

# CSS Annual Report

## July 2006-June 2007

### Snapshot

#### University-Wide Support

*Consulting and Support Services (CSS) provides computing and networking support and services to the University community to help faculty, students, and staff effectively carry out their University responsibilities.*

#### Campus/Departmental Support

*Consulting and Support Services (CSS) provides consulting and tools to increase the effectiveness of technology in the campus communities and in the business operations of the University.*

#### Faculty/Instructional Support

*Consulting and Support Services (CSS) provides consulting and computing support and tools to the faculty to facilitate efforts to achieve excellence in teaching and learning.*

#### Student Support

*Consulting and Support Services (CSS) provides resources and services to aid and encourage students to achieve the maximum benefit from their academic careers.*

#### Access Accounts

Active Accounts	141,600
Contacts	48,000

#### AIS Help Desk

AIS Accounts	15,200
Contacts	17,500

#### Computer Store

Invoices	36,000
CDs Pressed	33,453

#### Penn State Call Center

Incoming calls	139,129
Audio Conference calls	4,115
Video Conferences	1,232
CHAMPS Service	3,702

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Total Contacts	148,178
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#### User Services Contacts

Help desks	65,171
Hardware evaluations	1,088
Disk recoveries	275
Lab consultants	33,960
Webmaster	3,000
Postmaster	12,500
ANGEL	10,000

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Total Contacts	125,994
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#### CSS Contacts

Total	400,000+
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# CSS July 2006-July 2007 Annual Report

## *University-Wide Support*

### **ITS Knowledge Base (KB) Utilizing Zope/Plone Content Management System**

CSS staff continued to develop, populate, and maintain a technology knowledge base for Penn State users at <http://kb.its.psu.edu/>. The ITS Knowledge Base provides answers to technology questions specific to Penn State and allows contributions from across the University. There are nearly 50 total contributors to the KB.

### **User Services Help Desks**

The Computer Building Help Desk and the Willard Building Help Desk answered a combined total of 65,171 questions for students, faculty, and staff on a wide range of topics including ANGEL, dial-up connections, account issues, wireless, WebMail, disk recoveries and viruses. The two help desks provided 105 hours per week of coverage.

With the creation and population of the ITS Knowledge Base, the relevant content from the help desk Web site was moved to the ITS Knowledge Base. While minimal information has been maintained on the site at <http://helpdesk.psu.edu/>, the majority of the content has been moved to the knowledge base.

A large screen display that shows information about servers, routers and lab systems was installed at the help desks in 6 Willard and 215 Computer Building. This new troubleshooting tool helps staff quickly view the status of routers and servers and the availability of student computer labs.

### **Work Bench**

The Work Bench offers computer evaluation and software problem resolution to faculty, staff, and students for their personal machines. Equipped with a variety of diagnostic hardware and software tools, the Work Bench staff evaluates and resolves problems on 1,088 machines and recovered data from over 275 disks including 215 hard drives. Individuals receiving help included 620 undergraduate students, 158 graduate students, 48 faculty members, 197 staff employees, and 52 retired faculty/staff members. Because of the extreme demand for this service in the fall of 2004, a sign-up list was implemented to balance the increased load. This process continues to work smoothly.

### **Administrative Information Services (AIS) Support Center**

The AIS Support Center handled 21,190 issues, several involving multiple contacts per issue. On average, 50 additional account modifications per day were performed that were not included in the total issues number. These modifications required interaction and verification with access and security representatives (ASRs), data stewards, financial officers (FO), human resource representatives and end-users.

The AIS Support Center performed eight site visits to other campuses and utilized Adobe Connect (formerly Macromedia Breeze) to solve three issues remotely.

### **Accounts Services Office**

The Accounts Services Office handled 31,191 e-mails and approximately 9,000 phone and walk-in communications for accounts-related issues in support of students, faculty and staff. The issues covered a wide range of topics including account creation, access modification, password changes, LDAP entries, and lab print billing.

### **Computer Store**

During the past year the Computer Store provided a means for thousands of faculty, students, staff, and departments to save money and to receive objective information needed to make smart purchasing decisions. The Computer Store allowed customers to take advantage of its services in new two ways: departments were able to use eBuy to purchase from the store, and customers were able to use a second walk-in location conveniently located on the ground floor of the HUB next to the Penn State Bookstore. The HUB location was especially helpful to the hundreds of FTCAP families because of its proximity to other related activities.

During arrival weekend, store staff set up a remote sales location at Findlay Commons where over 900 students were assisted. This was in addition to the 1,000+ students who were served in the standard store locations during the three days. The Computer Store worked with colleges and departments to provide a central source for information regarding laptop recommendations.

The Computer Store actively reached out to the Penn State community, participating in a variety of events and campus visits including the Computer Store Expo/ITS Event, the User Services Conference, the TLT Symposium, a Penn State Wilkes-Barre visit, the Altoona Tech Fair, a Penn State Mont Alto visit, the ITS Road Show at Penn State Hazelton, the Hershey Tech Fair, Take Our Daughters and Sons to Work Day, and the Web 2007 conference.

### **Penn State Call Center**

The Penn State Call Center answers the University's general information phone number (814-865-4700). In responding to over 148,000 calls, the Call Center provided general University information, directory information, prospective student admission information, and Ag ICT help desk support.

Conference calling continued to grow. Of the 3,504 conference calls scheduled last year, 24% were for conferences of 14-30 participants, 48% were for conferences of 6-10 participants, and 28% were for conferences of fewer than 6 participants.

Throughout the year, 103 orders for calling cards and authorization codes and 150 standing orders for Call Center services were processed. In addition, the ordering and

mailing of 11,500 Verizon telephone directories and the update of 163 department listings were coordinated through the office.

Working with the Adobe Connect team, the Call Center established Adobe Connect meeting creator services for University personnel who did not hold a meeting creator license. The Call Center created meetings for individuals to manage. Five meetings were created for individuals to use.

Research and evaluation efforts were started to create a new chat service. This service will provide another means for the community to communicate with the Call Center for assistance. Evaluation and testing will begin in the upcoming months.

### **AskPSU**

The AskPSU tool supports the AD54 requirement for contact information on Web pages. AskPSU provides forms on which users asked questions. These questions are directed to the appropriate person or office. One hundred offices used AskPSU, up from 77 a year ago. About 141 users were involved in creating and modifying AskPSU forms. During the past year, 6,221 user questions were submitted through AskPSU.

Among the organizations using AskPSU were the Alumni Association, the Affirmative Action Office, the College of Arts and Architecture, The Nittany Lion Inn, Penn State Mont Alto, the Department of Comparative Literature, the Department of Mechanical & Nuclear Engineering, the Registrar's Office, Housing and Food Services, University Development, and the Department of Landscape Architecture.

### **Site Index Generator**

The site index generator tool supports the AD54 requirement for a site index on each Web page. Web administrators simply and easily creates a site index by filling out a series of forms. Using a database backend and a series of CGI scripts and Web forms, the software prompts the Web administrator for items to list and automatically generates a site index. Knowledge of HTML is not required.

This service was used by 66 departments and offices, compared to 56 departments a year ago and 46 departments two years ago. Some of the offices using the site index generator were the Affirmative Action Office, the Department of Civil and Environmental Engineering, the Eberly College of Science, the Graduate School, the Hershey Medical Center Library, the Office of Human Resources, Outreach, the Registrar's Office, ANGEL, and the Department of Mechanical Engineering.

### **Employee Directory Generator**

A flexible, searchable employee directory was developed in support of the AD54 requirement for a faculty/staff directory. The system was used by ITS, and work was underway to make it available to other Penn State organizations.

Users could search for employees by name, userid, unit, supervisor, staff assistant, job type, status, or free form text. Data were extracted from LDAP. Additional data stored in

a separate database were displayed as well. An optional photograph and optional user-defined text fields can be associated with each employee. The ITS implementation used a subset of these features: users searched on name, userid or unit only. Photographs were optional, though encouraged.

### **Labman Employee Management System**

Labman, an automated approach to capturing wage-payroll information, was originally developed for in-house use. Since it became available for other units, its use continues to grow. The University Libraries began using Labman for wage payroll employees with close to 500 employees across 16 campuses. The Commons Desk operations group in Housing and Food Services implemented both time clock and time card functions for approximately 100 employees. Penn State Berks committed to using Labman for help desk and residence hall operations.

### **Scanning Project**

Access and Accounts continued its scanning project by digitizing 71,672 more AIS access forms for a total of 137,056. This equated to 38 standard filing cabinet drawers or 9 filing cabinets. Scanning these forms allowed ASRs and Internal Auditing to review these forms via the AIS Imaging System. This eliminated the need for ASRs to retain copies of these forms, and it eliminated the need for Internal Auditing to request copies in preparation for an audit.

Access and Accounts initiated scanning of the Access Account forms to house the signature in an encrypted format in the existing CACTUS system. Since spring, 2,498 were scanned into the system.

### **Software Site Licenses**

The licensing group administered 30 unique contracts, representing hundreds of products that saved the University approximately \$5 million over retail pricing. The CD/DVD duplication service produced more than 7,000 pieces of software media to fulfill customer orders. In addition, 17,500 copies of the PAC-ITS CD were produced, and an additional 7,890 CDs were duplicated for 80 custom jobs.

### **Cellular Services**

Cellular voice and data usage continued to increase at Penn State. To handle the demand, additional cellular sites were installed on top of the East Parking Deck. New sites were planned for installation at The Penn Stater by AT&T, Nextel Partners (Sprint/Nextel) and Verizon Wireless. Plans were begun for the Nittany Parking Deck to accommodate multiple carriers.

### **Web and Media Design Solutions (WMDS)**

The WMDS group, now 4 years old, showed steady growth for another year. The core services offered to University departments and groups are designing basic Web pages and programming dynamic database-driven Web applications. CD/DVD creation and video conversion from VHS, MiniDV, DV, Hi8, Digital 8, and 8mm to digital video are among the services offered to clients. Converted digital files are delivered via DVD, Web, or

other media of the client's choice. WMDS continues to offer hosting/streaming for completed University projects that need on-going technology support.

Among the 2006-2007 projects were undergraduate research, aerospace, protected.personal, public scholarships, WebMail, MARTCP, and Coffee with Kevin.

The major project completed in 2007, which will go live in July/August, was the new online version of the Web Bulletin, i.e. the Undergraduate Degree Programs Bulletin (Blue Book) and the Graduate Degree Programs Bulletin (White Book). The online bulletins served as a reference to every student and department in the University. As the new version of the Web Bulletin is released, it will include the Blue Book alone at first with the White Book to follow soon after.

### **Support, Development and Infrastructure (SDI)**

This year SDI took on technical support for the office of the CIO, ITS human resources, parts of the 229 suite in Computer Building, and per-incident for the Office of Governmental Affairs in Old Main. Two additional system administrators were added to handle support requests, infrastructure maintenance, and development of new services. A new registration application for the ITS Event/Computer Store Expo was developed and supported. eBay purchasing was added to the Computer Store Web site. Red Hat Satellite and SSL certificate services were upgraded to better handle increasing demand.

The Information Privacy and Security (IPAS) initiative required major changes in network infrastructure and topology as well as upgrades and updates to most major systems. A significant upgrade to the Computer Store point of sale system was planned for later this year along with a complete redesign and rebuild of the Computer Store's Web presence.

This group worked closely with the Web and Media Design group developing databases and application logic (code) for some of the larger and more complex applications, including the Web Bulletin and the Penn State Bookstore's online textbook adoption system.

### **PAC-ITS**

Almost 18,000 copies of PAC-ITS, a CD containing a collection of software that may be installed on personal and University computers, were distributed last year. The CD included software and instructions for using Penn State's modems, for accessing electronic mail and the Internet, and for protecting computers with Symantec antivirus software. In addition, the Star Office suite of software was provided on a separate CD.

### **Toll Free Access to Resources**

The Willard Help Desk and the Computer Store offer 800 numbers for toll free access from within Pennsylvania. This past year 1,800 calls were received at the help desk and 3,000 were received at the Computer Store.

## **Cost-Saving Actions**

### *Software Licenses*

Computer Store licensing staff administered 30 unique license contracts for the Penn State community. Titles that saw interest and growth included Adobe CS3, Filemaker, RedHat Linux, MatLab, and Footprints. The licensing group worked collaboratively with a CIC license group, and together licenses with SPSS and Symantec were obtained. Consolidation of University license usage allowed lower pricing to be secured for all participants. Savings over standard retail costs were more than \$5 million.

### *PC/Laptop Bulk Buy*

The PC and Laptop aggregated purchase was again conducted. Data was collected from IT staff from various Penn State departments, colleges, and campuses for preferences on computer models, configurations, and options. In addition, IT professionals provided feedback on vendor preferences. Using this information, ITS and Purchasing developed two desktop and two laptop configurations as well as a list of available options. By standardizing on configurations, ITS and Purchasing were able to negotiate a substantial price savings averaging 25% per unit off contract price. The University saved over \$1,000,000 due to this aggregation.

### *Campus Access Modems*

Based on a review of the access modem usage at all non-UP campus locations, ITS recommended and implemented a reduction of 14 ISDN-PRI facilities at 13 sites. This action resulted in an annual saving of \$56,100, funds which return to the involved campus. The reduced usage at these 13 locations was due to the increased use of cable modems, DSL service, and/or cellular data services to access the University's network. The total campus modem count has fallen from a peak of 1,879 in 2001 to 746 after the latest reduction in 2007.

### *Campus Audits*

Telecommunications billing and network audits were performed at 14 non-UP locations this year. The overall audit process resulted in a \$10,000.00 annual savings to the University.

## **Communication Efforts**

### *User Services Conference: Supporting Penn State's Success*

The third User Services Conference was held Thursday, April 5, 2007. The conference was designed for staff that provide IT support to departments, colleges, campuses, and offices. Participants attended educational sessions, interacted with their colleagues, and enhanced their professional development on topics such as the IPAS Project, Windows Domain Group Policy Management, Adobe Captivate, and Contributing to the ITS Knowledge Base. Keynote speaker John Bucher, chief technology officer, Oberlin College, spoke on the future of technology.

The conference committee members represented ITS, Auxiliary and Business Services, Commonwealth College, Penn State Schuylkill, and the College of Agricultural Sciences.

### *Web 2007 Conference*

The tenth annual Web conference, designed for Penn State faculty and staff, drew nearly 380 Penn State Web developers, graphic designers, content providers, and system administrators. Highlights of Web 2007 included an opening keynote speech by Jared Spool, founding principal, User Interface Engineering. Jared was a recognized authority on user interface design and human factors in computing and a well-respected speaker at conferences across the country. Kimberly Blessing, manager of the Web Development Platform Team at PayPal delivered the closing keynote speech. The conference provided 28 sessions (up from 24 sessions last) that covered a wide range of topic areas such as Internet Marketing: How to Get Noticed, Advanced Design with Cascading Style Sheets, Essential Web Graphics, Publishing Scholarly Articles on the Web, iPolling and Feedback (XML, AJAX, and Perl), Audio Commenting Using Adobe Acrobat, Web Application/Vulnerability Scanning, and Virtual Worlds to name just a few.

Web 2007 included a full day of post-conference tutorials in the Business Building where 277 conference attendees signed up for six half-day sessions and one full-day session with Jared Spool. The tutorial topics were Web Design Foundations, Adobe Dreamweaver and Flash, Writing for the Web, Introduction to Version Control with Tortoise SVN, Universal Design, The Web and You, XSLT: How Do We Use It?, and Podcasting Basics.

A catered anniversary luncheon took place on the day of the tutorials and included poster sessions, a retrospective video of the last ten years in Web development at Penn State, a display of past conference materials, networking opportunities, good food, and a Creamery ice cream sundae bar. The Business Building atrium was a beautiful backdrop for the ten-year celebration luncheon complete with balloon centerpieces on blue linen covered tables.

The conference, sponsored by Information Technology Services, was planned by a steering committee composed of staff from a variety of University colleges and offices.

### *Web Developer Luncheons*

The Web Developer Luncheons provided timely information for Web developers at Penn State. Intended to increase communication and networking, the luncheons were videotaped through January for those who could not attend. Beginning with the February luncheon, the presentations were available, both synchronously and asynchronously using Adobe Connect Pro. The popular luncheons normally attracted from 45 to 65 Web professionals. Topics covered this year included AD54 Status and Supports, Web Survey Tools, Web Statistics, Lightning Talks, Adobe Connect Professional Demonstration, Web 2007 Preview, and How a Content Management System Improves Efficiency and Effectiveness in Communication. Information about the Web Developer Luncheons was available by visiting <http://css.its.psu.edu/weblunch/>.

### *WebXM: Site Quality Reporting – One Year Trial in ITS*

WebXM, a software product that crawls Web pages and reports errors, was tested by a small group of ITS Web professionals. CSS initiated a one-year trial for ITS Web sites in order to assess whether the product would provide a useful service to the larger University Web community in future years. In addition to WebXM's native quality checks (such as broken links, slow pages, and spelling errors), the product was configured to check for most AD54 compliance issues as well as some Penn State and ITS-specific branding issues. Sites were crawled on the weekend, reports were generated on the vendor's server, and each ITS Web professional had access to the appropriate reports for resolution of the problems found.

The one-year trial concluded in March and the service was not continued. Although WebXM was deemed useful, CSS discontinued the service due to high costs and a low level of usage by ITS Web liaisons.

### *Network of People (NWOP)*

The Network of People, whose members consists of IT professionals from colleges, departments, and campuses, met three times last year. The IT community within Penn State represents a wealth of knowledge, and these meetings provide an opportunity to share ideas and solutions and to learn about changes to the University's central computing infrastructure. Attendance of the meetings continues to increase, and the incorporation of Adobe Connect, a desktop video application, allowed participation from remote locations. Approximately 100 new members participated this past year.

To improve governance, a Network of People steering committee was formed, which included two IT professionals from selected colleges and departments at University Park and one IT professional from a non-UP location. In addition, two ITS Consultants were added.

### *Web and Printed Publications*

Printed publications produced by CSS included the *ITS Academic Computing Newsletter*, *Your Guide to Information Technology Services at Penn State*, *Computing Times for New Students*, *Computing Times for New Faculty*, the ITS Help Desk bookmark, and changing your password reminder cards. CSS produced promotional materials for several services and events throughout the past year, including the ITS Event, the TLT Symposium, and Web 2007.

Web publications including the Consulting and Support Services' News and Information page (<http://css.its.psu.edu/news/>), the ITS Computing Service Alerts page (<http://css.its.psu.edu/news/alerts/>), and the ITS Academic Computing Newsletter archive page (<http://css.its.psu.edu/news/archive/index.html/>) were maintained and updated with new information regarding Consulting and Support Services and ITS activities. An RSS feed was added to <http://css.its.psu.edu/news/alerts/>.

During spring and summer 2007, the publications group collaborated with the students of Professor Lanny Sommese's Art 475 class to redesign the *Your Guide to Information Technology Services at Penn State*.

### *Listserv*

Listserv remained an important means of communication and collaboration across the University and beyond. Penn State supported over 6,000 lists with over 1,800,000 subscribers. About 100 classes used listserv mailing lists last year.

This past year, SpamAssassin was run on incoming mail, and this helped cut down the queues. Several utilities were written to check on the status of the server running listserv, increasing the reliability of listserv. General maintenance and administration was required on a regular basis.

### *Take Our Daughters and Sons to Work*

CSS coordinated ITS activities in the Willard Building for Take Our Daughters and Sons to Work Day on April 26, 2007. Approximately 40 students and parents were able to see the latest gadgets and gizmos available in the Computer Store at Penn State, and they had their pictures taken on an iMac. The pictures were printed as souvenirs to take home.

### *ITS Services Database*

The ITS services database, in its second full year of operation, was developed to give CSS a searchable database of all the ITS services available. A complete review of all the services was completed in December 2006. This review, done annually by an established database committee, ensured accuracy for the next year. The database contains 390 services.

### *Committees and Meetings*

In order to provide effective application of technology and efficient use of University resources, CSS hosted the following standing committees and meetings:

- Network of People
- Financial Officers Advisory Committee
- IT Directors (non-UP Campuses) Advisory Committee
- IT Directors UP Colleges
- Student Advisory Committee
- Web Developers Luncheons
- Web 2007 Conference
- Computer Store Expo in conjunction with ITS Event
- User Services Conference
- IT Leaders Program
- ITS Road Shows
- CATV Advisory Committee

## *Campus/Departmental Support*

### *Calendar Conversions*

The ITS Consultants worked with various areas to successfully facilitate departmental conversions to the Oracle Calendar solution. The first Meeting Maker to Oracle conversions took place with Gravitational Physics converting 18 users followed by Undergraduate Education converting 16 users.

### **New IT Employee Training**

The ITS Consultants held quarterly IT new-hire orientations this past year. The orientations are a way to introduce the ITS organization and the many IT services offered to new information technology employees at the University. Not only are these orientations an opportunity for IT professionals to learn about ITS, but they are also a way to meet and to network with other new IT hires in various departments. The use of Adobe Connect provides a way for those with limited travel funds or limited time to participate. Each quarter, the orientation information is updated to include new services and important URLs. A “Dates to Remember” page was developed listing activities hosted by ITS. A tour of Video Operations and the ITS Network Operations Center located in the Telecommunications Building was coordinated for those who were interested.

### **Wireless 50-50 Program**

Through the 50-50 Wireless cost sharing program, ITS contributed over \$73,000 towards wireless network upgrades at campuses. This expanded wireless coverage included the following campuses: Abington, Shenango, Scranton, Wilkes-Barre, Erie, Hazelton and Harrisburg.

### **Ruckus**

Ruckus, the University's new legal media downloading service was introduced in May 2007. This service provides students with the ability to legally download music, music videos, and movies and to have access to social networking features. Ruckus had over 7,000 subscribers by June 30, 2007.

### **Microsoft Vista Task Force**

The Vista Task Force was charged with communicating information about the Windows Vista release to the general Penn State public and with providing information to help with upgrades and deployments. The primary focus for the committee was making Windows Vista information available during the rollout stages while also allowing the University community to share Vista information through testing and implementation. Knowing that Penn State's community was diverse in PC operating system experience, the committee provided both a Vista Web site for the general public and a collaboration site for faculty and staff to share their Vista experiences and knowledge. In addition, the committee worked with the Penn State Computer Store to track the licensing on a University machine via the Key Management Server. While testing Vista, the committee concluded that Vista had varied capabilities and shortcomings that could not be tested in every

environment across the University. Through various presentations and listservs, the committee recommended that the IT community move slowly and perform systematic testing in each environment before converting. Because the findings of the committee were readily available to the Penn State community and because Microsoft had reached its final roll-out of Vista, the Vista Task Force concluded that its charge was complete in April 2007. A final report on the Vista Task Force was placed on the collaboration site.

### **Microsoft Office 2007 Collaboration Project**

For a project in spring 2007, participants in the Penn State IT Leaders Program needed to identify a University-wide IT collaboration process. The goal of the process was to find a better way to share information and to work jointly towards common solutions on like IT issues throughout the University. The beta test case selected for trial and process refinement was training for the University's conversion to Microsoft Office 2007. Because most departments, colleges, and campuses faced similar training and support issues with the new platform, the goals of the proposed process were to develop methods to share resources and information, to develop tools and documentation, and to avoid duplicative efforts. The outcome would be jointly-developed training materials for Microsoft Office 2007 that could be used by all organizations.

A total of 13 organizations participated in this project (4 of which were from campus locations other than University Park). The group members identified the types of training required (overviews, hands-on, video, etc.), investigated the resources already developed, and determined the materials that needed to be created to meet the training needs of the University.

### **Eudora Migration Project**

As a result of Qualcomm's announcement ending technical support for Eudora in October 2007, a collaborative team of central and distributed IT staff was formed to identify alternate desktop and Web-based e-mail clients and to create documentation and training materials for e-mail client migration. The team was charged with listing the pros and cons of each alternative client; providing information to campuses, colleges and departments to assist them in making informed decisions based on their needs and environment; identifying training needs, procedures, and tools to assist with the migration; creating documentation to support the migrations; and developing a communication plan to inform the Penn State community of Qualcomm's end of support for Eudora and to share the committee's findings on alternate clients.

### **Voice over Internet Protocol (VoIP) Project Team**

The ITS Consultants continued to participate in the ITS-wide VoIP project. The consultants contacted University Park customers and held informational meetings on the VoIP system, set types, features, costs, training, and accessories. They discussed, in detail, how to complete the VoIP spreadsheet with specific information needed for the conversions. During this past year, approximately 2,500 phones were converted to VoIP. The ITS Consultants were instrumental in helping to identify which phones still need to be converted and which phones must stay Centrex for various reasons.

### **ITS Road Shows**

Building on the success of previous road shows, ITS continued to take representatives and informational materials to various campus locations. The road shows allowed ITS staff to better understand the campus environments and allowed non-University Park personnel easy access to ITS staff. The Fall event took place at Penn State Hazleton in October 2006, and the Spring event was hosted by Penn State Shenango in March 2007. A combined total of 93 people attended the shows. Attendees had an opportunity to learn more about topics such as the Penn State Computer Store, Microsoft Office 2007, Adobe Connect, password changes, WebMail Lite, IPAS project, and the computer bulk purchase.

### **Computer Store Campus Visits**

In addition to investing resources in University Park events such as the FTCAP and the ITS Event, Computer Store staff traveled to several campuses to participate in informational events and collaborative staff meetings. These visits were used to assess the effectiveness of services, communications, and processes and to obtain feedback for improving services for all Penn State customers. Campuses visited this year included Beaver, Altoona, Delaware, New Kensington, and Harrisburg.

### **Customer and Administrative Support Groups**

The Customer and Administrative Support groups provide assistance to the University community by answering questions regarding ITS services, processing work orders, resolving billing issues, and providing cellular support. The groups processed cellular service requests and voice work orders, and they worked with vendors to resolve billing and service issues. Over the past year a total of 3,673 work orders were processed through the groups.

### **Adobe Connect**

The Unit Services staff worked closely with Teaching and Learning with Technology (TLT) on the Adobe Connect project. A four-person Unit Services Adobe Connect demonstration team conducted 51 demonstrations online and 9 demonstrations at various customer sites. Each of these sessions lasted an hour. They were attended by a total of 448 people.

### **ITS Event/Computer Expo**

The ITS Event and the Computer Store Expo combined efforts at the HUB on Tuesday, April 24, 2007, with the theme *Your Ticket to Smart Computing, Travel Smart, Buy Smart*. By utilizing existing resources, cutting low priority items, and collecting donations the committee streamlined expenses and saved ITS over \$4,000 while maintaining a professional atmosphere for the event.

The goal for the Expo/Event was promoting awareness of computer security, social networking, wireless access on campus, and the Computer Store products and services. Of the 1,100 attendees, 39% were students and 47% were staff.

## *Faculty/Instructional Support*

### **Faculty Research Support**

Financial and administrative support was provided to a faculty member developing a mobile public key infrastructure capability. The goal of this work was to have an acceptable method for using digital signatures and end-to-end encryption of signals carried over cellular and wireless networks.

### **Publishing Support**

Assistance was given to faculty having questions and problems with publishing. Twelve faculty members received help with their publishing projects, primarily book publishing. Most assistance involved text formatting, image file conversion, text importing, and diacritical mark usage. The main emphasis was on providing faculty with the support needed to get their manuscripts in the form required by publishers.

### **Web Maintenance via Database Integration**

The Course Links for University Learning (CLUE) project that was designed to handle Web maintenance using a Microsoft Access database was still used this year by Penn State faculty and students. However, as faculty migrated their courses and materials to the ANGEL system, CLUE requests again declined. Maintenance of the CLUE database continued to be the responsibility of User Services staff in CSS.

### **Grade Reporting**

The AIS Support Center Help Desk provided support outside normal working hours during critical weekends such as during grade reporting and arrival weekends. Grades entered during a normal grade reporting period totaled around 350,000 and could be entered between 7:00 a.m. and 12:00 midnight.

### **ANGEL Support**

In its fifth year, ANGEL, Penn State's course management system, continues to be enhanced while usage by faculty and students expanded across the University at all 24 campus locations. The challenge for ANGEL Support was to support a rapidly growing user base from a centralized support structure.

ANGEL Support consists of one full-time manager, two full-time system administrators, a systems testing coordinator, and a half-time graduate assistant. Between July 1, 2006, and June 30, 2007, ANGEL Support resolved over 10,000 requests for assistance, an increase of 59% over the previous year. The vast majority of requests were resolved in less than one business day. In addition, ANGEL Support staff provided training, consultation, and assistance to IT support staff at all campus locations. These services allowed maximum leveraging of a minimally-staffed centralized support team to provide University-wide support.

Additionally ANGEL Support was involved in the complete life cycle of application development and had a central role in functional and performance testing.

While difficult to quantify, the most significant impact of ANGEL Support was its supporting role to hundreds of support staff who are empowered by ANGEL Support to provide local assistance to their user base. Users were able to avail themselves of the centralized support system through their local support contact who had direct access to ANGEL Support expertise. Also difficult to quantify was the impact of the ANGEL Support role in systems testing. Performance and functional testing allowed ANGEL Support to proactively address user concerns before they occurred in production. The combination of providing direct support to users, direct support to support staff throughout the University, and proactively addressing problems before they appeared in production allowed for maximal leverage of the ANGEL Support infrastructure on a large and growing user base.

ANGEL assistance was available through the ITS Help Desk between 9:00 a.m. and 5:00 p.m., Monday through Friday. In addition, users could call the ANGEL Support phone line at 814-865-4928 as early as 7:00 a.m. Monday through Friday. ANGEL Support was also available through the online help form between 9:00 a.m. and 10 p.m. on Monday through Thursday, between 8:00 a.m. and 5:00 p.m. on Friday, and between 1:00 p.m. and 10:00 p.m. on Sunday.

## *Student Support*

### **Student Lab Consulting**

Consulting support was provided in twelve ITS labs across campus for a total of 912 hours per week of staffed lab consulting. Lab consultants in staffed ITS labs answered nearly 34,000 questions from faculty and students relating to the use of the software and the services available.

The Lab consultant Wiki project moved to full release in January 2007. The Wiki was an amazing success, and the student consultants populated it with information that developed it into an invaluable tool and asset for end-user support.

### **PsuThesi**

The PsuThesi package, a group of templates and associated programming to help with thesis production and formatting, continued to be supported. During the year, seminars on PsuThesi were presented to 146 attendees, primarily graduate students. Telephone and e-mail support was provided throughout the year with approximately 420 contacts made. Students became aware of support for PsuThesi through either attending a seminar, being referred to CSS by the Thesis Office of the Graduate School, or attending one of several presentations made to graduate student groups throughout the year.

### **New Seminar**

A new seminar, Overview of the Thesis Process, was developed in 2006 and made available through the ITS Training Services Web site. This one hour overview of the

entire thesis writing and submission process was well received by the 120 students who attended during the year.

### **Electronic Theses and Dissertations (eTDs)**

Seminars on using Adobe Acrobat to create electronic theses and dissertations were presented several times during the year to help students with the process of creating eTDs. As of July 13, 2007, 1,847 theses were on the University's eTD server Web site (<http://etda.libraries.psu.edu/>). In fall 2006, eTDs became mandatory for Ph.D. students. This requirement increased the number of eTDs submitted and somewhat increased the amount of support required.

### **First-Year Testing Counseling and Advising Program (FTCAP)**

The ITS Accounts Services Office assisted incoming students at FTCAP in obtaining Access Accounts that were required for using computing services at Penn State. Exactly 6,212 Access Accounts were activated at signature stations during FTCAP 2007. Fifteen portable laptop signature stations were used daily at the Hetzel Union Building to provide access to the accounts.

To help new students get started with Penn State computing, the *Computing Times for New Students* publication was distributed to all FTCAP participants.

### **Student Outreach Initiatives**

#### *Student Luncheon*

A student luncheon at the The Nittany Lion Inn was held in the spring semester. ITS used the opportunity to learn directly from the students who attended how to best accommodate their technology needs. Speaking individually with the students, asking questions, and probing for more information yielded valuable input. Lab access, wireless Internet, and bandwidth concerns were some of the topics the students discussed.

#### *Student Advisory Committee to ITS*

The Student Advisory Committee for Information Technology Services met twice this past year, once each semester. This group provided student input for ITS development, offered students an opportunity to comment on services or needed services, and allowed ITS staff to demonstrate existing or new services.