

October 4, 2007

**Annual Report**

**Abstracts**

## **ITS Computing - Customer Services**

Ivan Boyd

The ITS Computing Customer Services sub-departments make up the customer-facing staff and services that structure the point of contact between the students, staff, faculty, alumni and non-affiliated customers and the ITS Computing organization. This highly diverse department provides for student laboratories (Pods) and classrooms, consulting, e-mail administration, knowledge management, skilled service desk, incident logging and tracking, computing accounts, course evaluations, information dissemination, training, software site licensing and computer repairs. The Customer Services department promotes a quality approach based on ITIL, the internationally recognized collection of best practices, to achieve business effectiveness and efficiency in the use of information systems.

### **❖ Collaborative Applications Team (CAT)**

The CAT manages, provides technical support, and does primary application configuration for the applications and services listed below. The CAT also provides consultation, documentation and training on these services as needed. They often serve as a liaison for customers between the Support Center and ITS systems management areas to diagnose problems and plan for changes. The CAT also works directly with non-ITS departments to help them use their own implementation of these applications. The CA Team also provides high level technical consultation to end users on many other IT topics from network and desktop support to desktop security.

#### **➤ Accomplishments:**

- Developed a website showcasing UNM's involvement in the community for CPSCE (Committee for Public Service and Community Engagement)
- Coordinated the acquisition and set up of computing equipment for incoming President Schmidly,
- Established 24x7 support processes for the President's office.
- Implemented SPAM filtering in a collaborative project with UNM Hospital and Health Sciences Center resulting in blocking 95% of unwanted e-mail to the university
- Transitioned Mechanical Engineering to ITS Web and Email
- Implemented Identity Management interim measures to meet requirements of audit finding, including new password standard enforcement and a Password challenge/response system that automates password resets

- Made changes to GroupWise email and calendar and communicated steps for users to take to avoid loss of productivity due to Daylight savings time changes enacted by the Energy Policy Act

### ❖ **Computer Accounts Office**

Provides help to UNM faculty, staff and students to get their computer access ("NetID") to work for them. This involves creating NetIDs, changing passwords and various levels of consulting on how to do a variety of things. Our office is also charged with managing IP numbers, Listservs, creating Oracle logins for certain users, and approving and maintaining Group Studio Accounts in MyUNM portal.

#### ➤ **Accomplishments:**

- This area took on extensive support duties in the areas of security, UNIX and Web support in order to support the ITS reorganization goals.

### ❖ **Faculty and Student Support (Pods and Classrooms)**

The Faculty and Student Support department manages 7 "open" computing pods and 10 classroom/training facilities. The department employs 4 FTE and 40 student computer consultants charged with managing 12 servers, 350 Windows, 115 Apple computers, 15 printers, 10 projectors and 10 scanners deployed.

#### ➤ **Accomplishments:**

- Converted Maya from Linux to Windows platform
- Learned iClicker systems and provide support for iClicker usage in classroom instruction
- Implemented Citrix in pods, resulting in greater availability and more cost effective usage of licensed software in the university Pods
- Implemented screen savers in all Pod systems to help in marketing efforts for Athletics and Student Health
- Implemented FastInfo in the Pods for publishing solutions to questions related to the Pod facilities.
- Performed numerous equipment upgrades in the Pods including installing 24 new Apple Mac replacement computers in the LoboLab and 10 iMac G5 and 19 PC's in Communications and Journalism Pod and 118 PC's in LoboLab and ESC Pods and two projectors.

### ❖ **Communications & Training**

Develops and implements integrated communications, technical writing and publications related to ITS and its initiatives and services. Consultants collaborate directly with ITS staff on communication plans for projects and the Support Center for support in developing training plans and materials (i.e. triage and fastinfo) when needed for various projects and just-in-time needs.

#### ➤ **Accomplishments:**

- Coordinated all communications for the campus wireless network initiative

- Developed FastInfo knowledge engineering skills and began entering solutions into FastInfo for ITS
- Developed Iclicker support procedures

#### ❖ **Evaluation, Assessment and Metrics Services**

Data management services include a variety of evaluation, measurement, assessment, and reporting features across several vectors and systems. 1st and 2nd level support for various data systems is also provided.

##### ➤ **Accomplishments:**

- Provided systems, programming and support for campus elections including Homecoming and Student Government elections

#### ❖ **Department of Hardware Maintenance**

The Department of Hardware Maintenance is responsible for a variety of 1<sup>st</sup> and 2<sup>nd</sup> level technical computer support functions for ITS and the UNM community. The Hardware Maintenance Group provides complete hardware and software support for all ITS desktop and laptop computer equipment. This includes initial configuration, installation, imaging, and roll-out of all new PC's for ITS staff; and ongoing support of PC hardware and software is provided. Full hardware repair (both warranty and post warranty) and upgrade support is also provided to ITS staff. Hardware repair and upgrade support is also provided, on a charge basis, to the greater UNM community (faculty, and staff).

##### ➤ **Accomplishments:**

- Implemented LanDesk workstation management resulting in significantly faster system setup, management and recovery processes.
- Prepared configuration requirements and communicated with campus departments to assure readiness for the upgrade to Banner version 7.

#### ❖ **Software Distribution Department**

The software distribution department is primarily responsible for the acquisition and distribution of volume or site licensed operating system and application licenses for cost benefit to the UNM community. This includes forecasting volume needs, price negotiation, acquisition, and sales of software licenses. Software sales are logged and monitored to ensure license compliance.

##### ➤ **Accomplishments:**

- Performed key negotiations with Microsoft to enable Health Sciences Center to implement the MS Campus Agreement.

#### ❖ **ITS/CSS (Customer Services and Solutions)**

The CSS team comprises nearly 50 years of University experience, knowledge, and service relating UNM Faculty, Staff, and Student processes. CSS consultants are known for

interpersonal skills, customer service, and relations. Using a consultative approach, BPO (Business Process Owners) are involved early, ITS/CNS departments are included from the beginning and assessments of business needs start with a cross-organization focus.

➤ **Accomplishments:**

- The development of the Services and Solutions group in new to ITS as part of the 2006 reorganization. This group developed tools to help UNM customers assess their IT needs and determine how best to work with ITS and/or find resources to meet their needs.
- Performed support planning for Human Resources/Pay Roll and Advising including developing partnered relationships, and implementing support processes based on agree up best practices; assisted in developing front line support for HR/PR Banner sneak preview initiatives
- Performed research and development on “1 Stop” support service planning for a consolidated Enrollment Management customer service, including establishing feasibility and a consensus to move forward. This is now a project with the first milestone defined to be a web based “virtual” 1 Stop support offering.
- Provided extensive project coordination to the Bureau of Business and Economic Research (BBER) during a large multi-departmental organization move.
- Assisted UNM in support of Regional Science Fair by developing automated systems for judging and scoring the even requiring completely update the entire process using newer technology.
- Developed new programs to process ITS Inventory

❖ **Support Center and LINK Service Center**

Is a customer-focused ERP service desk comprised of staff with technical expertise, business awareness and interpersonal skills providing a single point of contact for advice, and rapid restoration of normal services to customers and users.

➤ **Accomplishments:**

- Provided training to Operations staff so they could deliver 24x7 help to customer in computer account and problem logging.
- Cross-trained staff for Computer Accounts and Communications areas
- Took on many new support responsibilities in Security, UNIX and web support in support of the 2006 ITS reorganization.

# ITS Computing - Infrastructure Services

Gary Bauerschmidt

ITS Infrastructure Services is an organization dedicated to the providing Operational Support, End-to-end management, Tactical Planning and Networking UNM to state and national networks. To accomplish these duties ITS Infrastructure Services is made up of four divisions.

## Operations

The Operations Staff is in transition where they currently provide 24x7 support for an IBM Mainframe environment with very large printing jobs such as W2s, weekly payrolls, special printing and scanning jobs such as Instructor Evaluations (ICES) with over 250,000 surveys to process each semester. While continuing the support for these critical legacy applications, the Operators have begun to provide 1<sup>st</sup> level support 'after-hours' as a compliment to the Support Center. In addition, the Operators have been trained to handle phone queues during peak or overload situations such as password reset requests at the beginning of a semester. 1<sup>st</sup> level support training will increase with the goal of having Operators become User Support Analysts so as to provide 24x7 support in the "online world" that UNM is entering. The Data Prep department of Operations continues to handle over 125,000 Instructor Evaluation Forms with a 50% decrease in FTEs and continually increasing numbers of Lobo Test Scoring forms and Surveys.

## Enterprise Command Center (ECC)

The ECC is responsible for the coordination of end-to-end Management of ITS Services including servers, databases and networking. The ECC is also responsible for monitoring, troubleshooting, and resolving problems associated with ITS Services. In addition the ECC provides direct 2<sup>nd</sup> Level Support by offering a 24x7 on-call service to IT professionals around the university. Other responsibilities include fielding trouble calls, providing proper documentation, analyzing and reporting performance data. Using a pro-active approach via monitoring the health of IT Systems the ECC provides the following benefits:

Monitor:

- Telephone PBX switches

## State and National Networking

Closely working with ITS Communication Network Systems (CNS) the State and National Networking (SNN) Group is developing the Albuquerque Metro Area Network including the formulation of the Albuquerque GigaPop (ABQ-G) while partnering with the New Mexico General Services Division (GSD), CNM, Sandoval County and the City of Albuquerque. The partnerships continue at the state level with NMSU, NMT, LANL and UNM to leverage costs for Research Bandwidth. This collaboration philosophy continues with working on aggregation agreements with the Front Range GigaPop to build a cost effective National Network using National Lambda Rail (NLR). Last year accomplishments include:

### ➤ Accomplishments:

- 1) Establishing connections to Sandoval County, CHECSNet, and Sevilleta Research Center to Gigapop.
- 2) Signed contract with Navajo Technical College
- 3) Completed electrical upgrade of 505 Marquette (ABQ-G)
- 4) Installed a metro wide Dense Wave Division Multiplex(DWDM) fiber ring
- 5) Established I2 connectivity for Los Alamos National Labs
- 6) Established Commercial Peering Service (CPS) connectivity with I2 which allows UNM, NMT, NMSU and all CHECSnet connectivity to save use of bandwidth to Internet1 service providers and instead using the I2 network which acts as a commercial aggregation exchange to reach commercial sites on their network.
- 7) Due to the DWDM ring, ABQG will soon be establishing peering with ESNet which will save router hops for UNM, NMSU, NMT and CHECSNet users connecting to LANL and Sandia National Labs (will keep traffic destined for LANL and SNL in NM without the use of going out of the state and then coming back in).

### **Tactical Planning**

The major role of this team is to act as a facilitator to assist project completions and alignment with the ITS Strategic Plan. To bridge the gap between daily work and the need for planning, team members join project teams and provide the expertise needed for the best solutions. Some current examples are the ICES Replacement Project, BAGH-D, Facilities Assessments, Storage Management Strategy, IT Strategy Initiatives, State and National Networking, Metro Area Fiber and New Mexico National Lambda Rail. Support and Back-up for key positions is also provided by these team members in areas of Networking, Operations and Facilities. Outstanding example of the effort of this group is being a major contributor to the formulation of New Mexico National Lambda Rail (NMNLR) and the Data Center Upgrade Proposal.

# Applications (AIS)

Bonnie Young

➤ **Accomplishments:**

In the applications successful rolling systems implementations brought about integration of UNM's administrative system. The added value included introducing common data, common language and opportunity for business process improvement in many large departments including: Financial, Student and Academic Systems, Cashiering and Student Accounts Receivable. These implementations built on the success of the financial system implemented in July, 2004.

Applications and its support infrastructure Implemented a new student system to support registration, catalog, advisement, degree audit, admissions, recruitment, self service for students through Lobo Web and Lobo Phone for 32000+ on main campus, north campus and four branches to include: Taos, Los Alamos, Valencia and Gallup.

The parallel implementation of the financial aid system provided more than \$148 million of financial aid consisting of grants, scholarships, loans and work program for over 24,000 students.

With an upgrade to the enterprise-wise systems in January of 2007, the students were provided even more access and functionality to their enrollment and financial aid data.

We are current building on these successes with several new projects. The Human Resources/Payroll project is scheduled to implement in January 09 and will provide on-line access to all employees: student: faculty: staff. This will allow visibility to secured individual payroll and benefits data. Departments will be better able to manage their pay input and approval processes as well labor distribution accounting. Additional budget and salary planning will be available in the spring 2008 when a new budget and salary planning system are implemented.

# Platforms & Databases

David Northrop

Groups in this area provide for the complete infrastructure and operation of all ITS-CIAS (and many third party) servers. This includes the physical room, the physical computers, operating systems, storage applications servers and databases. They often act as the “support of last resort” within ITS and are called to provide consulting and problem resolution for issues not otherwise covered by ITS staff

## ➤ **Accomplishments:**

- Active Directory (grew from 3 to 8 org units served)
- Academic Services
- Direct Application Support (Hyperion, xTender,Citrix,FACE)
- Microsoft Operations Manager (MOM)
- LanDesk – Desktop deployment services
- SQL 2005 – (FACE, MOM)
- Windows Update Server (grew from 40 to 77 hosts serviced)
- Windows VMWare environment (grew from 4 to 14 hosts)
- Departmental Consulting (compromises,security,AD,installation,desk top)
- Hosted Server Support (Library,Ticketing)

## **Storage**

Storage – ITS provides online and backup storage for a wide variety of needs including Banner production and development, all of the ITS systems above and for third parties needing high capacity, highly reliable storage.

## ➤ **Accomplishments:**

- During the past year, the storage infrastructure has been continuously upgraded with the demise of older IBM FastT storage and the increased production use of the CoPan offsite virtual tape library at 505 Marquette
- Numerous projects to re-allocate available use to meet capacity, upgrade software and provide for ad-hoc requests.

## **Database Administration**

The Database Admin group is responsible for implementation and administration/maintenance of all Oracle databases and applications servers at ITS for Banner/Link and third parties. Oracle Database support for Banner, Reporting, Legacy Oracle and Departmental systems as well as for ITS-local systems and WebCT/Vista instructional systems.

## ➤ **Accomplishments:**

- The DBA group was part of successful LINK Go-Lives for Student and Financial Aid and played a lead role in the successful effort to upgrade all Banner applications to Banner 7 over the winter break.

## **Data Center Services**

Data Center Services (DCS) is responsible for the physical infrastructure of the ITS – Computing Services data center. They oversee the cooling, power, space, and all associated components within the data center. DCS provides co-location services for a variety of UNM groups besides ITS such as NMEL, UNMH, UNMTickets and Planet Lab.

### **➤ Accomplishments:**

- Added 15 tons of cooling for the ITS data center (August 2006)
- Purchased 2 portable cooling units (August 2006 and April 2007)
- Purchased second 160 kva UPS system and begun implementation (Feb. 2007)
- Completed the design for the data center network upgrade and purchased equipment (March 2007)
- Installed 50 devices, removed 24 devices

As of July, 2007, DCS provided for 335 server class units in the data center using 95KW of UPS-protected power

# IT Service Management

David McGuire

The infrastructure to support Banner represents a shift from IBM mainframe and IDMS database environments to Oracle database and data warehouse, and many other platforms (Unix, Linux, Sun and Window servers, and Hyperion reporting) beyond the Banner-specific software that runs on those platforms. As these technologies are fully exploited, non-Banner applications are also being implemented. This creates major changes in the way ITS works internally to:

- Define, implement and access new systems and services
- Identify and resolve incidents and problems with new systems
- Serve and respond to customers

In FY07, ITS decided to align our service delivery and support operations with ITIL (IT Infrastructure Library), the industry standard guidance for best-practice IT service management. Leadership for the ITIL implementation was identified, and resources are being allocated according to the implementation phasing, beginning in July 2007.

In FY 2007-2008, we expect to implement improved processes for

1. Handling IT service failures (Incident Management)
2. Handling changes to the IT infrastructure (Change Management).
3. We also expect to begin implementing Service Level Management (SLM) for many IT services in our catalog. SLM begins a constant cycle of agreeing, monitoring, and reporting on IT service achievements, and taking actions to eradicate poor service.

With consistent organization-wide planning, training, and execution, ITS' Service Improvement initiative hopes to deliver results in three areas:

- **Improved Service Quality** – Introducing a consistent set of processes enables pro-active improvements. Expected results include shortened resolution times, more reliable IT services, continuous service improvement, and better management control
- **Cost Advantage** – A lower Total Cost of IT Ownership (TCO) is achieved through increased efficiency and productivity, lower incident volumes, faster incident resolution, and less (business) disruption due to service failures.
- **Pro-active IT Management** – IT managers are expected to support the success of UNM as a whole, not simply maintain the IT infrastructure. We must plan ahead and efficiently shape UNM's IT environment. Implementing ITIL best-of-breed standards helps ensure our success.