	45	55	33
2006	38	34	36	29	31	54	73	117	64	51	51	15

Continuing Maintenance Contracts
PC Support Services continues to participate in partnership/maintenance contracts with various departments and colleges. These agreements are based on a per machine costing model. At the end of 2006, we had contracts for over 300 machines disbursed between VP for Student Services, Placement and Career Services, Counseling, Student Health Center, Employee Health Center, Border Epidemiology, Center for Learning Assistance, Administrative and Academic Support, KRWG-TV, University Communications, Registrar, Auxiliary Administration, Audit Services, and 10 college specific labs.

Lab Software Usage

Percentage of Time Spent Using Top 10 Keyserved Lab Software 2006

Legend:
- Microsoft Word
- Microsoft PowerPoint
- Microsoft Excel
- Microsoft Access
- Adobe Photoshop
- Adobe Reader
- Microsoft Publisher
- Adobe Illustrator
- SPSS
- Microsoft FrontPage

Pie chart values: 72%, 11%, 8%, 2%, 2%, 1%, 1%, 1%, 1%, 1%

Top 10 Keyserved Lab Software by Hours Used 2006

Legend:
- Microsoft Word
- Microsoft PowerPoint
- Microsoft Excel
- Microsoft Access
- Adobe Photoshop
- Adobe Reader
- Microsoft Publisher
- Adobe Illustrator
- SPSS
- Microsoft FrontPage

Bar chart values: 3043, 490, 344, 105, 76, 62, 47, 43, 36, 22

Equipment Upgrades and Transitions

During the past year the following computer lab equipment changes occurred:

- Addressed 1050+ maintenance requests for Macintosh and PC computers recorded in the SCS database.
- Provided support and maintenance for 1000+ pieces of lab equipment, including software and hardware support.
- Completed installation of computers in Jacobs Hall 128c assessment lab.
- Rebuilt all student lab equipment during summer 2006.
- Setup and configured PCs in the Frenger Court and Aggie Snack Bar (GT157) areas.
- Moved UNO Project ARC 30 training lab and setup equipment at the new space in Anderson Hall (PSLW1101).
- Moved location of UNO Project ARC 12 war room lab to newly remodeled space in ARC B.
- Installed SAS in all ICT labs.
- Installed Video Intercept for the visually impaired in all labs.
- Setup and tested Pharos print management system and developed roll-out plans for installation in ICT computer labs for spring 2007.

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- Began installation and testing of Bootcamp software on iMac G5 to discern feasibility of dual operating system (MS Windows and Mac Tiger) in campus labs.

Scheduled Labs

PCSS lab services staff continues maintaining scheduling for five computer classrooms. In 2006 there continued to be an increase in the number of requests from faculty to use computerized classrooms. The request for an assessment lab made by the Faculty Advisory Committee on Technology (FACT) and ASNMSU was fulfilled in spring 2006. There is now a standard multimedia classroom in Jacobs Hall lab 128c containing 10 computer workstations with at least one that is ADA compliant for the visually and hearing impaired. When the lab is not scheduled for assessment, small classes, or training, it remains open for general use.

Scheduled Labs

Lab ID	Number of Seats	Typical Usage
ARC B 106	12	UNO Project Training
PSL 1101	30	UNO Project and General Staff Trainings
ICT 141	16	UNO Project, NMSU Classes, Open Lab
JA 128c	10	Assessment, HR testing, Open Lab
JA 129	37	NMSU Classes, Open Lab
JA 204	25	CS110 Grading, Open Lab
JA 205C	17	Multi-Media Classes, Open Lab

Proctored Labs

In 2006, ICT PCSS labs were proctored approximately 712 hours per week distributed among 11 labs. In 2006 we had to increase lab proctor hours to secure the student housing Vista Del Monte lab. The Housing Office moved to a different location on campus and could no longer provide assistance for the lab.

Average proctored lab hours per week

Lab	Wkly Hours 2005	Wkly Hours 2006	Number of Computers
Pete's Place	168	168	58
Breland 175	20	16	31
English 121	64	71	35
Gerald Thomas	14	12	26
HSS 219	10	16	26
Jacobs 128	113	115	69
Jacobs 205	97	106	76
Journalism 154A	10	10	19
Knox 146	78	84	23
Speech 315	13	12	25
Vista Del Monte (VDM)	0	102	20
Total	**587**	**712**	**388**

Comparison of Proctored Labs Average Weekly Hours
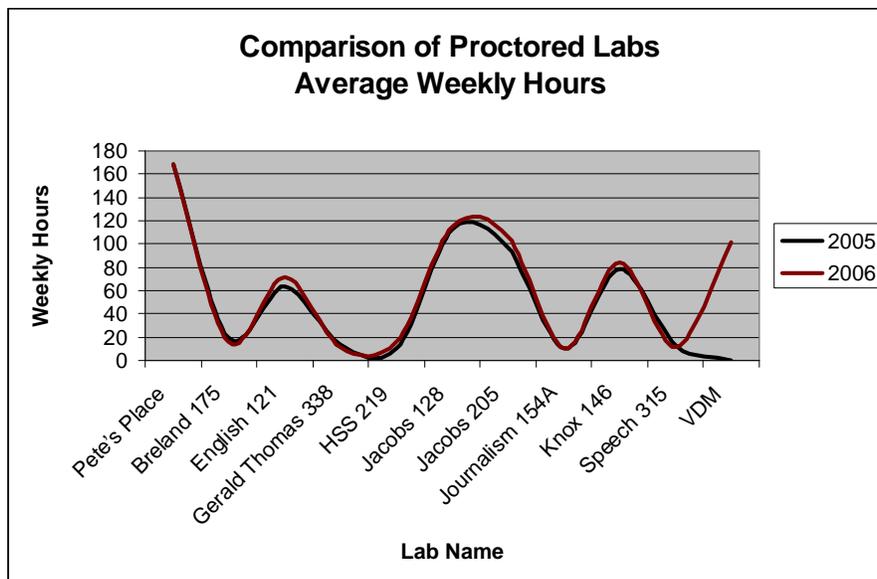
PC Support Services Equipment Rental

PC Support Services continues to provide computer systems for rent on a semester, monthly, weekly, daily, or ½ day basis. These systems are available for rent by NMSU students, faculty, and staff on a first come, first serve basis. All machines include keyboard, mouse, and modem or Ethernet card, and 15" Flat panel monitors. As new equipment is purchased for the labs, the older equipment is transferred to the rental pool. Over 60 computers were transferred to the rental pool in 2006 and older equipment was sent to property for disposal. There are currently 103 computers in the rental pool which includes 30 laptops (10 of these are used for the Regents meetings) and 73 desktops systems. There were very few machines left in the rental pool after the 3rd week of classes in both spring 2006 and fall 2006. In the summer of 2006 we purchased 15 new laptops and 20 flat panel monitors using student tech fee money allocated for the student rental program. We also have 4-20G and 1-30G iPods, and 4 digital projectors available for short term check-out by faculty.
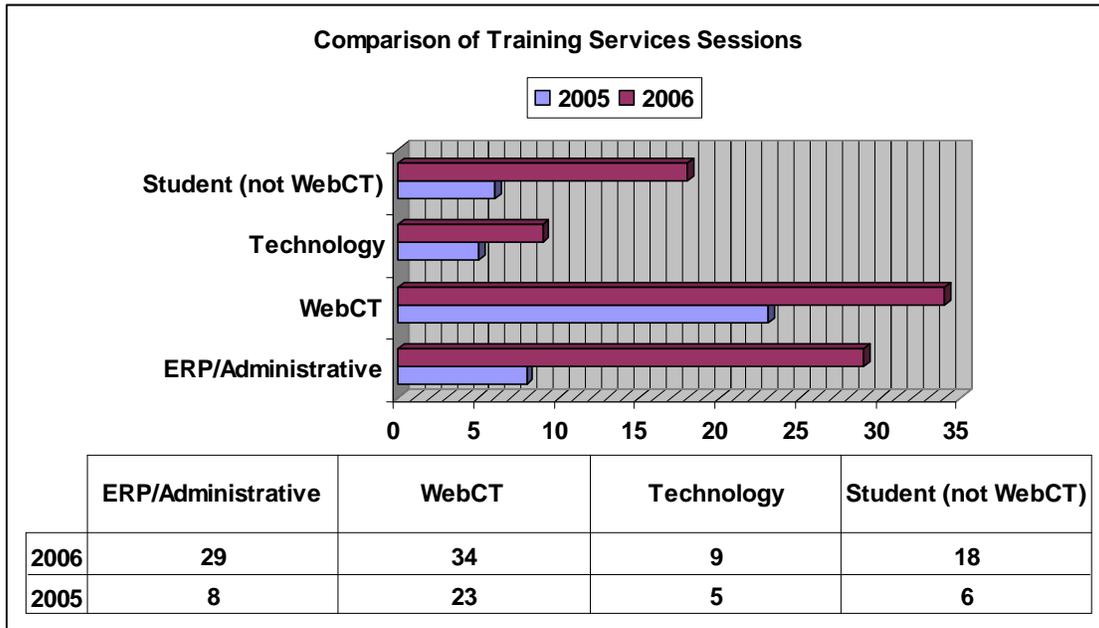
Standard Rental Computer Specifications

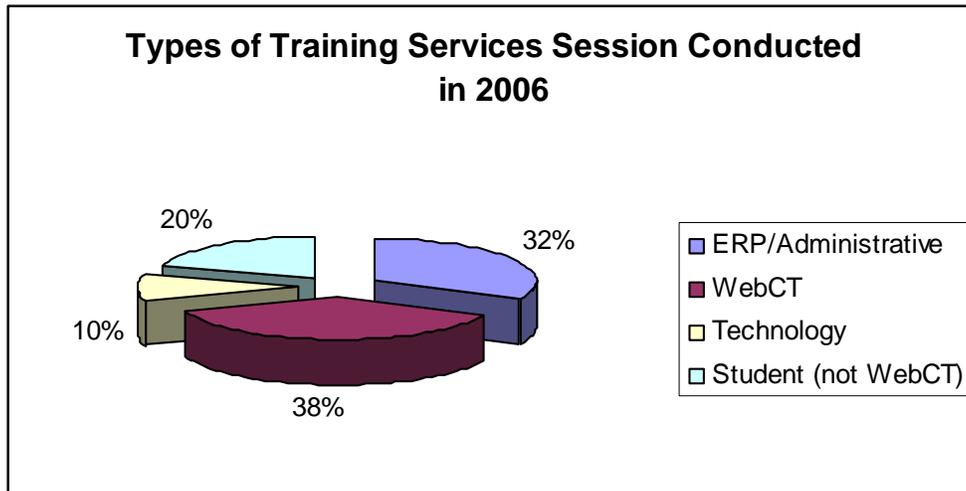| Standard PC	Standard MAC
Microsoft Windows XP	Mac OS X (10.4.x)
Microsoft Office 2003	Microsoft Mac Office 2004
Microsoft Internet Explorer Browser	Safari Browser
Adobe Acrobat Reader	Adobe Acrobat Reader
Sophos virus scanning software	Sophos virus scanning software
1.2 GHz (or better) Processor	800 MHz (or better) Processor
256 - 512 MB RAM	256 MB RAM
20-60 GB Hard Drive	20-60 GB Hard Drive
CD-ROM Drive	CD-ROM Drive
3.5" Floppy Drive	3.5" Floppy Drive
Networking: 56kbs/modem or Ethernet card	Networking: 56kbs/modem or Ethernet card
3.5" Encarta 2004 depending on hard drive size	NMSU Net Software
NMSU Net Software	Free Technical Support (carry-in and phone)
Free Technical Support (carry-in and phone)	

Equipment Rental Price List

Equipment	Rental Term	Students	Faculty/Staff
Laptop Computer	Semester	$300	$400
	Monthly	$100	$150
	Weekly	$50	$75
	Daily	$30	$40
	½ Day	$15	$20
Desktop Computer	Semester	$100	$150
	Monthly	$50	$75
	Weekly	$25	$40
Projector	Weekly	$50	$60
	Daily	$30	$40
	½ Day	$15	$20
VCR, DVD, Digital Camera, and other	Weekly	$25	$30
	Daily	$10	$15
	½ Day	$5	$10

Training Sessions Conducted 1/06 – 12/06

Comparison of Training Services Sessions

	ERP/Administrative	WebCT	Technology	Student (not WebCT)
2006	29	34	9	18
2005	8	23	5	6

Courses Available	
ERP/Administrative	**WebCT**
Introduction to Banner	WebCT Respondus
Introduction to Cognos PowerPlay	WebCT Basics
	WebCT Content Module
Student (not WebCT)	WebCT Course Recycling
Lab Student Training	WebCT in the Afternoon
Aggie Welcome Week	WebCT Quiz Tool
Camp Training	WebCT for Graduate/Teaching Assistants
Information Table	WebCT Open Lab
Technology Day	WebCT Basics - Online
Aggie Experience Information Fair	WebCT Calendar - Online
ICT Presentation UNIV 115	WebCT Course Recycling - Online
Technology	
Centra - Facilitator and Leader Training	
Synchronous Tools on Campus	
Brown Bag Tech Sessions	

Types of Training Services Session Conducted in 2006

- ERP/Administrative: 32%
- WebCT: 38%
- Technology: 10%
- Student (not WebCT): 20%

The following Brown Bag Technical Sessions were held in 2006.

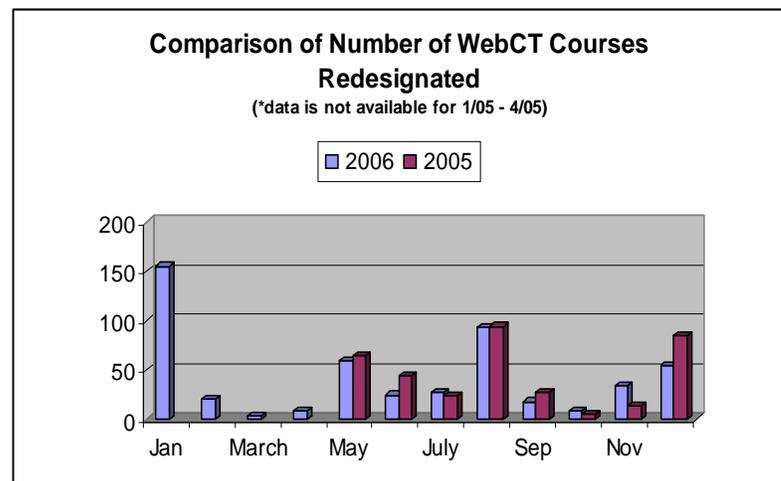| Tech Session Name	Presenter	Date
Telecommunications and Networking	Norma Grijalva	February 7th
Reporting	Olga Conter	April 5tth
PC Technologies	Teresa Burgin	May 16th
Enterprise Web Services	Jim Dryden	August 9th
Exchange Functions	PC Server Admin Group	October 12th
ICT Training Services	Training Services Group	December 7th

Web-based Course Management Tools

The demand for use of the NMSU Learning Management System (WebCT) continues to grow and Training Services team members are collaborating with other units within ICT to address the needs for NMSU to possibly share in a statewide funded Learning Management System. ICT Training Services staff have been active participants in reviewing hardware and software upgrades (i.e., WebCT Vista), continued direct training, documentation, and ongoing one-on-one support for faculty and graduate assistants. In preparation for the transition to the WebCT 6.0 upgrade, Training Services created new training events and provided numerous days of training for NMSU faculty, graduate assistants, and other college support people. The workshops included WebCT Basics, WebCT in an Afternoon, WebCT Quiz, WebCT for Grad Students, materials conversion, open labs, and ITAL. Ad-hoc technical support services continue to be provided on a call, email, or walk-in basis.
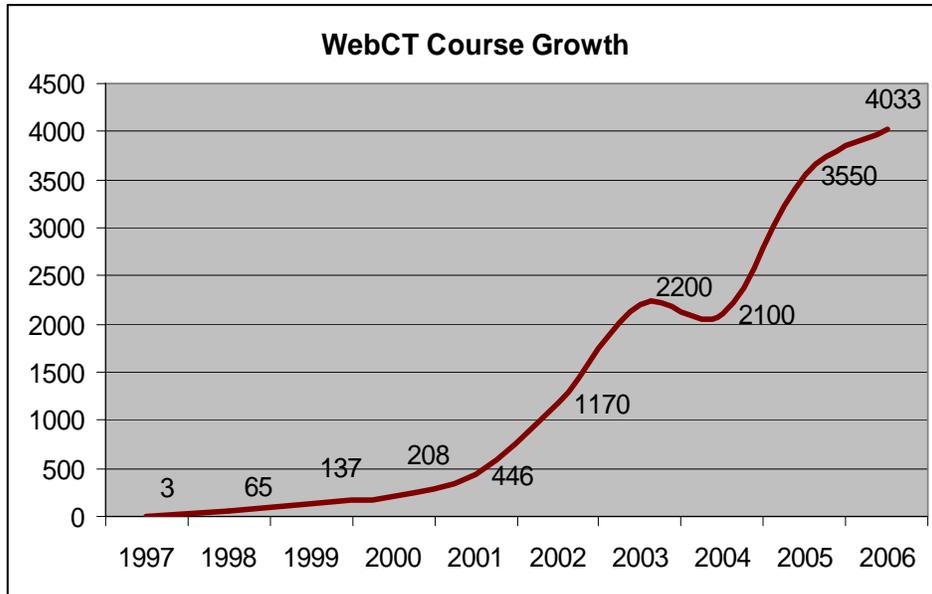
WebCT Course Information for 2006

Month	2005	2006
Jan	151	316
Feb	60	49
March	31	44
April	95	44
May	181	134
June	119	84
July	93	138
Aug	337	422
Sep	166	81
Oct	77	57
Nov	94	77
Dec	116	127

Comparison of New WebCT Courses Created
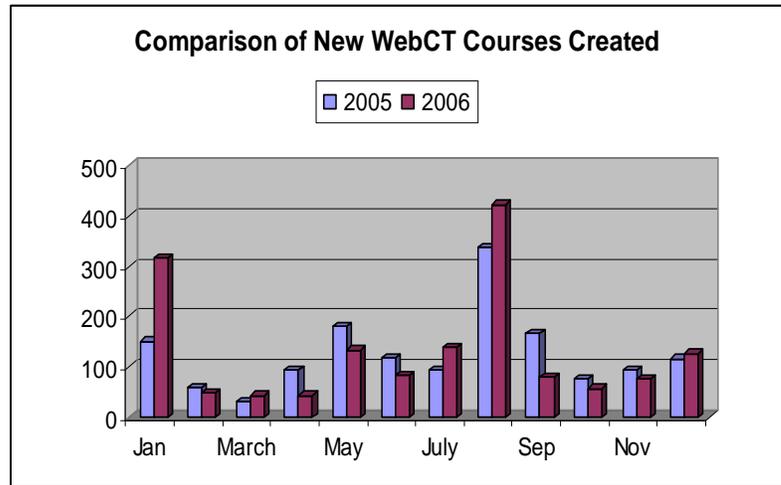
Month	2005	2006
Jan		155
Feb		21
March		4
April		9
May	65	59
June	44	25
July	24	27
Aug	94	93
Sep	28	18
Oct	5	9
Nov	14	34
Dec	85	54

Comparison of Number of WebCT Courses Redesignated
(*data is not available for 1/05 - 4/05)

WebCT Course Growth

Year	# Courses
1997	3
1998	65
1999	137
2000	208
2001	446
2002	1170
2003	2200
2004	2100
2005	3550
2006	4033

Centra

Centra continues to be the preferred NMSU web-based tool to create live online meetings, classes, or conferences. It also works effectively over modem connections. During the past year, Dona Ana Community College, Ag Extension, College of Extended Learning, and ICT Training Services have been the heaviest users and supporters of the application.

Centra Events 2006

Legend: CES, DAB, DE, ICT, RETA, Misc.

52, 10%   7, 1%   35, 7%   129, 26%   45, 9%   230, 47%
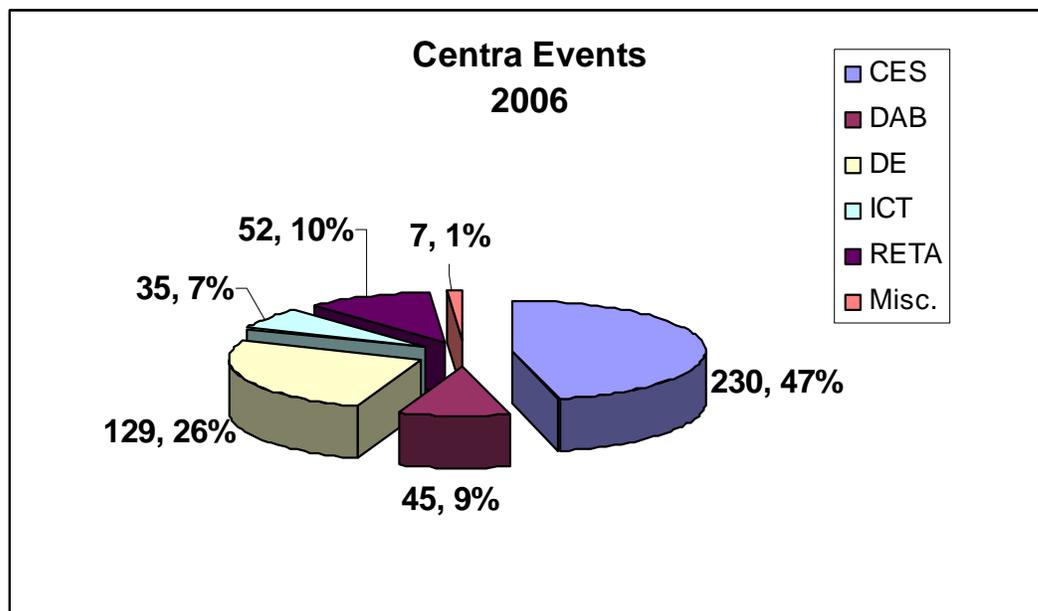
**Metrics of Ongoing Operations for Telecommunication and Networking Services**
The Telecommunication and Networking Services group is an operational services group and, as such, has responsibility of ensuring that several NMSU-wide services are functioning properly. The core services provided by NMSU are voice and data networking services; classroom technology support, and technical help desk services. The following sections detail some of the operational metrics.
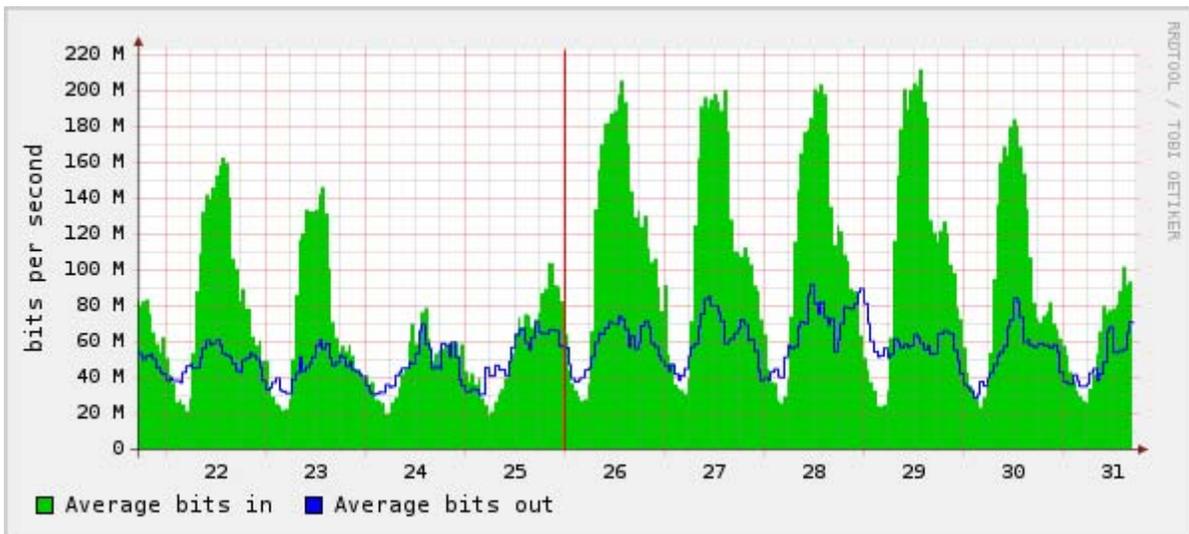
Network Services
Since NMSU relies heavily on the network for much of its day-to-day business activities. Therefore it is critical to determine the number of connected devices and the network utilization used by the university community.   In 1992, the number of network connected devices was 1200 and has now grown to 22,497 in 2006. It is important to note that the connected devices include computers, printers, building managers, and many other network attached devices. The chart on the next page illustrates the rate of growth of the NMSU network. This service is part of ICT's outcome assessment process.
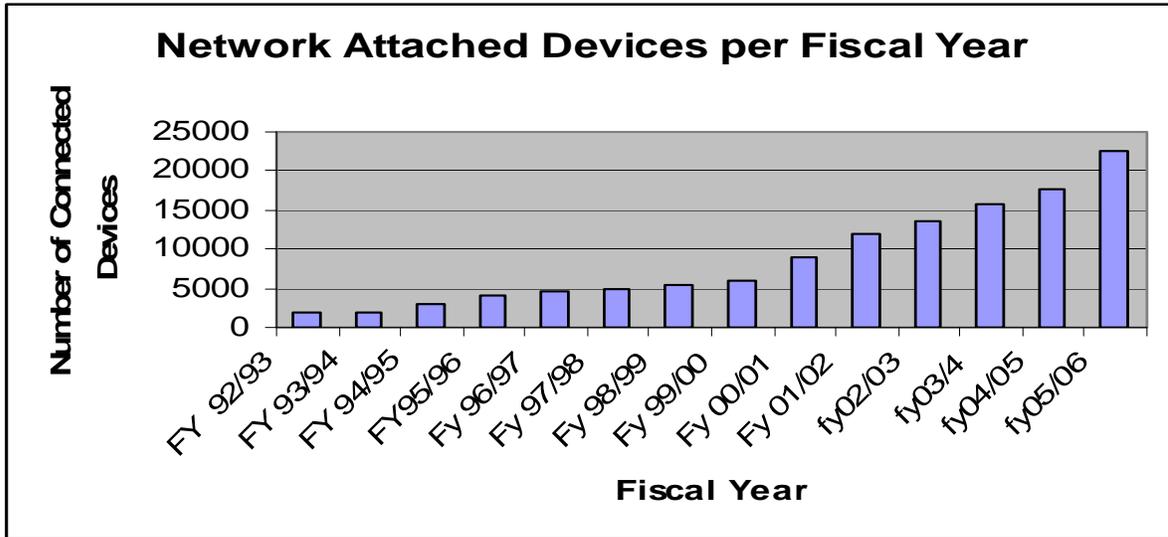
The growth in connected devices has resulted in an increase Internet bandwidth. The following chart illustrates the growth in Internet Bandwidth since 1992. The bandwidth has grown close to 200% since 1992.

Internet Bandwidth per Fiscal Year
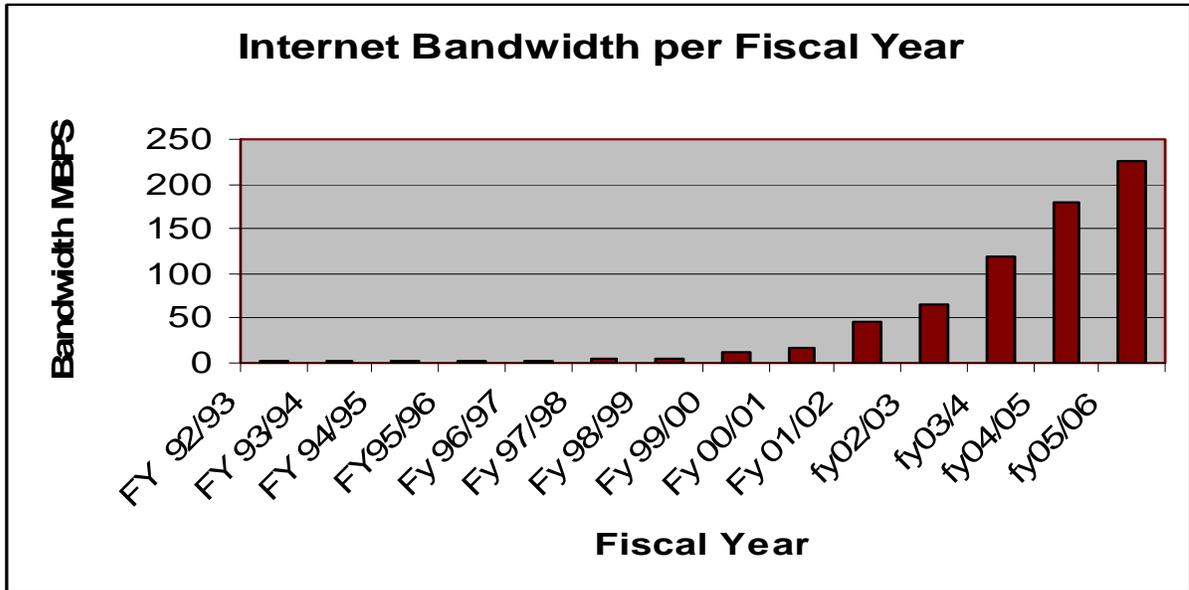
The final networking chart illustrates the typical Internet usage over a period of a week. This graph shows internet usage for the week of March 22, 2007. Please note the diurnal cycles and the increased usage during the typical work week. Also if this graph is compared to last year, the peaks are a full 40 Mbps higher than last year.


Telephone Services

ICT Telecommunication and Networking Services group provides all on-campus phone related services for both student and administrative customers. The following charts show usage of the telephone system at NMSU over a typical week time period.

The number of calls during that time period range from 375 to 1800 an hour. (These calls are into the Las Cruces campus). Please note usage is fairly steady from 8 AM to 5 PM.

This year we also visited many of the departments around campus to help them insure that there office call setup was in an optimal configuration.

Calls for the Week of October 16, 2006
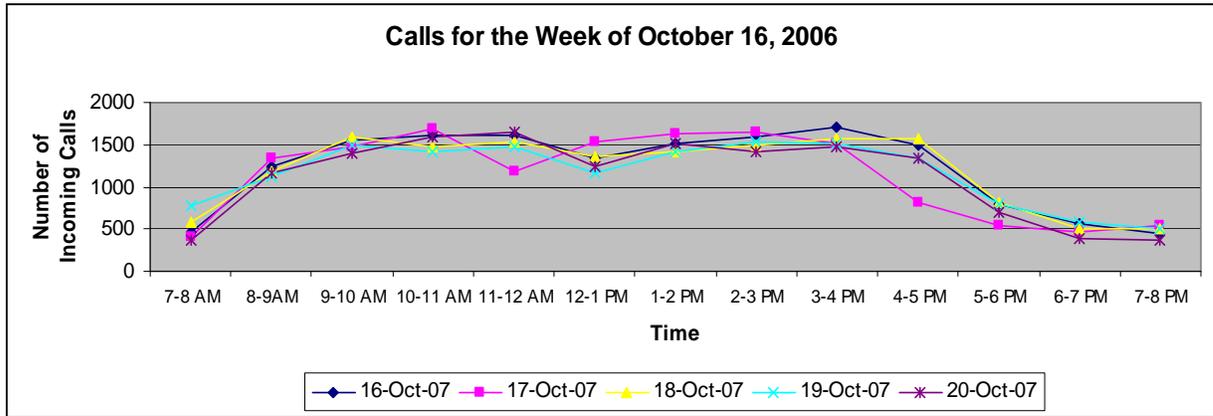
ICT Technical Help Desk
The ICT Help Desk, in conjunction with the Customer Service Desk, provides a single contact point for users of ICT services. The Help Desk directs questions and reports problems regarding supported software and hardware and assist in issue resolution. The Help Desk also identifies issue trends and notification of the appropriate personnel.

The following chart illustrates the category and number of calls handled by the ICT technical help desk during the period from January 2006 through December 2006. The number of trouble tickets handled by the help desk dropped by 2200 tickets in the period between calendar years 2005 and 2006. As the table below shows that the vast majority of calls are related to username and password issues.

ICT Help Desk Statistics for 2006		
Type:	Number of Tickets	Percentage
myNMSU Username/Password	4961	54.1%
Student Network	578	6.3%
Network	412	4.5%
CPIP Error	331	3.6%
PIN	324	3.5%
PC Maintenance	301	3.3%
INB Password	213	2.3%
WebCT Logon	172	1.9%
Email receive/send	168	1.8%
Netview	167	1.8%
Email Programs	165	1.8%
my.NMSU.Edu Portal	154	1.7%
Web-Time Entry	153	1.7%
Student Banner	118	1.3%
Dialup	116	1.3%
WebCT Error	95	1.0%
Lab	79	0.9%
Wireless	61	0.7%
Exchange	50	0.5%
ListServe	42	0.5%

|		
Virus	41	0.4%
Web Page	30	0.3%
Work-Flow	28	0.3%
Email Alias	25	0.3%
Work-Order	24	0.3%
INB Browser Problem	19	0.2%
Forward to FSA	13	0.1%
DARS	8	0.1%
SCS Ventana	7	0.1%
Third Party Software	6	0.1%
WebMail	5	0.1%
E-Hire	3	0.0%
Retiree Account	3	0.0%
IDS	2	0.0%
Unix	1	0.0%
Total	9175	100%

Central Modem Pool Services
The NMSU Central Dial-Up Modem Pool offers university students, staff, faculty and retirees a method to connect to the campus network from a remote location using a modem.

Even though the NMSU campus is heavily wired, there remains a substantial need for modem pool services. In the year 2006 there were over two-thousand unique users of the NMSU central modem pool. The following chart depicts the unique number of users over a typical week.
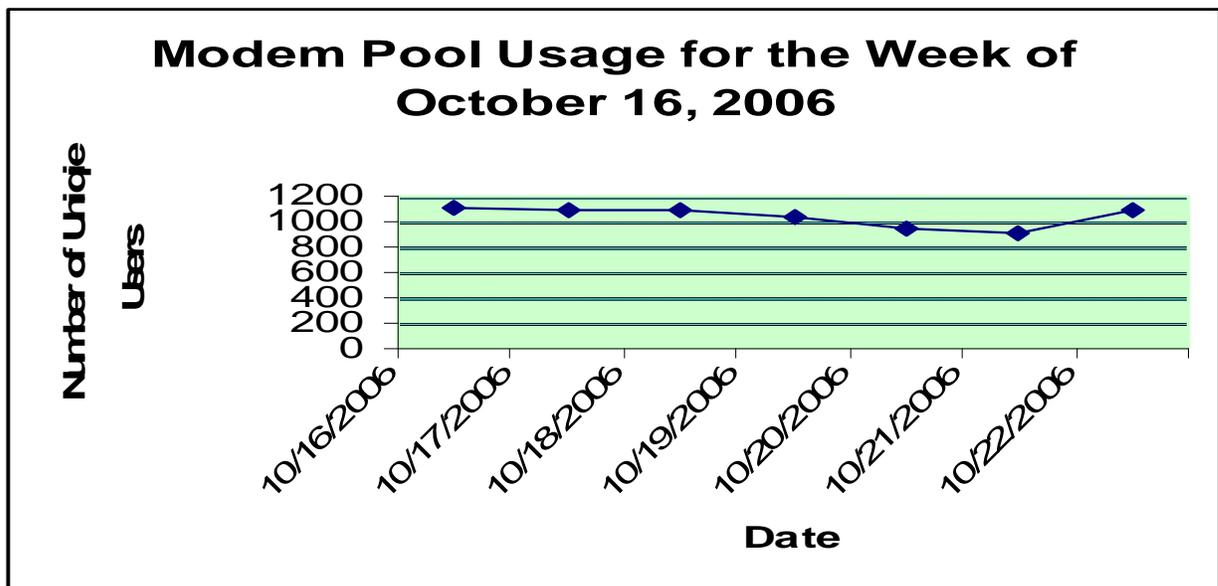
The following graph shows a weekly view of the use of the modem pool. Daily usage still exceeds 300 simultaneous users for many nights. An average of thirteen hundred unique users taking advantage of the modem pool services on a daily basis.
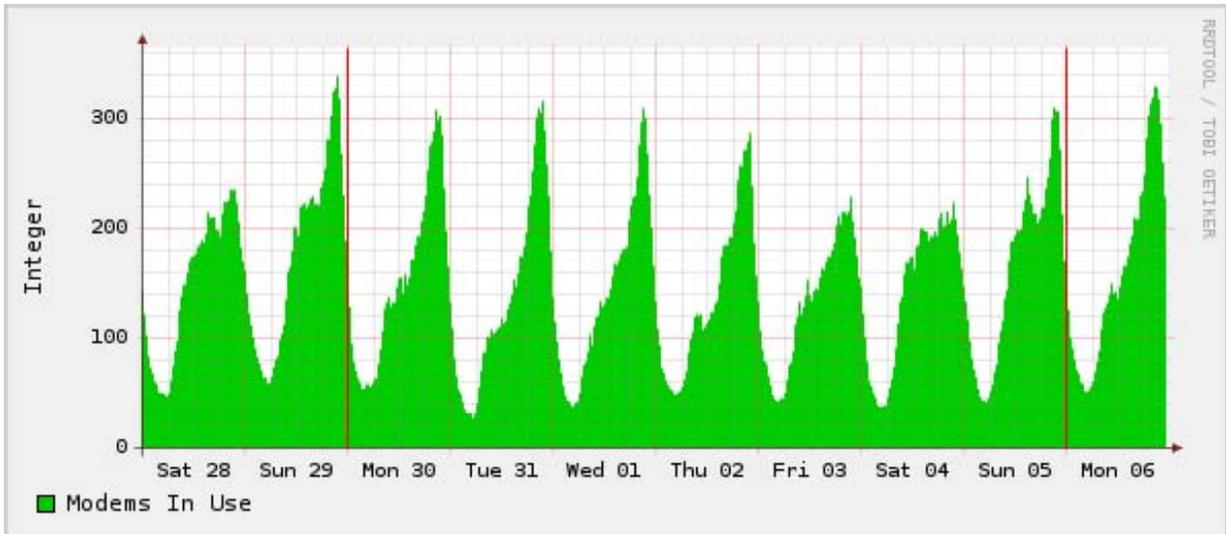
Classroom Technology

ICT is responsible for providing classroom technology services. ICT has developed a standard for classroom technology that has been very well accepted by the NMSU faculty. There is very limited funding for this effort. There are two central pools of money for this effort. The first is the student technology fee and building repair and renewal fund. In FY05/06 this two pools of money totaled a little over $75,000. In order to maximize this money, ICT has developed a cost sharing program with the colleges. In FY05/06 this resulted in a cost share from the colleges of over $211,000 or a ratio of 2.8. This effort has resulted in a steady increase of technology enabled classrooms.

The following charts show the results. The first is the total number of technology classrooms. The second is the number of technology classrooms by college. The data is through the end of 2006.

Classrooms over Time

Technology Classrooms by College